Project Identification Note (PIN)

This document has a guideline objective for Green Farm CO2FREE`s Payment for Ecosystem Services – PES Carbon, covering its potential to generate ecosystem credits (carbon). All estimates presented are preliminary and do not give any right to obtain carbon credits, which are subjected to adequacies and the resulting reduction on GHG emissions or enhancement of anthropogenic net positive balance of sequestration and storage of carbon (removal of atmospheric CO2) from the project activities.

PROJECT IDEA NOTE

A. Project description, type, location and schedule

Name of Project: Fazenda Porto Bonito and Green Farm BiRCS

Technical summary of the project ***Date submitted: xx/xx/2024***

Objective of the project	The objective of the project is to introduce tested and proven **BiRCS** tree-based "Forestry System" management to improve Harvested Wood Products (HWP) including biochar, Non-Timber Forest Products (NTFP), and carbon removals from soil application in Itaquirai, MS, Brazil. The proposed project interventions through development and promotion of high-quality planting materials will transform the natural yields with higher returns through principles of improved forest management (IFM), HWP and NTFP production, ending up by biochar soil application.
Project description and proposed activities	A Project of Improved Forest Management activities with tree species for the production of industrial wood and Non-Timber Forest Products (NTFP) including biochar, with the purpose of removing and stocking atmospheric CO2, enhancing water availability and improving soil condition and quality. Activities include inventories and implementation and management of forestry treatments. The project will promote forestry systems to intercrop suitable HWP and NTFP production. The project will also produce biochar and apply it to the soils within the region. The project has a pilot focus area of about 4,654 ha covered by different land uses including 3,659 ha of degraded secondary forests as showed at the Table:

Nome do Imóvel Rural	Município	UF	Área Total	Consolidated	APP	AVN	RL
			(ha)				
Fazenda Porto Bonito	Itaquirai	MS	2254	1088	158	1101	451
Fazenda Green Farm	Itaquirai	MS	2400		2000	400	

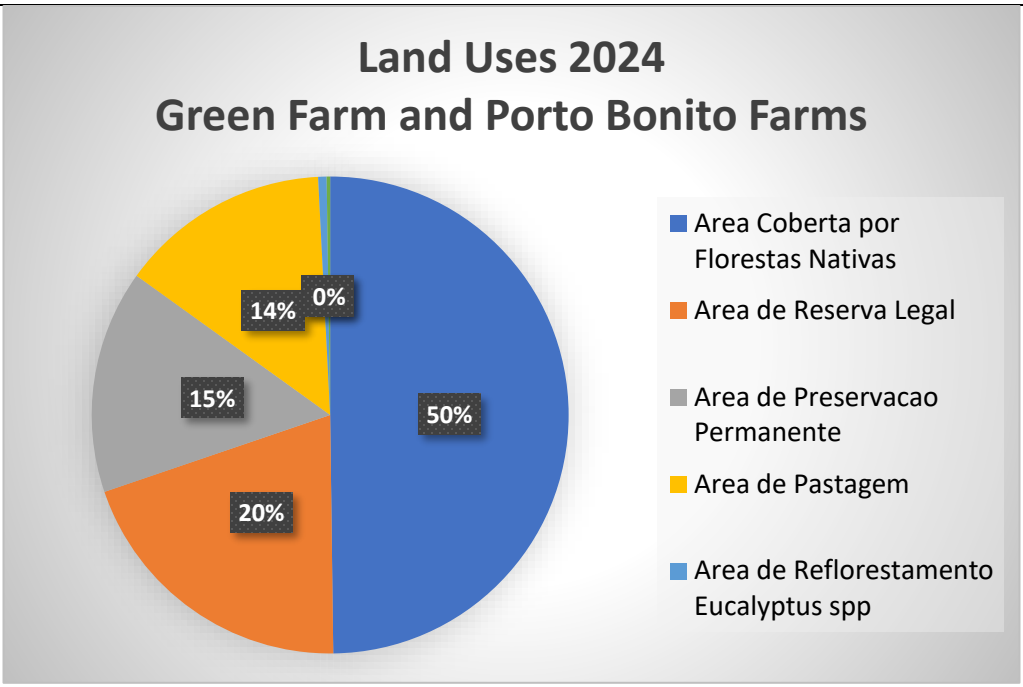
Landscapes of different native and introduced vegetation, as well as degraded areas that should be reforested or restored in a holistic approach with other land uses. The area of 4,654 ha corresponds to two properties under a single company located at Itaquirai, Mato Grosso do Sul state, Brazil. With the BiRCS AR-IFM-HWP-Biochar-SOC program of activities owned by Green Farm CO2FREE cultivating trees and participating at forestry production chain.

