

PRIVATE SECTOR PROPOSAL
FIP Brazil
International Finance Corporation (IFC)

<i>Name of Project or Program</i>	<i>Commercial Reforestation of Modified Lands in Cerrado, Brazil</i>
<i>CTF amount requested (US\$):</i>	➤ <i>Investment – USD 15 million equivalent in local currency (Brazilian reais) to be invested as equity.</i>
<i>Country targeted</i>	<i>Brazil</i>
<i>Indicate if proposal is a Project or Program</i>	<i>Project</i>

1. DETAILED DESCRIPTION OF PROGRAM

1.1. Proposal Context:

This project proposal (“Project”) conforms to Brazil’s FIP Investment Plan (FIP-IP), which was endorsed by the FIP Sub-Committee on May 4, 2012, and to the IFC-FIP Brazil concept note “*Commercial Reforestation of Modified Lands in Cerrado, Brazil*” which was endorsed by the FIP Sub-Committee on October 30, 2013 under the FIP Competitive Set-Aside Fund.

Pressure on the world’s planted and natural forest resources is expected to continue to rise with an increasing population and overall demand growth for wood products, which exposes the forestry sector to continued risks including unsustainable management of forestry resources, illegal wood sourcing, loss of biodiversity and threats to community rights over forests. The proposed Project aims to respond to these challenges by supporting the transformation of the forest plantation sector in Brazil, which has the potential to provide a sustainable source of wood products to local and global markets eliminating the need for exploitation of natural resources. More specifically, the Project seeks to encourage the development of forest plantation on modified habitat in the Cerrado biome by funding a direct intervention on a new forest product (*teak grown over a short rotation*), which is very much nascent but offers significant growth potential in Brazil.

FIP funds are essential to provide the much needed long-term, patient equity, to an emerging sector to demonstrate the business case for a commercially viable activity with strong climate, environmental and social benefits to catalyze market transformation where commercial investors are currently reluctant to invest.

While the Amazon biome still maintains around 80 percent of its original cover, approximately 48 percent of the Cerrado has been converted for agricultural use over the past 50 years. The goal of the Project is to help demonstrate the viability of financing sustainable teak plantations, which can increase carbon stocking, while protecting the region’s remnant and threatened cerrado. Moreover, the Project will help alleviate the pressures on natural forests in the country since short-rotation teak competes directly with other hardwood species from the Brazilian Amazon (such as Ipe, Cumaru, Jatoba, Garapa). Additionally, by supporting pioneering private sector companies that work *beyond*

environmental requirements, the Project will also demonstrate approaches to consolidate the Brazilian legal requirements of Legal Reserves and Permanent Protected Areas¹ which form the backbone of biodiversity conservation and watershed protection, while ensuring financial viability.

The Project is consistent with the Brazilian government's Plan for Mitigation and Adaptation of Climate Change for a Low Carbon Emission Agriculture (generally referred to as the "ABC" Plan), supported by the Brazil's FIP Investment Plan (Brazil FIP-IP), which seeks to ensure continuous and sustainable improvement of management practices that reduce GHG emissions and enhance atmospheric CO₂ uptake on vegetation and land used by the farming sector. The Promotion of Commercial Forest Plantations is one of the seven Strategic Programs under the ABC Plan and its goal is to promote reforestation by expanding the reforested area by 3.0 million ha.

The Project will help meet Brazil FIP-IP's objectives by (a) improving forest and land use management by promoting high value hardwood plantations in areas previously converted to agricultural use, (b) alleviating pressure from remaining forests in the Cerrado biome as well as from the Amazon biome by providing an alternative source of hardwood, (c) incremental sequestration of at least 100,000 tCO₂e per year, (d) diversification and expansion of employment opportunities in a region where the local economy is very dependent on cattle grazing and the cultivation of soy and corn (which are among the main drivers of deforestation), and (e) by directly supporting the Government's goal to promote reforestation and expand the reforested area in the country.

Moreover, the Project will help lower the barriers of entry and catalyze the development of short-rotation teak plantations and bring state-of-the-art, value-added milling to the eastern Brazilian Cerrado. Project will develop replicable technologies which can be adapted by small and large farmers alike. This knowledge, in turn, will reduce perceived risks for future investors in the sector. And finally, it will help bring in new and additional resources for forests and projects related to forests by leveraging funding from multi-lateral and other private sector investors.

