



GROUPED PROJECT SUL DA BAHIA



Document Prepared by The Green Branch

Project Title	Grouped Project Sul da Bahia
Version	1.0
Date of Issue	03-July-2023
Prepared By	The Green Branch B.V.
Contact	Keizersgracht 560-4, 1017 EM, Amsterdam / NL

CONTENTS

1.	PROJECT DETAILS.....	4
1.1	Summary Description of the Project	4
1.2	Sectoral Scope and Project Type.....	5
1.3	Project Eligibility.....	5
1.4	Project Design	5
1.5	Project Proponent	6
1.6	Other Entities Involved in the Project	7
1.7	Ownership.....	7
1.8	Project Start Date	7
1.9	Project Crediting Period	7
1.10	Project Scale and Estimated GHG Emission Reductions or Removals	8
1.11	Description of the Project Activity	10
1.12	Project Location.....	11
1.13	Conditions Prior to Project Initiation	12
1.14	Compliance with Laws, Statutes and Other Regulatory Frameworks	15
1.15	Participation under Other GHG Programs	15
1.16	Other Forms of Credit.....	15
1.17	Sustainable Development Contributions.....	16
1.18	Additional Information Relevant to the Project.....	17
2	SAFEGUARDS	17
2.1	No Net Harm	17
2.2	Local Stakeholder Consultation	17
2.3	Environmental Impact	17
2.4	Public Comments	17
2.5	AFOLU-Specific Safeguards	18
3	APPLICATION OF METHODOLOGY.....	18
3.1	Title and Reference of Methodology	18
3.2	Applicability of Methodology	18
3.3	Project Boundary	19
3.4	Baseline Scenario	20

3.5	Additionality	20
3.6	Methodology Deviations	20
4	QUANTIFICATION OF GHG EMISSION REDUCTIONS AND REMOVALS	20
4.1	Baseline Emissions	20
4.2	Project Emissions	20
4.3	Leakage.....	20
4.4	Net GHG Emission Reductions and Removals	20
5	MONITORING	21
5.1	Data and Parameters Available at Validation.....	21
5.2	Data and Parameters Monitored.....	21
5.3	Monitoring Plan	22
	APPENDIX	23
	REFERENCES.....	23

1. PROJECT DETAILS

1.1 Summary Description of the Project

The Grouped Project Sul da Bahia is an ARR (Afforestation, Reforestation and Revegetation) project that aims to restore land that has been deforested and degraded. Restoration is done through active planting of mixed native and non-native species, enrichment planting, as well as assisted natural regeneration. In addition to carbon crediting, the project incorporates agroforestry systems and designated timber harvesting areas to maximise benefits for all involved parties and communities. The overarching goal of the project is to create a biodiverse forest cover that combines carbon capture, biodiversity and community impacts with a diversity of economic functions such as sustainable production of crops and forest products.

The Grouped Project is located in the Atlantic Forest biome in the state of Bahia, Brazil (Lange et al., 2014). This biome is one of the global biodiversity hotspots, but fragmentation due to human activities has been destroying the different ecosystems it entails. The project zone overlaps with one of the most important ecological areas of the Atlantic forest, the Central corridor of the Atlantic Forest (Lamas, Crepaldi & Mesquita, 2015).

The mesoregion Sul da Bahia was one of the main forested areas of the Atlantic forest. However, in the 1970's an intense deforestation for Eucalyptus timber exploitation started in the area and forest cover diminished drastically, leaving forest lands fragmented and forest patches genetically isolated (Marcolin et al., 2020). Deforestation has transformed and degraded the landscape (Cerqueira Neto, 2012; Amorim & Oliveira, 2007).

To be eligible for the ARR project, project areas were deforested from native vegetation more than 10 years ago. At the start of the project, implementation sites show degradation signs, e.g. due to the presence of cattle. Restoration practices facilitate the regeneration of degraded soils.

The project aims to remove GHG-emissions through its reforestation activities. Carbon will be sequestered in woody above- and belowground biomass, dead wood, litter, and as soil organic carbon. On average, 21.76 tCO₂e. are stored per hectare per year in the commercial forestry areas throughout the crediting period of 30 years. The total estimated GHG emission reductions or removals is 5,222,842 tCO₂e accumulated over 30 years in the targeted 8,000ha of commercial forestry.