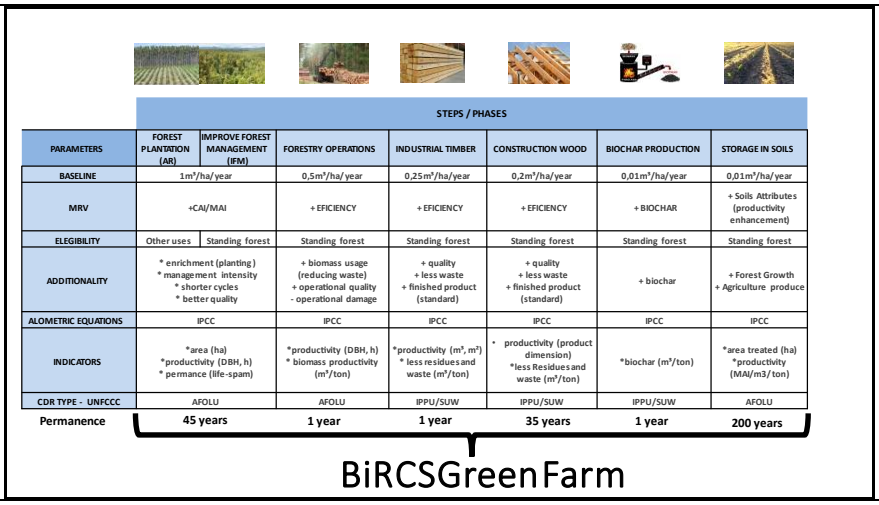
	The different project activities, HWP, biochar and land use borders and their monitoring will be subjects of the BiRCS MRV methodology registered by Foundation of Forestry Research from Federal University of Parana FUPEF version 1.0 (2024). FUPEF is a Brazilian institution of national reference in the forestry sector. The plots and their management are under the Green Farm CO2FREE which is responsible for monitoring and hiring 3rd parties' auditors to validate and verify project activities.
Technology to be employed	Integrated management of rural property, including environmental liabilities and a set of activities. Specifically, reforestation, avoided degradation of areas and improved forest management with native and introduced tree species seedling aiming at obtaining industrial and energy wood, biochar and carbon credits, through estimates. 1. Improved forest management of secondary degraded tropical forest` stands by applying contemporary silvicultural treatments: 1.1 Selection of individuals for establishing seed and gene banks 1.2 Seed and provenance collections 1.3 Prescribed pruning and rejuvenation of non-productive, aged trees 1.4 Nursery establishment of improved individuals through seed-based and seedless plant propagation 1.5 Planting and plantation regeneration 1.6 Selective and prescribed thinning 1.7 Biomass and timber harvesting 1.8 Biochar production 1.9 Biochar application to soils 2. Baseline and monitoring of Atmospheric CO2 removals and stocking 2.1 Baseline estimation of carbon pools and stocks 2.2 Projection of carbon stocks by different scenarios of IFM, tree species` orchard rejuvenation, and tree density management. 2.3 Adapting MRV procedures for land use sector (AFOLU) and landscape restoration 2.4 including the production chain of industrial, energy and biochar 2.5 Monitoring SOC under biochar application