1.2. Country and Sector Context:

Estimates suggest that deforestation in the Cerrado is proportionally more severe than that of the Amazon. During the period 2002-2008, Amazon deforestation represented 3.2% of the area of the biome, with 82% of the original forested area remaining. Over the same period the Cerrado biome lost on average 4.1% of its cover and only 52% of the area covered by native vegetation still remains². The Cerrado is a strategic biome both for economic and environmental reasons and has become one with respect to food security. It covers a large area with significant carbon stocks, water resources, and substantial biodiversity. The Center-West region of Brazil, where the Project is located, consists of gallery forests covering lowland areas which are extremely rich in biodiversity but are very sensitive disturbance and particularly vulnerable to fire (see Figure 1). The area is largely rural, and sparsely populated, which presents a unique opportunity to develop new models that combine modern and sustainable plantation management practices in small mosaics with the conservation of natural forests and other ecosystems

¹ Brazilian Forestry Law requires that every farm in the Cerrado should have a Legal Reserve (RL) of native vegetation cover of 20-35% of the private landholding. If a farm is located in the area considered transitional between the wetter Amazon Biome and more typical Cerrado Biome, as in the case of this Project, 35% of the land should be set aside for conservation. The Law also requires private landholders to protect the natural vegetation in areas at risk of generating erosion, storm water runoff or deterioration of the protective role of the headwaters and the edges of water bodies, which are known as Areas of Permanent Preservation (APPs).

² Brazil's FIP Investment Plan, 2012.

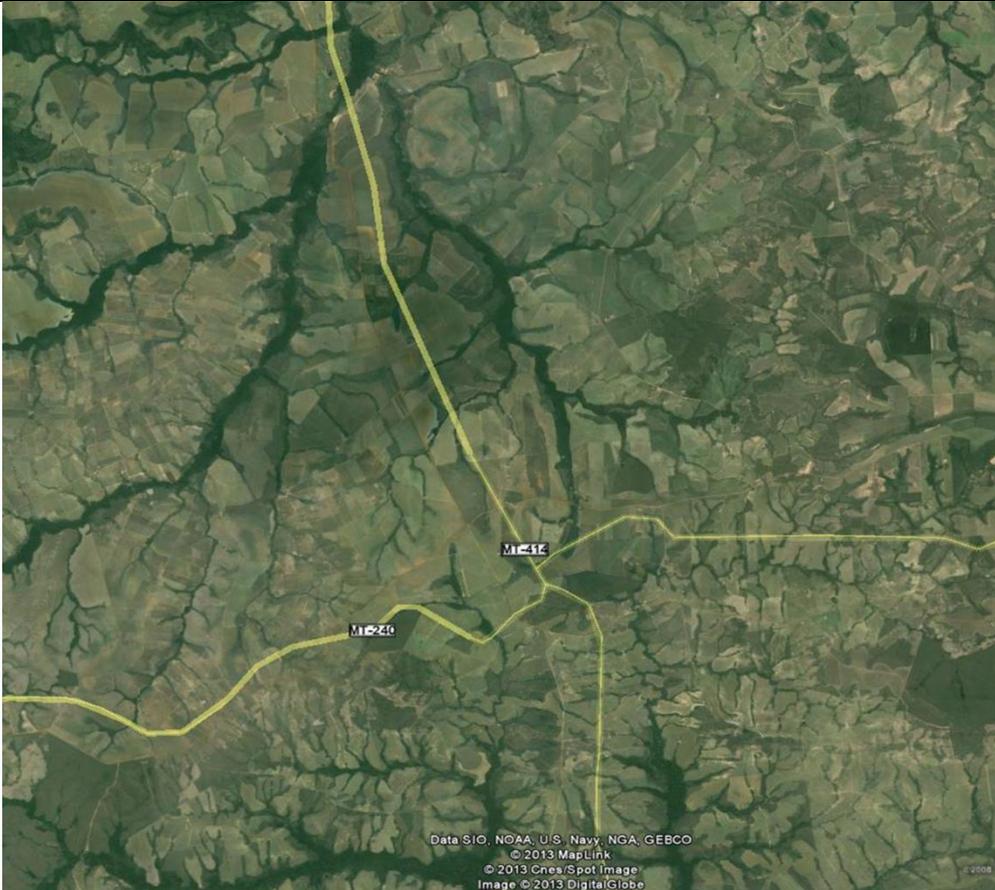
services including improved surface water regulation, increased carbon stocking, and retention of microclimates which enhance agriculture production.