The community goals include providing employment opportunities to residents of the region, operational and technical training to local workers, neighbours and farmers, partnerships with local stakeholders and universities, and raising awareness about the potential of restoration projects and the voluntary carbon market.

In regards to biodiversity, the project focuses on increasing tree species richness and habitats for flora and fauna species by expanding the cover of native forests. Moreover, it aims to enhance the populations of threatened species by actively planting them in the project areas.

1.2 Sectoral Scope and Project Type

The Grouped Project Sul da Bahia is an AFOLU (Agriculture, Forestry and Other Lands Use) project under the sectoral scope 14 “Agriculture, Forestry and Other Land Use” and falls specifically under the ARR (Afforestation, Reforestation and Revegetation) category. The project will be developed to be certified under the Verified Carbon Standard (VCS) and Climate, Community & Biodiversity Standards (CCB) of Verra and is a grouped project.

1.3 Project Eligibility

The Grouped Project Sul da Bahia complies with the eligibility criteria of the latest VCS standard – version 4.4, as further elaborated on in section 1.4 for the eligibility criteria of new project instances, and section 3.2 for the methodology applicability criteria.

1.4 Project Design

The project is considered as:

- ☐ The project includes a single location or installation only.
- ☐ The project includes multiple locations or project activity instances, but is not being developed as a grouped project.
- ☒ The project is a grouped project.

Eligibility Criteria

The following eligibility criteria apply for the inclusion of project instances to the Grouped Project Sul da Bahia:

- The new project is located within the boundaries of the Grouped Project Sul da Bahia zone, defined by the borders of the Sul da Bahia mesoregion, in the north-east of Brazil.
- There was no deforestation of native forest in the new project area within 10 years prior to the project start date of the new project instance.
- The project will not convert well-preserved and productive native ecosystems.
- The new project instance demonstrates compliance with the applicability criteria of the applied Verra methodology for Afforestation, Reforestation and Revegetation projects and its related modules, as described in chapter 3.2 “Applicability of Methodology”.
- Any new project instance has characteristics with respect to additionality that are consistent with the initial instances for the specified project activity and geographic area.
- Any new project instance is subject to the baseline scenario determined in the project description for the specified project activity and geographic area.
- The new project is subject to the same community and biodiversity without-project scenarios as defined for the Grouped Project Sul da Bahia.

- Stakeholder identification for new project instances shall follow the processes as will be indicated in section 2.2 for the Grouped Project Sul da Bahia and must demonstrate that the activities are subjected to the respect for the lands' rights, territories and resources, including free, prior and informed consent.
- The project activities shall increase the carbon stock within the project implementation area by increasing the forest cover. Techniques that will be applied in future project instances are covering active planting of seeds and/or seedlings and assisted natural regeneration, as specified in the project description.
- New project instances must have similar monitoring elements and monitoring plans as they have been defined for the Grouped Project Sul da Bahia.
- New project instances must take measures for the identification and preservation of HCV areas for community and biodiversity.
- New project instances must contribute to the same Sustainable Development Goals (SDGs) as these have been established for the Grouped Project Sul da Bahia. Contributions towards the SDGs should be monitored through the monitoring programmes of new instances.
- The project start date of new instances shall be at the same time or after the Grouped Project Sul da Bahia start date.
- Any activities of new project instances shall comply with the laws and regulations of the host country.
- New project instances will be only eligible for crediting from the start of the verification period in which they are added to the grouped project.
- New project instances will not be enrolled in another VCS project.

1.5 Project Proponent

Organization name	The Green Branch B.V.
Contact person	Kasper Kupperman
Title	Managing Partner
Address	Keizersgracht 560-4, 1017 EM, Amsterdam / NL
Telephone	+31 6 15574245
Email	k.kupperman@thegreenbranch.nl

1.6 Other Entities Involved in the Project

Organization name	Futuro Florestal
Role in the project	Project Partner
Contact person	Eduardo Ciriello
Title	CEO
Address	Rua Rodolfo Miranda, 292 · Vila Willians · CEP: 17400 - 000, Garça/SP
Telephone	(14) 99761-0165 (11) 4780-4391
Email	contato@futuroflorestal.com.br

1.7 Ownership

The project proponent will present rightful ownership of the project via a contractual agreement with the landowners of properties included in the Grouped Project Sul da Bahia. This legal agreement will fulfil the requirements as stated in the ownership specifications in section 3.7 of the VCS standard (v4.4).