Project developer	
Name of the project developer	a.Green Farm CO2FREE b.Fazenda Porto Bonito c. Fazenda Green Farm
Organizational category	**a.** Private company
Other function(s) of the project developer in the project	**a. Sponsor** **b.** Technical advisor **c.** Activities implementation
Summary of the relevant experience of the project developer	Green Farm CO2FREE has been engaged by Fazenda Green Farm and Fazenda Porto Bonito to provide required technical advice and support for the proposed forestry intensification and soil biochar program. The Green Farm CO2FREE team members have relevant experience in the region. Green Farm CO2FREE deals with the recovery, maintenance and monitoring of vegetation in the areas. Carbon projects are consultative in nature. Through the preliminary diagnostic study, rural landowners receive a quick analysis of their potential to generate carbon credits, based on the activities that are already carried out in their areas (or under analysis), in order to establish the volumes of gas that are being removed. and stored by them. The function is to publicize this initial data, presenting the project proposal to any clients interested in the benefits generated by these activities. Owners are responsible for the information, and Platform for Business with Ecosystem and Environmental Goods and Services PNBSAE digital registry performs independent registration and disclosure to interested parties. The development of the carbon project will be carried out by Green Farm CO2FREE that will guide the owner on the project preparation, actions, monitoring, validation and verification of carbon credits that may be placed on the market. All personal under Green Farm CO2FREE will be updated on the latest developments related to technical and marketing aspects for ecosystem services, including carbon. The direction and management of the proposing company will be assisted by a team of professionals from different areas involved, serving as technical advisors for the implementation and monitoring of project activities.
Address	BR 487, km 123
Contact person	Marcelo Mammana
Telephone / fax	5511-944419723
E-mail and web address, if any	www.greenfarmco2free.com.br
Project sponsors	
(List and provide the following information for all project sponsors)	
Name of the project sponsor	Green Farm CO2FREE
Organizational category	a. Private
Address (include web address, if any)	BR 487, km 123
Main activities	The Green Farm CO2FREE has been established with the aim of organizing biomass industry, improving quality, yields and trade reducing volatility and maintain an acceptable price level. Biomass are still being shipped for processing and value aggregation along the production and service chains are under development, focusing

	on generating Jobs and enforcing a gender agenda in favor of women empowerment.
Summary of the financials	
Type of the project	
Greenhouse gases targeted	**CO_2**.
Type of activities	**CO_2 Removal, transfer to products and soil storage (biochar)**
Field of activities	Forestry, HWP, Biochar, SOC
BiRCS	**Biomass Removal and Carbon Storage**
Location of the project	
Region	LAC
Country	Brazil
City	Itaquirai
Brief description of the location of the project	Green Farm is located at the margins of Parana River, 6km from BR 487, km 123 by a secondary road. It is about 180km far from Corumba airport in Mato Grosso do Sul.
Expected schedule	
Earliest project start date	2024/2025
Estimate of time required before becoming operational after approval of the PIN	Time required for financial commitments: 06 months Time required for legal matters: 06/12 months Time required for negotiations: 06/12 months Time required for field implementation: 12/24 months
Expected first year of carbon credits – tCO2e validated	Year 2025
Project lifetime	Number of years : 15 years, renewable twice (45 years total)
Current status or phase of the project	**Identification and pre-selection phase** / At this point we are on initial identification and pre-selection phase, with assets under scrutiny by Green Farm CO2FREE and officials in order to identify sites and strata.
Current status of the acceptance of the Host Country	The National Designated Authority NDA is waiting on the present document to be forward for review
The position of the Host Country with regard to the Paris Agreement and Glasgow Pact	The Host Country a. signed or acceded to the Paris Agreement and b. is a Party to the UNFCCC. *(mention what is applicable)*