Brazil is endowed with climatic conditions and soil characteristics that favor the growing of production forests. The country has some of the world's most advanced applied technology for forest production which grew out of decades of R&D to select fast-growing eucalyptus clones and high-productivity silvicultural practices. Moreover, Brazil has the enabling infrastructure and access to markets, including a rapidly expanding domestic wood products industry. However, despite these assets, Brazil has a deficit of plantation forest and the existing plantations are highly concentrated in only a few species destined almost exclusively to the pulp and paper industries³.

At the same time, there is an enormous opportunity for Brazil to tap into its vast potential and develop a forest plantation sector that would be able to satisfy local and help meet global demand for tropical hardwoods. Most high grade, tropical hardwood production from natural forest globally is still unsustainable and will not be enough to satisfy growing demand. Brazil could play a leading role in developing a supply for a new tropical forest product (short rotation teak) that is relevant globally with the local benefit of a making a contribution to reducing deforestation in tropical forests while enhancing carbon stocks and achieving biodiversity conservation.

Figure 1: Image of area typical for where planting will take place

³ Brazil Low-carbon Country Case Study, World Bank Group, 2010.



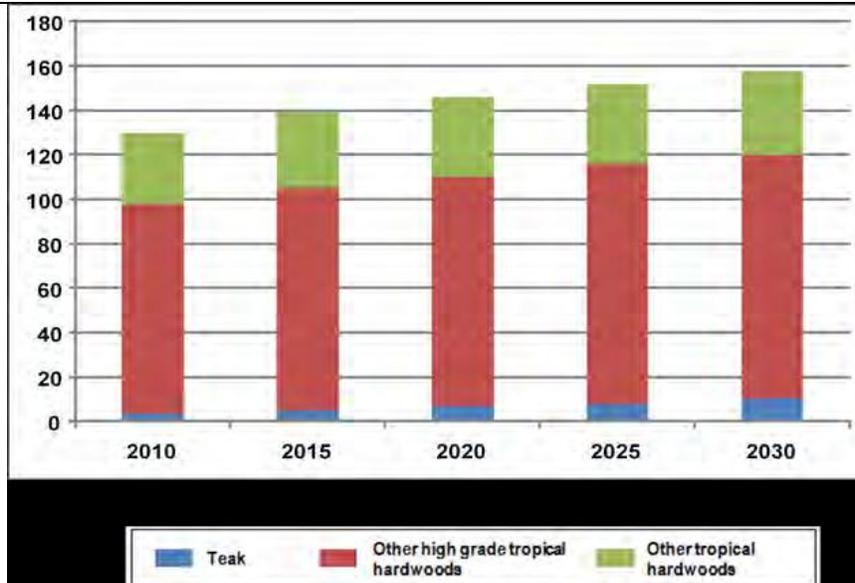
Sector Context: Global Teak Industry Overview

Teak (*Tectona grandis*) is one of the most valuable high grade tropical hardwoods in the world due to its unique durability properties and aesthetic qualities. Its reputation for excellent wood quality stems from its sought-after properties, which include: strength with lightness; durability; dimensional stability; corrosion-resistance when in contact with metals; ease of working and seasoning; termite, chemical, fungus and weather resistance, water resistance. Such properties have made it a prized wood for a wide range of traditional and contemporary end-uses including for furniture and joinery, veneers, flooring and marine applications.

The market for high grade tropical hardwoods estimated at about 100 million cubic meters (m³) per annum in 2010 is expected to increase to a minimum of 120 million m³ per annum by 2030. (Figure 2) The demand for teak was estimated at 3.5 million m³ in 2010, representing roughly 3.5 percent of the global hardwood market. Teak demand is also expected to increase driven by several factors, including population growth with an increasing purchasing power of middle income countries, and economic growth leading to increased demand of furniture (furniture manufacturing, outdoor furniture, wood flooring, marine boats, and luxury items among others).