1.8 Project Start Date

The Grouped Project Sul da Bahia activities will start on the 1st March 2024, the first day of planting at the first project instance.

1.9 Project Crediting Period

The crediting period starts on 1st March 2024 and ends 30 years later on the 28th February 2054.

1.10 Project Scale and Estimated GHG Emission Reductions or Removals

The estimated annual GHG emission reductions/removals of the project are:

- ☐ <20,000 tCO₂e/year
- ☐ 20,000 – 100,000 tCO₂e/year
- ☒ 100,001 – 1,000,000 tCO₂e/year
- ☐ >1,000,000 tCO₂e/year

Project Scale	
Project	✓
Large project	

Year	Estimated GHG emission reductions or removals (tCO ₂ e)
2025	174,095
2026	348,189
2027	522,284
2028	696,379
2029	870,474
2030	1,044,568
2031	1,218,663
2032	1,392,758
2033	1,566,853
2034	1,740,947
2035	1,915,042
2036	2,089,137
2037	2,263,232
2038	2,437,326
2039	2,611,421

2040	2,785,516
2041	2,959,611
2042	3,133,705
2043	3,307,800
2044	3,481,895
2045	3,655,990
2046	3,830,084
2047	4,004,179
2048	4,178,274
2049	4,352,369
2050	4,526,463
2051	4,700,558
2052	4,874,653
2053	5,048,748
2054	5,222,842
Total estimated ERs	5,222,842
Total number of crediting years	30
Average annual ERs	174,095

1.11 Description of the Project Activity

The project will reduce GHG emissions through ARR activities that will be developed in degraded pastures. For the description of the project activities and the impact on the community, biodiversity and climate benefits, the theory of change will be used. Results are shown in the table below.

Table 1: Project Activities and Theory of Change.

Activity description	Expected climate, community, and/or biodiversity			Relevance to project's objectives
	Outputs (short term)	Outcomes (medium term)	Impacts (long term)	
Project design	Purchase of seedlings from local nurseries.	Form partnerships with local restoration initiatives.	Stimulate the local restoration market and contribute to the creation of a local restoration movement.	Community benefits: Stimulate local economy.
Project Implementation: Active tree planting of various species (incl. endangered)	Number of species, number of threatened individuals, restored area.	Revenues from the carbon sale, land rehabilitation and degradation cycles halted, alternative income for the land owners.	CO2 sequestration, increase in quantity and quality of forest cover and habitat for forest species, increase tree species richness, increase connectivity of fragmented forest patches, restoration of landscape structure and functioning, enhancement of threatened species populations.	Climate benefits: Emission removals are achieved. Biodiversity benefits: improve habitat cover and species composition.
Project Implementation and maintenance	Number of employees, number of trained people, local women hired.	Novel work experience, training in safety and technology, great income, knowledge of ARR techniques and agroforestry and harvesting systems.	Better well-being conditions, social and personal development, establish a precedent of a carbon financed project in local society.	Community benefits: Increase in local employment opportunities, improved knowledge and education on ARR and sustainable forest management.

Project Implementation	Contact with community groups and members.	Greater awareness, environmental education provided by upcoming meetings (ARR, agroforestry and harvesting).	Educational opportunities and decrease in rural exodus, appreciation and interest of local people in the project. Strengthen connection of locals with natural elements of the area.	Community benefits: Educate and share knowledge about ARR and other sustainable forest management activities.
Project monitoring	Job creation.	Improved income, knowledge sharing and training, familiarity with ARR principles, agroforestry and harvesting systems.	Long-term job opportunities, long lasting knowledge and skills.	Community benefits: Alternative livelihoods, income stream, training/ education monitoring techniques & sustainable land management.
Project monitoring	Checking and reporting status of pressures and threats.	Reduced impacts of pressures & threats.	Process of ecological succession is enabled, seedlings survive and grow, forest growth becomes possible, soil health and structure are improved.	Climate benefits: biomass builds up, sequestering carbon in the process. Biodiversity benefits: Habitat cover and structure is improved, impacts of pressures and threats on soil and vegetation are minimised.