Estimate of Greenhouse Gases abated / CO_2 Sequestered (in metric tons of CO_2-equivalent)	Annual: TOTAL Carbon stock per 4,654 ha of land, 700 ha of AR and 1,600 ton of biochar Up to and including 2025: 10,800 tCO_{2e} Up to a period of 15 years: 172,800 tCO_{2e} Up to a period of 30 years: 345,600 tCO_{2e} Up to a period of 45 years: 518,400 tCO_{2e} Note: The above figures are merely indicative and was taken from secondary sources (published literature). However, the actual data will be collected during activities in the pilot phase
Baseline scenario	A6/ITMO projects must result in GHG emissions being lower than "business-as-usual" in the Host Country. At the PIN stage questions to be answered are at least: • Which emissions is the proposed A6 Mechanism (A6/ITMO) project displacing? Secondary degraded forest sites are aged and non-productive which determines its status emitting CO2 from total oxidation of old stands, these will be displaced by revitalization of plantations which will enhance atmospheric CO2 removals. Acid soils also demand high inputs from chemical fertilization and biochar application will reduce emissions from this as well. • What would the future look like without the proposed A6/ITMO project? Without the project activity the project the secondary degraded forests will suffer further degradation and eventually end up by dying of age without any new reforestation going on, with the tendency of turning into a disperse vegetation from atmospheric CO2 fertilization and land use change. • What would the estimated total greenhouse gas (GHG) removals be? The proposed project has five major implications. The first one is on greenhouse gas (GHG) reduction by means of avoiding all synthetic fertilizers in establishment of tree plantations. The project is proposed based on the principles of low carbon and therefore, it is expected that important amounts of CO_2 emissions can be reduced per year. The second one is on actual Carbon removals by growing trees. It is estimated that since the beginning of interventions as well as by 15th year about 10 tCO_2 will be sequestrated per hectare by tree plantations. HWP removal keep the forest productive and healthy, reducing risks of spreading infectious diseases and wild fires while generating jobs, income and further atmospheric CO2 removals. Biochar production transforms biomass residues into high aggregated value soil enhancement technology, also generating jobs and income while storing atmospheric carbon into a useful product. Finally, application of biochar to acid soils rehabilitates productivity and enhance pH up to 7.7 when needed, storing some 20 tCO2e / ha. The project baseline involves two specific project activities: 1. Reduction of emissions from degradation of secondary degraded forests and use of chemical fertilizers 2. increase of atmospheric CO2 removal and stock with IFM improved forest management and HWP and biochar traceability to soils. The replacement of vegetation areas by other land uses is a consequence of population growth and the demand for food, fiber, housing, infrastructure and others. Secondary degraded forests are due to disappear when not rehabilitated to a productive state. The methodology used is AR-IFM-HWP-BIOCHAR-SOC FUPEF v 1.0 (2024). In the case of degraded areas their use for non-forest purposes implies increased pressure and a consequent worsening of soil conditions, with an increase in total annual emissions. Without the project, secondary degraded forested and cultivated areas would increase annual emissions.
For sequestration projects only: Existing vegetation and land use	*(What is the current land cover and land use? Is the tree cover more or less than 30%?)* Currently, the AR-IFM-HWP-BIOCHAR-SOC Green Farm CO2FREE project area covers 4,654 ha and 700 ha of AR referring to the areas of grassland proposed at local scale. The area for the pilot project comprises different land cover and land use:

	 Land uses amongst which are Native vegetation (50%), Legal Reserve (20%), Protected Areas (APP – 15%), grassland (14%)
Additionality Please explain which additionality arguments apply to the project: (i) there is no regulation or incentive scheme in place covering the project (ii) the project is financially weak or not the least cost option (iii) country risk, new technology for country, other barriers (iv) other	*Use the tool from UNFCCC of specific for the MRV methodology applicable* (i) there is no regulation or incentive scheme in place covering the project activity of restoring secondary degraded forests with integrated forestry management to improve HWP, biochar and carbon production for soil applying (ii) the project is financially weak due to the necessity of having up-front investment on genetic improvement, seedling and nursering, plantation and replantation, silvicultural treatments, harvesting, buying machinery, equipment and others (iii) It is a new technology for the country, an alternative land use that combines best forestry practices and carbon accounting in order to increase productivity, enhance SOC and generate carbon credits (iv) BiRCS / CDR the project looks into integrating forestry and HWP/NTFP, including biomass for biochar, in order to identify the positive footprint of forestry products and have them certified as such, an additional carbon removal and transfer accountability that allows to implement further project activities directed towards increasing consumption to enhance carbon stocks in society
Leakage	Existing secondary degraded forests and local soils are to be regenerated by planting and land management applying biochar, which should generate biomass from integrated system management, thereby increasing yields within existing boundaries with no foreseen effect related to transfer of activities to other areas. Leakage and other emissions resulting from project activities implementation, management and monitoring are to be included within carbon credits generation estimates and monitoring
MRV Methodology	BiRCS AR-IFM-HWP-BIOCHAR-SOC FUPEF v 1.0 (2024)



PARAMETERS	STEPS / PHASES						
	FOREST PLANTATION (AR)	IMPROVE FOREST MANAGEMENT (IFM)	FORESTRY OPERATIONS	INDUSTRIAL TIMBER	CONSTRUCTION WOOD	BIOCHAR PRODUCTION	STORAGE IN SOILS
BASELINE	1m³/ha/ year		0,5m³/ha/ year	0,25m³/ha/year	0,2m³/ha/year	0,01m³/ha/year	0,01m³/ha/year
MRV	+CAI/MAI		+ EFICIENCY	+ EFICIENCY	+ EFICIENCY	+ BIOCHAR	+ Soils Attributes (productivity enhancement)
ELEGIBILITY	Other uses	Standing forest	Standing forest	Standing forest	Standing forest	Standing forest	Standing forest
ADDITIONALITY	* enrichment (planting) * management intensity * shorter cycles * better quality		+ biomass usage (reducing waste) + operational quality - operational damage	+ quality + less waste + finished product (standard)	+ quality + less waste + finished product (standard)	+ biochar	+ Forest Growth + Agriculture produce
ALOMETRIC EQUATIONS	IPCC		IPCC	IPCC	IPCC	IPCC	IPCC
INDICATORS	*area (ha) *productivity (DBH, h) * permance (life-spam)		*productivity (DBH, h) * biomass productivity (m³/ton)	*productivity (m³, m²) * less residues and waste (m³/ton)	* productivity (product dimension) *less Residues and waste (m³/ton)	*biochar (m³/ton)	*area treated (ha) *productivity (MAI/m3/ton)
CDR TYPE - UNFCCC	AFOLU		AFOLU	IPPU/SUW	IPPU/SUW	IPPU/SUW	AFOLU
Permanence	45 years		1 year	1 year	35 years	1 year	200 years