Figure 2: Global demand – Tropical Hardwoods (million m³/annum)⁴

⁴ Source: "Teak Market and Production," 2010. Internal IFC internal report based on industry studies researched by forestry consultancies Indufor and Poyry



A significant percentage of high grade tropical hardwood demand, however, is supplied from unsustainable and illegal logging. It is estimated that illegal logging accounts for 50-90% of the volume of forestry activities in key producer tropical forests, such as those of the Amazon Basin, Central Africa and Southeast Asia, and 15-30 per cent of all wood traded globally⁵. In particular, natural or “old growth” (more than 60 years to maturity) teak is currently only supplied from Myanmar, where a teak log export ban is to be phased-in beginning in 2014.

High quality plantation teak typically has higher percentage heartwood, longer, straighter lengths and fewer defects from timely thinning and pruning, and can substitute natural teak in most applications thus helping offset demand from unmanaged tropical forests. Meeting future demand for high grade tropical hardwoods on a sustainable management basis will require large areas (est. 10 million ha) of high grade tropical hardwood timber plantations (such as teak), supplemented by supply from limited areas of sustainably managed natural forest. At this time, the total area of tropical hardwood plantations total approximately 4 million ha – of which plantation teak makes up an estimated 2.5million ha – and thus falls well short of this required area of 10 million ha.

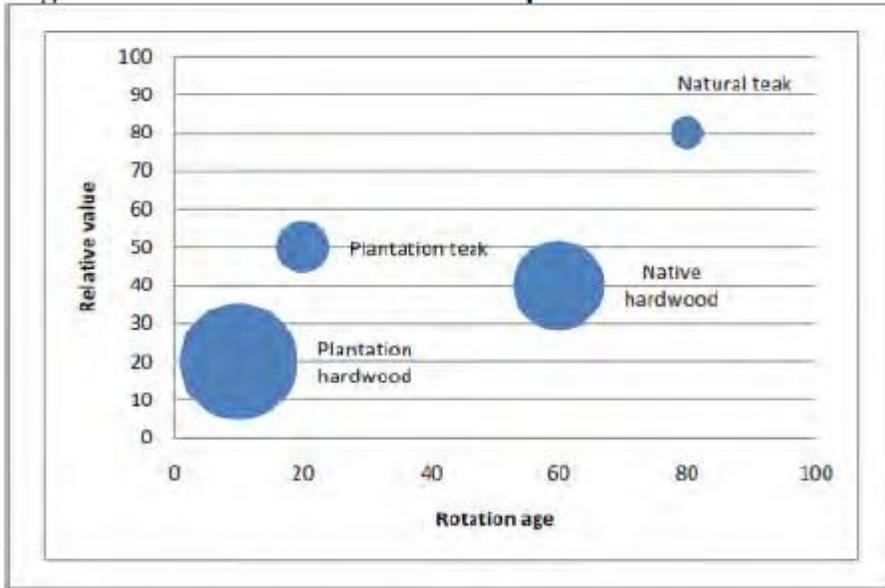
Moreover, countries like India and Indonesia that have the largest long-rotation teak plantation areas (40% and 30% respectively of total global production), do not have the genetic base and propagation techniques found in Brazil nor do they have the advanced silviculture practices which can accelerate growth, improve wood characteristics, and reduce rotation length. Many of these areas are often not being replanted due to urban encroachment since the middle of the last century. In short, globally there is a declining supply of teak in the face of growing demand.

Plantation teak now competes with, and is fast becoming the wood of choice based on cost-benefit for many applications over wood from natural forests as well as other plantation species due to its intrinsic teak quality

⁵ Source: Interpol - <http://www.interpol.int/Crime-areas/Environmental-crime/Projects/Project-Leaf>

(resistance to drought, fire, pest, and its multi-purpose uses), and suitability for a wide range of end-users. Additionally, most of the other tropical hardwoods that have been grown in plantation formats have had significant problems with pests, whereas plantation teak has proven to be pest-resistant. For these reasons, plantation teak is gaining in recognition as a high value tropical wood. This is reflected in its current indicative value positioning in the total hardwood species market (Figure 3).

Figure 3: Indicative position of plantation teak in the total hardwood species market⁶



Sector Context: Plantation Teak in Brazil

In addition to the rising global demand, Brazil’s domestic demand for teak is anticipated to increase because of the country’s GDP growth, increasing middle-age population, and a growing urban middle class consumer market (Brazil’s middle class is expected to increase by about 24 million people over the next decade).