The project is not located within a jurisdiction covered by a jurisdictional REDD+ program.

1.12 Project Location

The Grouped Project zone is located in the southern part of Bahia state, covering the Sul da Bahia mesoregion, which extends over a surface of around 111,000 km². This area is entirely located within the Atlantic Forest biome (Lange et al., 2014). The geodetic coordinates are as follows: - 15°43'14.9087" (Project Latitude); -39°16'2.3087" (Project Longitude).

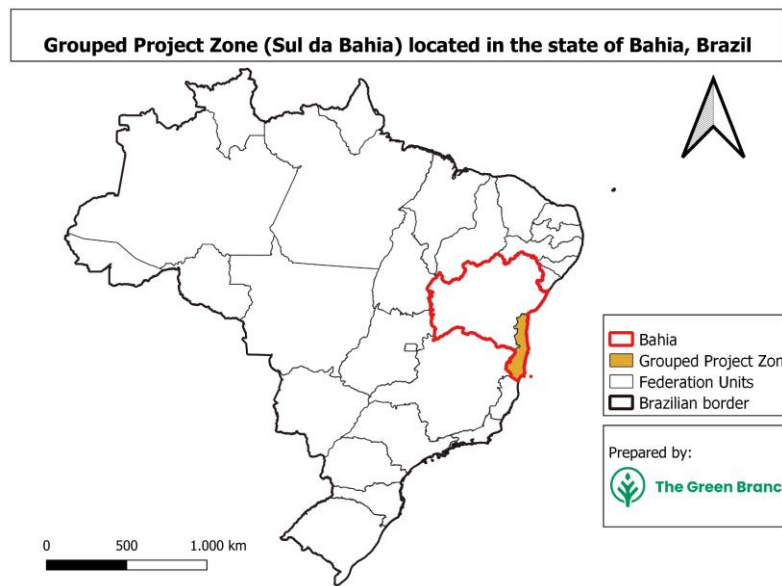


Figure 1: Location of Grouped Project Zone (Sul da Bahia).

1.13 Conditions Prior to Project Initiation

The land before the project implementation was degraded pasture due to the presence of cattle over time. Without the implementation of the Grouped Project Sul da Bahia, the land would continue to be degraded with low possibility of native forest development.

- **Ecosystem type:** The Grouped Project is located within the following tropical ecosystem: the Atlantic Forest.
- **Current and historical land-use:** The historical and baseline land use in the Grouped Project area has been cattle ranching, resulting in degraded pastures over time.
- **Has the land been cleared of native ecosystems within 10 years of the project start date?**
 - ☐ Yes
 - ☒ No

The conditions in the project area are as follows:

- Climate:** The Grouped Project area is entirely located within the Atlantic Forest biome (Lange et al., 2014). It is characterized by Am and Af climates (Köppen classification), with maximum temperatures of 29°C in parts near the coastline, and with more than 1,600 mm/year of accumulated precipitation (Moreno, 2022). In general, the coastal region receives more rain than the interior during the year. The climate offers satisfactory water availability for good crop development throughout the year, especially in the northern part of the mesoregion (D'Angionella et al., 2005).

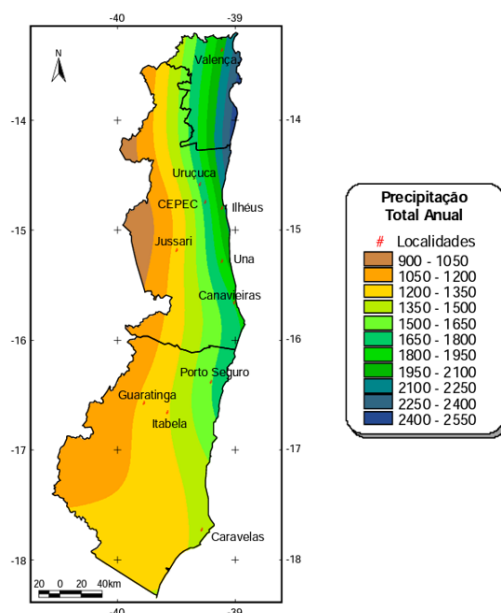


Figure 2: Total annual precipitation in Sul da Bahia. Source: D'Angionella et al., (2005).