BiRCSGreenFarm

Specific global & local environmental benefits	Increase in stock and atmospheric CO2 removals from tree plantations, HWP and biochar production, Reduction of carbon emissions from fertilizers and degradation of secondary degraded forests. Increase of SOC by biochar applying Reforestation, Conservation and enhancement of managed forests for the production of industrial and biomass wood materials, atmospheric CO2 removals and storage in rural property areas. Creating positive incentives for the increase of cultivated flora species, creating conditions for the conservation of local genetic variability.
Which guidelines will be applied?	IFM guidelines from ACR: https://acrcarbon.org/wp-content/uploads/2023/03/Improved-Forest-Management-Primer.pdf IPCC chapter 12 on HWP: https://www.ipcc-nggip.iges.or.jp/public/2019rf/pdf/4_Volume4/19R_V4_Ch12_HarvestedWoodProducts.pdf Biochar Guidelines from EBC: https://www.european-biochar.org/en/certificate Biochar to soil from International Biochar Initiative: https://biochar-international.org/wp-content/uploads/2023/01/IBI_Biochar_Application.pdf
Local benefits	- Crop diversity and sustainable land management - Improved yields - Healthy biomass - Resilient farms and families - Creation of “green” income and jobs, production of HWP and NTFP (biochar) and biomass of sustainable origin, Atmospheric CO2 removals and storage.
Global benefits	-Climate change mitigation -Healthy biomass -Support food security and livelihoods -Creation of “green” income and jobs, production of HWP and NTFP (biochar) and agrifood of sustainable origin, Atmospheric CO2 removals and storage.
Socio-economic aspects What social and economic effects can be attributed to the project and which would not have occurred in a comparable	Without the project activity, the secondary degraded forest and cultivated area would suffer further degradation and chemical fertilizers, compromising its productivity and healthy and emitting carbon into the atmosphere. Deforestation and soil degradation also compromises the availability and quality of water resources, in addition to unwanted changes in the local biodiversity or landscape. By introducing modern forestry techniques and integrating climate-smart tree-crop production with ecosystem services provision, the project contributes to the recovery of degraded areas, creates jobs and income and improves the region's microclimate and local livelihoods. With the management of forested areas to estimate and monitor carbon, jobs and income are generated, aimed at proving the quantity and quality of carbon held in stocks. The use of improved

situation without that project? Indicate the communities and the number of people that will benefit from this project.	forest management techniques can further increase local capacity building and also encourage exchange and transfers of knowledge/skills to communities and future generation. It is expected that over 65 direct and indirect jobs shall arise from this project. Furthermore, biochar machinery and soil application improve local skills and provide more opportunities to social and economic developed, being a model for local landholders and entrepreneurs.
What are the possible direct effects (e.g., employment creation, capital required, foreign exchange effects)?	-Sustainable land management leads to higher productivity. It generates more employment opportunities. -Quality biomass offers more opportunities to attract international markets (e.g forex) into the country. -Several direct jobs will be generated during the stages of seedling production and planting, in addition to others in the maintenance and monitoring of forest management. With forest harvesting and sustainable management, direct and indirect jobs are generated. With the estimated investment as on the Table:

AFOLU - IFM (2024-2030)				
1.	**Pre operational expenses**		**value**	**total**
1.1.	Planning (PIN and PDD)	700	50,00	35.000,00
1.2.	Forestry planning	700	50,00	35.000,00
1.3.	Land acquisition			-
1.4.	others			-
	Subtotal			*70.000,00*
2.	**Fixed investments**	**Qtty**	**Value**	**Total**
2.1.	reforestation	700	2.500,00	1.750.000,00
2.2.	maintenance	700		-
2.3.	harvest	700	-	-
	Subtotal			*1.750.000,00*
3.	**Initial capital**			**total**
3.1.	cash			
3.2.				-
3.4.				-
	Subtotal			-
	Total (1. + 2. +3.)			*1.820.000,00*

For planning, including forestry and carbon, the investment is around US$ 50 / ha, while reforestation with average 1,250 seedlings of US$ 3/seedling, demand US$ 1,750,000 for the 700 ha, while maintenance and harvest can be performed by locals. The volume of 7,000 m3/year would demand some 0,03 jobs per hectare (10% of what is expected from agricultural land use), creating new opportunities for other 21 people. The production of HWP also involves investments, as below:

CDR - Industrial Timber (2024-2030)				
1.	**Pre operational expenses**			**Valor**
1.1.	Planning (PIN and PDD)	1	50.000,00	50.000,00
1.2.	Industrial Timber planning	1	20.000,00	20.000,00
1.3.	Industrial Timber machinery	1	1.000.000,00	1.000.000,00
1.4.	others			-
	Subtotal			*1.070.000,00*
2.	**Fixed investments**	**Qtty**	**Value**	**Total**
2.1.	Storehouse	1.200	400,00	480.000,00
2.2.	Reposition	1	100.000,00	100.000,00
2.3.	Harvesting			-
	Subtotal			*580.000,00*
3.	**Initial capital**			**Value**
3.1.				-
3.2.				-
3.4.				-
	Subtotal			-
	Total (1. + 2. +3.)			*1.650.000,00*