On the supply side, teak wood is used in applications which most often compete directly with other tropical hardwoods from the Amazon including Ipe, Cumaru, Jatoba and Garapa. These tropical hardwood species grow in the native Amazon forest where total merchantable yields of all species are estimated to be less than 1 cubic meter per hectare. The high value species are generally a minority in any management unit of natural forest and typically less than 0.3 cubic meter per hectare per year. In contrast, short-rotation teak growing at about 15 cubic meter per hectare per year means each hectare of teak will produce the equivalent of 45 hectares of high value species as a single hectare in the Amazon. Thus, developing short-rotation teak provides a *viable* opportunity to remove pressure from the native forests and provide the basis for development of value-added forest industry in Brazil to meet local and global demand.⁷

⁶ Source: “Teak Market and Production,”2010. Internal IFC internal report based on industry studies researched by forestry consultancies Indufor and Poyry.

⁷ Currently more than 87% of the decreasing natural forest harvested in Brazil (21 million m3/annum) is supplied to the domestic market, of which its estimated about one-third is illegally logged. Brazil has a very impressive and sophisticated system for timber-tracking as well as a robust system

Fortunately, Brazil also has some of the most favorable natural conditions for growing plantation teak. Despite this potential there are some significant barriers that limit the ability of the private sector to capitalize on it.

1.3. Barriers for market transformation:

a) Lack of track record - *Short rotation* plantation teak is not yet well accepted in the traditional natural forest teak market for a few reasons. First, *short-rotation* teak is a relatively new product, made possible due to improved silviculture, genetics, and management practices that are more recent and, therefore, there is a lack of historical information about this product. Second, there is an unsubstantiated perception that short rotation teak is inferior to long rotation teak. And without large volumes available for sale to date, an international wood-grading system for plantation teak has not yet emerged, such as the one for natural teak wood. Due to these reasons, there is a limited empirical track record for the production and use of intensively grown or *short-rotation* teak.

b) Lack of adequate finance (long term, patient investment) - The cycle for *short-rotation* teak is completed in 22 years on average, during which there will have been three thinnings. Thus the activity requires a long investment horizon and large upfront investments in land and capital-intensive planting. The return on investment is concentrated at the back-end of the 22 years (although there are modest cash flows from lower value thinnings around years 7, 12, and 17). To achieve maximum merchantable volumes, weeding, thinning, and punning must be meticulously conducted or the desired market value will not be attained.

Existing financial products from both private and public sources is not well matched to the long-term funding required to cultivate teak, which requires long-term, patient equity. A few companies that have attempted to achieve scale in teak plantations did so without sufficient equity backing and have been facing solvency issues because the debt that they raised does not match the rear-ended cash flows from their assets and the need to actively manage plantations through final harvest where value aggregation is captured. The limited financing available from some government programs are mainly for small-scale production, which will not achieve the planting scale needed for wood milling nor will it be able to sufficiently address the increasing demand for tropical hardwoods.

The proposed Project exemplifies some of the challenges of raising funds in this sector since the company has unsuccessfully tried to raise adequate financing since 2007. Due to the early stage of development of the Project, with major positive free cash flow expected only in the mid-2020s, the only potential equity investor to date is IFC.

c) Compliance requirements - The Government of Brazil is to be commended for having among the most stringent requirements for conservation set-asides in the world. The Legal Reserves (RL) and Permanent Protected Areas (APP)

for allocating and managing rights to harvest. The country has an institutional, normative and policy structure with proven capacity to reducing deforestation and promoting sustainable use of natural resources, especially in the Amazon. Some timbers supplied to the market, however, are still originated from illegally logging. "Illegal Logging and Related Trade - Indicators of the Global Response". Chatham House, 2010.

provisions are extremely important to protect biodiversity and water resources which arguably accrued largely to the public through improvements in environmental amenities. At the same time, the private sector must factor in these RL and AAPs requirements in its financial planning and land acquisition strategy. In the case of the proposed project, the total RL and APP set aside areas will be around 40% of all land owned by the potential client and the costs for protecting and restoring them are part of the client's valuation and cash flow. Moreover, the client is committed to managing its forest lands to the highest internationally recognized sustainable forest management standards and third party verification systems, which thus far return limited market premium.