- Hydrology:** Bahia state has 13 hydrographic basins, 6 of them are distributed throughout the project area: Extremo Sul, Jequitinhonha, Leste, Rio Pardo, Rio de Contas and Reconcavo sul (Batista, 2010; da Luz & da Silva, 2014).
- Topography:** Sul da Bahia has a predominant flat to wavy terrain, with maximum elevations of 320 metres above sea level (Mencia, Zanchi & Lopes, 2021).

- Historic conditions:** As shown on the figure from Mapbiomas (2021) below, the main land use scenarios are pastureland (main target areas for the Grouped Project Sul da Bahia, occupying 37.7% of the land in Sul da Bahia), Agriculture and Pasture mosaics (11.5% of the surface in the grouped project mesoregion), and forest plantations (8.6% of the land in Sul da Bahia mesoregion).

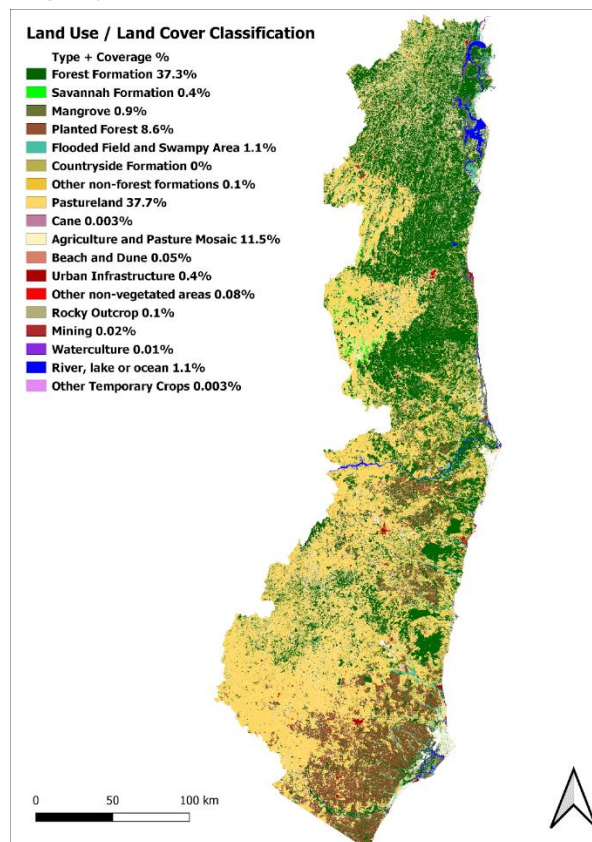


Figure 3: Land use in Sul da Bahia mesoregion. Source: Mapbiomas (2021).

- Soils:** The mesoregion covers the following soil types: Ferralsols, Podzols, Lixisols and Phaeozems (Fischer et al., 2008). Ferralsols and Lixisols are considered low clay activity soils, Phaeozems are considered high clay activity soils and Podzols are spodic soils, which have brown subsurfaces horizons that are rich in organic matter (Padmanabhan & Reich, 2022).
- Vegetation and ecosystems:** The vegetation in this mesoregion is formed by different types: Beach strands (sandy areas with different species such as *Remira maritima* and *Spartina* spp.), Mangroves (critical areas for many kinds of marine life), Restinga (forest type that is divided in open restinga and restinga forest), Southern Bahian Wet Forests (divided in lowland over latisols, lowland over podzols, montane forests, tabuleiro forests and mussununga), Southern Bahian Moist Forests (mesophyllous and semideciduous) and Deciduous Forests (Mata de Cipó) (Thomas, 2003).

1.14 Compliance with Laws, Statutes and Other Regulatory Frameworks

TGB complies with all national and local laws. Legal compliance is handled by Feijó Lopes Advogados, a partner Law firm in Brazil who is very experienced with local and national legislation. The project proponent holds an overview of all applicable national, regional and local laws, statutes and regulatory frameworks in the host country that are relevant to the project activities. A list of all relevant legislation is submitted as an attachment in the supporting documents.