The purchase an operation of a sawmill facility can or cannot be taken by the project developer, since local conditions are suited for consuming logs coming out from managed forests. Finally, the biochar machinery to process residues and other biomass, as follows:

CDR - Biochar to soils (2024-2030)				
1.	**Pre operational expenses**			**Valor**
1.1.	Planning (PIN and PDD)	1	50.000,00	50.000,00
1.2.	Biochar planning	1	20.000,00	20.000,00
1.3.	Biochar plant acquisition	20	30.000,00	600.000,00
1.4.	others			-
	Subtotal			*670.000,00*
2.	**Fixed investments**	**Qtty**	**Value**	**Total**
2.1.	Storehouse	1.200	400,00	480.000,00
2.2.	Reposition	1	200.000,00	200.000,00
2.3.	Maintenance	1		-
	Subtotal			*680.000,00*
3.	**Initial capital**			**Value**
3.1.				-
3.2.				-
3.4.				-
	Subtotal			-
	Total (1. + 2. +3.)			*1.350.000,00*

The application of biochar on soils is estimated at 8 ton/ ha, circa of 20 tCO2e/ha of carbon storage for periods way over 100 years. The project will generate jobs for estimating and monitoring carbon, in addition to guaranteeing the jobs of people working in the area. With carbon remuneration, the environmental quality of environmental goods and services in the region and properties is justified and guaranteed.

Global markets for environmental goods and services is to reach US$ 5 trillion of international trade in 2030. With carbon estimates, conditions are immediately generated for recognition of the environmental quality of environmental goods and services. The carbon from properties can be used to improve other national production chains. In fact, the total carbon content of this project is being published on the PNBSAE, which serves a national and international audience of companies that invest in environmental quality as an ESG practice.

training/education associated with the introduction of new processes, technologies and	The project introduces modern concepts of forestry and Payments for Environmental / Ecosystem

products and/or the effects of a project on other industries -	Services - PES, for the cultivation and maintenance of forests for the production of wood and biochar, in secondary degraded areas, using genetically improved species of flora. As a result, the project achieves high levels of annual increment and optimizes the profitability of the sites. This is a conceptual change in the cultivation of forest plantations in the sense of creating a modern, efficient and sustainable system for the production of wood and biochar with benefits that can be extended to the entire national territory, with implications for all forest science and practice. The proposed technology transfer on plant propagation and tree rejuvenation with high quality propagules will have tremendous impact on tree yields and plantations management. The higher yields will bring more revenue to the farmers. The processing plants will produce high quality biomass and fetch higher prices. -The tree orchards are currently being raised using traditional seedlings and therefore, plantations don't receive intensive care. This is the reason why the yields are low and unpredictable. Through the proposed activities (proposal) once high-quality scions are available in Tocantins state, it is possible to rejuvenate secondary degraded forests that are in different senile stages and farm management. -The youth women, and the under-privileged (differently abled) groups will have opportunity for training and capacity building on new technologies and develop entrepreneurship skills to undertake '**Nursery as Business**' to produce high quality planting stock for raising new trees` plantations. Production of industrial wood and residues for biochar with its application to soil involves a whole chain of direct and indirect jobs, creating more opportunities together with the expected increase on productivity while reducing external outputs dependency for land cultivation
Environmental strategy/ priorities of the Host Country / Sector Background Please describe the laws, regulations, policies and strategies of the Host Country that are of central relevance to the proposed project, as well as any other major trends in the relevant sector. Please in particular explain if the project is running under a public incentive scheme (e.g. preferential tariffs, grants, Official Development Assistance) or is required by law. If the project is already in operation, please	Brazil has constantly advocated in international forums for more adequate conditions for forestry and low carbon agriculture activities to be recognized as mitigating global climate change. The country is a Non-Annex I party, signed and ratified Paris Agreement in 2016. Within its NDC there are plans for AFOLU sector, which include Conservation, Sustainable Forest Management, reforestation, REDD+ and Forestry which include Improve Forest species; Promote reforestation and agro-ecology; Restore degraded lands; sustainable use of biomass and promote the technical fertility improvement and soil conservation. To answer the call to raise ambition climate change, Brazil has undertaken to increase its mitigation objectives, to strengthen its adaptive resilience and to accelerate forestry, land tenure, land use, soils to contribute effectively to the fight against poverty. .The project complies with all of the above strategies and goes even further, offering an innovative approach to the cultivation of forest species, contributing to supply society with high quality environmental goods and services.