In short, lack of track record of large scale reliable supply of high grade plantation teak (sufficient to service demand from buyers with high level of confidence) in conjunction with the very long investment horizon needed for plantation teak limit the appetite of commercial minded investors (including DFIs) for this product. Until investors have a better understanding of the product, the benefits of its positive environmental impacts, and sufficient visibility of expected returns, the lack of financing available will limit the development of *short-rotation* teak plantations at scale. The role of the FIP funds is therefore critical to provide funding not currently available from commercial sources and to attract other investors, enabling the company to implement the Project at a sufficient scale. Therefore USD15 million FIP equity investment is being requested to help the Project complete the existing financing gap.

1.3. Project Summary:

The IFC-FIP Brazil Project will support the development of a new forest product (*teak from short rotation*) on modified habitat in the Cerrado biome. The Project will address some of the challenges for this sector described in section 1.3. It will target and apply FIP funds in the form of long-term patient capital (equity) to finance an experienced private sector company from Brazil with a proven track record in their pilot project and a team with extensive experience in silviculture to develop *short-rotation* teak plantation. The goal is to help demonstrate the viability of financing sustainable teak plantations, which can increase carbon stocking, while reducing pressure on natural forests and protecting the region's remnant and threatened cerrado.

The Project will support the investee company's efforts to complete planting 18,000 hectares of land that has been converted to farming decades earlier. The teak will be grown on a 22-year cycle to allow three thinnings and a final harvest over the rotation period. To comply with environmental regulations and set asides for conservation required by Brazilian law (RL and APP), the company provisions for planting on average 60% of a given ha owned

Funding from FIP in the form of equity financing in local currency will enable the Project's specific financing need for long term, patient capital and in doing so, demonstrate the business case for a commercially viable activity with strong climate, environmental and social benefits to catalyze market transformation.

The proposed Project seeks to demonstrate a sustainable business model at scale which is competitive and more profitable than illegal logging and conversion of cerrado into other land use activities that result in high GHG emissions. Moreover, the Project will also demonstrate approaches for the private sector to consolidate the Legal Reserves and Permanent Protected Areas which form the backbone of biodiversity conservation and watershed protection, while

ensuring financial viability.

1.6. Describe the Proposal's strategy for achieving market transformation

The Project will have a transformational role in the Brazilian forest plantation sector by supporting early success in a new integrated forestry and wood product line which has solid potential to grow at the necessary scale to meet increasing local and global market demand as well as avoid pressure on natural forest. The Project will also be transformational by demonstrating a sustainable forest management practice which promotes inclusion of biodiversity conservation and ecosystem services at scale.

Currently, market incentives drive conversion of forests to other land uses including agriculture and ranching. FIP resources are needed to consolidate a business case for sustainable forest management that leads to substantial carbon sequestration and enhanced environmental services (including biodiversity, watershed protection and recreation) in a global market that still needs forestry incentives to make innovative projects viable and accelerate market transformation.

FIP Funds will support the demonstration of a business model at a *large enough scale* which is competitive and more profitable than illegal logging and unsustainable forest management, as well as more competitive than other land use activities that result in high GHG emissions and put pressure on natural forests. Moreover, by supporting pioneering companies that work *beyond environmental requirements* to implement initiatives that increase the quality and management of conservation areas, the proposed project will also demonstrate approaches by the private sector to consolidate RL and APP requirements of the Brazilian law into its business operations while ensuring that its financial viability.

2. FIT WITH INVESTMENT CRITERIA

2.1. Climate change mitigation potential:

IFC estimates that the project plantation is expected to lead to a net positive change in GHG sequestration of 100,000 tCO₂e per year and a total of 1 million tCO₂e over the first 10 years of the Project. Over the lifecycle of 30 years the estimated net sequestration is 2.4 million tCO₂e.

It should be noted that the GHG estimates were prepared using CAT-A/R (Carbon Assessment Tool- Afforestation and Reforestation developed in 2010-11 by CATIE (Centro Agronómico Tropical de Investigación y Enseñanza⁸) with World Bank support. IFC chose the most conservative scenario and is a minimum estimate for the new plantations only. For example, early thinnings were calculated as net emissions from the site and the estimate does not include carbon tied up in products such as fencing poles. It also does not include reduced emissions associated with avoided deforestation and forest degradation from natural forest. Moreover, it does not include carbon sequestered in the permanent protection and legal reserve (APP and RL) areas, which amount to approximately 40% of the total land

⁸ <http://catie.ac.cr/es/>

owned by the company and designated to the Project. The calculations also do not include any plantings that were conducted prior to IFC's investment.