Compliance is achieved and monitored by Feijó Lopes Advogados during pre-contractual stages of the projects, when preliminary documents, such as an MoU are negotiated, drafted, and signed and a due diligence is conducted to assess the legal scenario of both the project's site and its owners, ascertain any past, present, or future risks to the project's planning and execution and to outline the most effective legal measures to be used in TGB's protection. Feijó Lopes Advogados also provides legal counselling during the contractual and post-contractual stages of the projects by drafting and assisting in the negotiation of contractual conditions as well as providing TGB with legal advice on monitoring the project contract and any other related contracts execution.

1.15 Participation under Other GHG Programs

1.15.1 Projects Registered (or seeking registration) under Other GHG Program(s)

The Grouped Project Sul da Bahia has not been registered and is not seeking registration under any other GHG programs.

1.15.2 Projects Rejected by Other GHG Programs

The project has not sought registration under, and as a result has not been rejected by, any other GHG program.

1.16 Other Forms of Credit

1.16.1 Emissions Trading Programs and Other Binding Limits

Does the project reduce GHG emissions from activities that are included in an emissions trading program or any other mechanism that includes GHG allowance trading?

☐ Yes

☒ No

1.16.2 Other Forms of Environmental Credit

Has the project sought or received another form of GHG-related credit, including renewable energy certificates?

☐ Yes

☒ No

Supply Chain (Scope 3) Emissions

N/A - the project does not impact emissions associated with a good or service.

1.17 Sustainable Development Contributions

- **SDG 2 - Zero Hunger:** Productivity of degraded land is improved by changing from an extensive cattle pasture system to establishing an agroforestry zone next to the forest restoration area. Monitoring indicator and frequency: Degraded areas turned into agroforestry systems within grouped project area [ha]. Monitored at every verification event.
- **SDG 4 - Quality Education:** Collaboration with universities to conduct research related to ARR efforts and workers training. TGB Monitoring indicators and frequency: Amount of students going on field trips visiting the project site for research and educational purposes [Total number of students across all field trips]; Amount of local workers trained in ARR [Total number of local workers]. Monitored at every verification event.
- **SDG 6 - Clean Water and Sanitation:** Water quality enhancements downstream due to increased forest cover in the area will improve water filtering, storing it in the aquifer and retaining sediments from entering waterways. TGB Monitoring indicator and frequency: Increase of forest cover [ha]. Monitored at every verification event.
- **SDG 8 - Decent Work and Economic Growth:** The project introduces an alternative land use activity in the project region, diversifying business opportunities. TGB Monitoring indicator and frequency: Fair income of local workers [R\$ per worker per working day]. Monitored at every verification event.
- **SDG 12 - Ensure sustainable consumption and production patterns:** Stakeholder involvement allows for interactive discussions and increasing awareness of the proposed project impacts on the region. TGB Monitoring indicator and frequency: Amount of students going on field trips visiting the project site for research and educational purposes [Total number of students across all field trips]. Monitored at every verification event.
- **SDG 13 - Climate action:** CO₂ is actively removed from the atmosphere and stored in the soil and vegetation, thereby combating climate change. Locally, the forest cover creates a cooling effect. The diversity of tree species planted increases resilience and adaptive capacity to climate-related hazards and natural disasters. TGB Monitoring indicator and frequency: CO₂ sequestration through project activities [tCO₂/ha sequestered at time of verification]; Amount of students going on field trips visiting the project site for research and educational purposes [Total number of students across all field trips]. Monitored at every verification event.

- **SDG 15 - Life on land:** We work on strengthening populations of threatened species catalogued in the IUCN Red List. Furthermore, the projects enhance landscape complexity by improving connectivity of highly fragmented forest patches in the area, functioning as wildlife corridors. TGB Monitoring indicator and frequency: Increase of forest cover due to project activities [ha]; Area planted for agroforestry and harvesting activities [ha]; Area of degraded land planted with tree species [ha]; Number of Red List species planted [Total Number]. Monitored at every verification event.
- **SDG 17 - Partnerships for the goals:** Project aspects (design, implementation, monitoring & management) support multi-stakeholder partnerships. The agroforestry and harvesting systems will diversify the sources of revenue, creating partnerships in different markets. Total number of partnerships created [contracts signed] with local initiatives. Monitored at every verification event.