describe if ITMO/JI revenues were considered in project planning.	

B. Expected environmental and social benefits

C. Finance

Total project cost estimate	
Development costs	US$ 315,000
Installed costs	US$ 4,820,000
Other costs	US$ 350,000
Total project costs	US$ 5.5 million
Sources of finance to be sought or already identified	
Equity	xxxxxxx (in xx US$million)
Debt – Long-term	xxxxxx (in xx US$million)
Debt - Short term	xxxxxx (in xx US$million)
Not identified	US$million
Carbon finance contribution sought	US$ 7.0 million (15 years, first period)
Carbon finance contribution in advance payments. (The quantum of upfront payment will depend on the assessed risk of the project)	US$ 7.0 million and a brief clarification This is the total amount needed for upfront investment on the full chain of BiRCS project activity + another US$ 1.5 million as capital to run the whole system. The costs of development, installation and running the AR-IFM, HWP, Biochar and SOC activities generate demand for capital in order to remunerate personal, raw materials and so on. The amount represents circa of 80% of the total estimates for the first 15 years` period.
Sources of carbon finance	xxxxxxxxxx
Indicative BiRCS, ITMO or MCU Price (subject to negotiation)	US$ 100 / tCO2e
Total Emission Reduction Purchase Agreement (ERPA) Value	
A period until 2025 (start of the first budget period)	US$ / € 1.198,800
A period of 15 years	US$ / € 19.2M
A period of 30 years	US$ / € 38.4M
A period of 45 years (3 * 15 years)	US$ / € 57.6M
If financial analysis is available for the proposed A6/VCM activity, provide the forecast financial internal rate of return for the project with and without the A64ER/VER revenues. Provide the financial rate of return at the	With Carbon

expected A64ER/VER price above and US$3/ tCO_2e. DO NOT assume any up-front payment from the financer in the financial analysis that includes financer revenue stream.

Please provide a spreadsheet to support these calculations.

AFOLU - IFM (2023-2068)	
Opportunity cost	10%
NPV (n=5) US$	2600794
NPV (n=6) US$	3201512
NPV (n=5) US$	780794
NPV (n=6) US$	1381512
IRR (n=5)	22%
IRR (n=6)	22%
IL (n=5)	1,4
IL (n=6)	1,8

HWP

CDR - Industrial Timber (2024-2040)	
Opportunity cost	10%
NPV (n=5) US$	1441019
NPV (n=6) US$	1773858
NPV (n=5) US$	-208981
NPV (n=6) US$	123858
IRR (n=5)	6%
IRR (n=6)	6%
IL (n=5)	0,9
IL (n=6)	1,1

Biochar to Soils

CDR - Biochar (2023-2038)	
Opportunity cost	10%
NPV (n=5) US$	1521759
NPV (n=6) US$	1873247
NPV (n=5) US$	171759
NPV (n=6) US$	523247
IRR (n=5)	14%
IRR (n=6)	14%
IL (n=5)	1,1
IL (n=6)	1,4

Illustrative project categories and examples include:

Code	*BiRCS*
xx	Biomass Removal using trees and storage as HWP and biochar in soils
xxa	AR and IFM
xxb	HWP, Biochar
xxc	Building, RSU, SOC application
yy	*Other*