Reforestation and addition of significant soil carbon will also have a positive impact on surface water balance and improve the region's drying microclimate. Also, the Project will provide waste from wood processing activities to local agro-processing facilities that will substitute biomass partly derived from the clearing of native forest and vegetation.

2.2. Demonstration Potential at Scale:

FIP's participation in the Project provides the critical support to early movers of a nascent but growing sector to demonstrate the business case to later entrants, and this demonstration effect will unlock new/other long-term investors for sustainable forest management at scale.

As described in the previous sections, the country is endowed with climatic conditions and soil characteristics that favor growth rates for production forests. Additionally, Brazil has some of the world's most advanced wood-production technologies and R&D based on fast-growing, high-productivity clones as well as the enabling infrastructure and access to markets, including rapidly expanding domestic industry. Despite these strengths, Brazil still faces a number of market barriers for forest plantation resulting in a deficit of plantation forests. Funding from FIP fills a critical gap of the financing package to the project that will enable the company to achieve a 22-year rotation which is short for teak but at present is too long for commercial sources of finance in the absence of a track record of a short rotation teak project that has established itself successfully at scale.

The Project is an opportunity to provide a demonstration effect for financiers how a well-managed project with sufficiently patient capital can achieve the scale that makes it effective to integrate downstream processing and achieve other economies of scale, making it easier for well-conceived plantation projects that will also substitute for tropical hardwoods from native forest to be funded in the future.

2.3. Cost-Effectiveness:

Based on the GHG calculations and the FIP investment of US\$15 million, the implied direct GHG reductions per FIP financing will be roughly to US\$ 6/tCO₂, based on total net positive change in GHG sequestration of 2.4M tCO₂e over 30 years of the project cycle.

2.4. Implementation Potential:

This Project has all the elements to start implementation immediately.

2.5. Integrating Sustainable Development (co-benefits):

The proposed Project is in a region where local economic structure is very dependent on extensive cattle grazing and

the mechanized cultivation of soy and corn. With a growing population, which has doubled in the last decade and growing awareness of the danger of commodity price fluctuations, local governments aim to diversify the economy. Establishing teak plantations and value-added processing offer alternative means for economic development in the region which are fundamental for the well-being of the population. Moreover, as plantation forestry is more labor intensive than cattle grazing and soy/corn production, there is a net increase in jobs generated by the project and its contractors (within the formal sector with respect to its employment and benefit practices). The potential client and the small companies that it contracts would add an estimated 400 jobs, and it is expected that female employment will represent about 20% of total jobs created. What is also important is that in addition to employment in silviculture, the scaling up of the project to integrate sawmilling will add value-added, manufacturing jobs in a region where the economy includes little value-added processing. The benefits of the Project therefore include reducing the local economy's dependence on the production of a narrow range of commodities, job creation and development of higher value-added jobs, and an increase and diversification of the local tax base.

The Project is expected to result in sustainably managed forests that will be FSC certified. This would set a good precedent in the country for forestry outside of the large scale pulp and paper plantations which rely entirely on using pine and eucalypts. Smaller scale and natural mosaic-based plantings of high value tropical hardwoods will help protect watercourses and remnant natural forests in the APP/RLs which form the basis for the region's rich biogeography and vital corridors for migratory species.

In sum, the potential client has demonstrated strong commitment to biodiversity and ecosystem conservation *beyond* compliance with legal requirements by pursuing initiatives that aim to increase the quality and management of HCVA and the region's natural resources. The Project has the potential to significantly improve the protection of biodiversity and ecosystem services in the company's holdings and provide a working model which can be leveraged by other landholders in the region as they manage their own APPs and RLs. Beyond the region and country in which it operates, where set-aside requirements are less stringent, the Project serves to demonstrate that silviculture can be financially viable while pro-actively promoting the conservation of about 40% of its landholdings. Also, IFC has used Integrated Biodiversity Assessment Tool (IBAT) to determine if the Project would have an impact on critical habitats and Indigenous Reserves. The analysis has indicated that the Project will not have impacts such areas.