1.18 Additional Information Relevant to the Project

Leakage Management

Commercially Sensitive Information

No commercially sensitive information has been excluded from the public version of the project description.

Further Information

N/A.

2 SAFEGUARDS

2.1 No Net Harm

The Grouped Project Sul da Bahia aims to have positive impacts on climate, community and biodiversity. We do not expect to have any negative impacts in the project zone, therefore no mitigation measures need to be defined.

2.2 Local Stakeholder Consultation

2.3 Environmental Impact

2.4 Public Comments

If received, public comments will be addressed by the project proponent (The Green Branch).

2.5 AFOLU-Specific Safeguards

3 APPLICATION OF METHODOLOGY

3.1 Title and Reference of Methodology

The Grouped Project Sul da Bahia is a VCS AFOLU (Agriculture, Forestry and Other Lands Use) project (scope 14) and falls specifically under the ARR (Afforestation, Reforestation and Revegetation) category. The project goal is the reforestation of degraded lands, which would continue to remain degraded, and would become increasingly more degraded in absence of the project. The project aims to restore natural biodiverse forests and produce other sources of income through harvesting activities and agroforestry systems.

The title of the applied Verra methodology is “Methodology for Afforestation, Reforestation and Revegetation projects” - Version 0.1.

As required by the methodology mentioned above, the Grouped Project Sul da Bahia relies on the following module:

- Module for Estimating Leakage from ARR Activities - Version 0.2.

3.2 Applicability of Methodology

Applicability criteria for the Methodology for Afforestation, Reforestation and Revegetation and for the Leakage module are listed and their fulfilment justified below.

Condition	Justification
The project activity qualifies as afforestation, reforestation, or revegetation. This may include direct and indirect activities.	The project activities are going to be focused on planting seedlings to regenerate degraded land. Harvesting and agroforestry will also be carried out as part of the project activities.
Project activities do not take place on organic soils or wetlands and result in an intentional manipulation of the water table (i.e., the project activity must not involve manipulation of hydrology or otherwise affect hydrology).	An assessment of all soils present in the Grouped Project Sul da Bahia shows that none of them are considered as organic soils. The analysis is provided in an attachment.
Project activities do not take place in tidal wetlands (e.g., mangroves, salt marshes).	The activities take place in degraded land that is not considered as wetland.

Area-based approach (selected for the development of the Grouped Project Sul da Bahia): The ARR activity can be clearly delineated spatially, and area calculated using GIS.

It is possible to delineate the project areas spatially and calculate the area using GIS.

3.3 Project Boundary

Source		Gas	Included?	Justification/Explanation
Baseline	Burning of tree biomass (emissions from burning non-tree biomass not included; de minimis)	CO ₂	No	Conservatively omitted
		CH ₄	No	Conservatively omitted
		N ₂ O	No	Conservatively omitted
		Other	n.a.	n.a.
	Emissions from nitrogen fertilizer	CO ₂	No	Conservatively omitted
		CH ₄	No	Conservatively omitted
		N ₂ O	No	Conservatively omitted
		Other	n.a.	n.a.
	Burning of fossil fuels	CO ₂	No	Conservatively omitted
		CH ₄	No	Conservatively omitted
		N ₂ O	No	Conservatively omitted
		Other	n.a.	n.a.
Project	Burning of tree biomass (emissions from burning	CO ₂	Yes	The pool has to be included but as there is no burning of biomass as it is not part of the project activities, it will be considered as "0".
		CH ₄	Yes	The pool has to be included but as there is no burning of biomass as it is not part of the project activities, it will be considered as "0".

Source		Gas	Included?	Justification/Explanation
	non-tree biomass not included; de minimis)	N ₂ O	Yes	The pool has to be included but as there is no burning of biomass as it is not part of the project activities, it will be considered as “0”.
	Emissions from nitrogen fertilizer	N ₂ O	Yes	In case nitrogen fertilisers are applied as part of the project activity, N2O emissions from nitrogen-containing soil amendments are accounted for. N2O emissions are conservatively set to zero in the baseline.
	Burning fossil fuels	CO ₂	No	De minimis
		CH ₄	No	De minimis
		N ₂ O	No	De minimis

3.4 Baseline Scenario

3.5 Additionality

3.6 Methodology Deviations

There are no deviations from the applied methodology “Afforestation, Reforestation and Revegetation - version 0.1” and related leakage module for this grouped project.

4 QUANTIFICATION OF GHG EMISSION REDUCTIONS AND REMOVALS

4.1 Baseline Emissions

4.2 Project Emissions

4.3 Leakage

4.4 Net GHG Emission Reductions and Removals

5 MONITORING

5.1 Data and Parameters Available at Validation

Data / Parameter	
Data unit	
Description	
Source of data	
Value applied	
Justification of choice of data or description of measurement methods and procedures applied	
Purpose of Data	
Comments	

5.2 Data and Parameters Monitored

Data / Parameter	
Data unit	
Description	
Source of data	
Description of measurement methods and procedures to be applied	
Frequency of monitoring/recording	
Value applied	

Monitoring equipment	
QA/QC procedures to be applied	
Purpose of data	
Calculation method	
Comments	

5.3 Monitoring Plan

APPENDIX

REFERENCES

Batista, G. T. (2010). Launching of the fifth volume of the scientific journal “Ambiente & Água”. *Ambiente e Agua-An Interdisciplinary Journal of Applied Science*, 5(1), 4-5.

D'Angiolella, G., Vasconcellos, V. L. D., & Rosa, J. W. C. (2005). Estimativa e espacialização do balanço hídrico na mesorregião sul da Bahia. *Simpósio Brasileiro de Sensoriamento Remoto*, 12, 83-90.

da Luz, L. D., & da Silva Neves, L. A. (2014). ANÁLISE DE ALTERNATIVAS PARA SISTEMA ADUTOR DE ÁGUA EM REGIÃO DA BACIA DO RIO ITAPICURU-BAHIA, POR MEIO DE PROGRAMAÇÃO MATEMÁTICA. *Revista Eletrônica de Gestão e Tecnologias Ambientais*, 2(1), 69-86.

Fischer, G., F. Nachtergaele, S. Prieler, H.T. van Velthuisen, L. Verelst, D. Wiberg, (2008). Global Agro-ecological Zones Assessment for Agriculture (GAEZ 2008). IIASA, Laxenburg, Austria and FAO, Rome, Italy. Retrieved from: <fao.org/soils-portal/data-hub/soil-maps-and-databases/harmonized-world-soil-database-v12/en/>

Lamas, I. R., Crepaldi, M. O. S., & Mesquita, C. A. B. (2015). Uma rede no corredor: memórias da Rede de Gestores das Unidades de Conservação do Corredor Central da Mata Atlântica. In *Belo Horizonte: Conservação Internacional* (Vol. 1000, p. 156). Available at:.

Lange, W., Cavalcante, L., Dünow, L., Medeiros, R., Pirzer, C., Schelchen, A., & Valverde, Y. (2014). HumaNatureza²= Proteção Mútua. Percepção de riscos e adaptação à mudança climática baseada nos ecossistemas na Mata Atlântica, Brasil. *SLE Série de publicações–S*, 255.

Mapbiomas - Cobertura. (2021). Mapbiomas Brasil v7.0. <https://mapbiomas.org/>

Mencia, F.P., Zanchi, F.B., & Lopes, E.R. (2021). CLIMATIC CHARACTERISTICS AND THEIR IMPLICATIONS AMONG THE PEDOLOGICAL AND TOPOGRAPHICAL ASPECTS OF SOUTHERN BAHIA, BRAZIL. *Revista Brasileira de Climatologia*. DOI: 10.5380/abclima

Moreno, G. S. (2022). Indicadores sociais, mudanças na paisagem e clima: efeitos em doenças emergentes e reemergentes.

Padmanabhan, E., & Reich, P.F. (2022). World soil map based on soil taxonomy. Reference Module in Earth Systems and Environmental Sciences, Elsevier, ISBN 9780124095489. <https://doi.org/10.1016/B978-0-12-822974-3.00118-X>.

Thomas, W. W. (2003). Natural vegetation types in southern Bahia. *Prado, PI; Landau, EC; Moura, RT; Pinto, LPS*.