2.6. Safeguards

The IFC's Policy and Performance Standards on Environmental and Social Sustainability (2012) include: Assessment and Management of Social and Environmental Risks and Impacts; Labor and Working Conditions; Resource Efficiency and Pollution Prevention; Community Health, Safety and Security; Land Acquisition and Involuntary Resettlement; Biodiversity Conservation and Sustainable Management of Living Natural Resources; Indigenous Peoples; and Cultural Heritage⁹. Additionally, any client of IFC will have to operate within the confines of the IFC's General Environmental, Health, and Safety (EHS) Guidelines, EHS Guideline for Plantation Crop Production, EHS Guideline for Forest Harvesting Operations, and the EHS Guideline for Forest Harvesting Operations. Moreover, the Project will comply with all Brazilian legislation and in particular the forest code and labor laws. Besides financial, legal and credit due diligence, integrity due diligence is an essential component of IFC's overall due diligence efforts for any

⁹ For information on IFC Performance Standards see: www.ifc.org/sustainabilityframework

engagement with outside parties.

During IFC's appraisal the company's operations were assessed against IFC's policies and Performance Standards (PS) described above and found to be substantially compliant.

IFC has dedicated over eight months into its appraisal which involved two experienced foresters, three financial experts in addition to the IFC's core investment team, and required several months of company preparation, including many stakeholder interviews. Also, the local authority—the State Environment Secretary (referred to as SEMA)—has confirmed that the company has demonstrated consistent compliance with APP and RL requirements.

2.7. Financial Sustainability

The role of FIP funds is to support early movers to demonstrate the business case for later entrants by filling the financing gap that will enable the Project to reach scale and ultimately achieve returns to its investors. Over time, the track record established by this Project, will make it easier for institutional and other commercial investors to invest in plantation forestry (beyond eucalyptus and other species which grow on very short cycles), gradually reducing the need for support from donor sources

2.8. Effective Utilization of Concessional Finance

FIP funds will be deployed in the form of equity to fill in the financing gap and address the lack of suitable financing barrier faced by projects that need large upfront investments but that will generate returns only in the long run. Large-scale forestry development has never occurred without forestry incentives schemes that helped balance the playing field with the agriculture sector which, for several decades, has had a negative impact in natural forests and ecosystems¹⁰. IFC's experience in forestry around the globe and use of novel financial products in the region can help build an important model for replication in Brazil and elsewhere. The Project will be the first under the Climate Investment Funds to make use of equity as a financing mechanism. Experiences and lessons from it will be of value to inform new financial structures being developed to tackle the needs and challenges of climate finance.

3. Performance Indicators

Expected Results and Indicators (using FIP indicators)

Results	Indicators
a) CO2 sequestered through afforestation and reforestation activities	Approximately 100,000 tCO2e per year, for a total of 1 million tCO2e over 10 years of the project and 2.4 million tCO2e over 30 years ¹¹

¹⁰ Douglas Southgate. 1998. *Tropical Forest Conservation: An Economic Assessment of the Alternatives in Latin America*; Rigoberto Stewart and David Gibson. 1991. *Environmental and Economic Development Consequences of Forest and Agricultural Sector Policies in Latin America: A Synthesis of Case Studies of Costa Rica, Ecuador, and Bolivia*.

¹¹ Project related GHG emissions are estimated using the World Bank Carbon Assessment Tool for Afforestation and Reforestation (CAT-AR) developed in 2010-11 by CATIE (Centro Agronómico Tropical de Investigación y Enseñanza) with World Bank support.

b) Sustainable management of forests and forest landscapes to address drivers of deforestation and forest degradation	18,000 Ha of sustainably managed forest plantations certified by FSC or equivalent.
c) Jobs created	400 direct, formal-sector jobs at the Project's plateau level of operations, including skilled employment, which is very rare in the region.

4. Other

The Project complements the various initiatives developed under the Brazil FIP Investment Plan and directly supports the objectives of the Investment plan to address deforestation and enhancement of carbon stocks in the Cerrado. IFC and the Government of Brazil are currently under discussion to ensure that experiences from the Project are captured and disseminated to the government and other stakeholders that could benefit the implementation of ABC Plan and other efforts of the government to expand planted forests in Brazil.