



**Verified Carbon
Standard**

VALIDATION-VERIFICATION REPORT

THE ARR HORIZONTE CARBON PROJECT



Document Prepared by Earthood Services Private Limited

Project Title	THE ARR HORIZONTE CARBON PROJECT
Report Title	Validation and Verification of THE ARR HORIZONTE CARBON PROJECT
Version	2.4
Report ID	22.158.VCS.VAL
Verification Period	from 02/November/2017 to 21/February/2022
Client	Suzano S.A.
Pages	142
Date of Issue	23/02/2023
Prepared By	Earthood Services Private Limited
Contact	Regd. Office: 409-410, Tower B-4, Spaze I-Tech Park, Sector 49, Sohna Road, Gurgaon- 122018, INDIA Tel: +91 124 4204599; Fax: +91 124 4204599 Website: www.earthood.in ; Email: info@earthood.in

Approved By	Kaviraj Singh – Managing Director
Work Carried Out By	Bibiana Duarte – Lead Auditor

Summary:

THE ARR HORIZONTE CARBON PROJECT, registered under the VCS Project ID 3350¹, is a grouped project implemented as a first instance in the locations of Três Lagoas, Brasilândia, Santa Rita do Pardo, Selviria, Bataguassu, Água Clara and Aparecida do Taboado, in the state of Mato Grosso do Sul, Brazil. It started on 02-November-2017 with a project area of 15,517.87 hectares of forest in validated properties. The project's activities aim to reduce greenhouse gas emissions by increasing forest cover in the state of Mato Grosso do Sul in the Cerrado biome.

The purpose of this audit is to provide an independent review and determine the project's compliance with the VCS standard. The project corresponds with Sectorial Scope 14 of the VCS: Agriculture, Forestry, and Other Land Uses (AFOLU), in the afforestation, reforestation, and revegetation category (ARR).

Earthood Services Private Limited (hereinafter ESPL), as part of the list of available validation and verification bodies (VVB), has been contracted to perform the validation and verification process of the project activities according to the VCS standard with a confidence level of 95% and a materiality of 5%. The purpose of this validation and verification process is to validate the Project Description and all associated project documents in accordance with all applicable VCS rules and requirements, the methodology (AR-ACM0003 - "*Afforestation and reforestation of lands except wetlands*" – V 2.0), and other applicable references; and also, to verify the implementation of project activities during the monitoring period from 02/November/2017 to 21/February/2022. This process includes document review, site visits, interviews, and consultation of secondary sources of information, statements of findings, feedback to the project owner, and preparation of the final report.

As a result, the number of findings raised about validation and verification requirements were 08 requests for clarifications (CL) and 05 requests for corrective action (CAR), which were addressed by the project proponent.

The document review, interviews, and site visit allowed ESPL to gather sufficient evidence to fully assess the validation and verification criteria and determine that the project meets all relevant requirements of the VCS standard, is implemented in accordance with the Project Description and Monitoring Report and assertion assessment, and correctly applies the methodology for baseline calculation, additionality determination, and quantification of removals.

¹ <https://registry.terra.org/app/projectDetail/VCS/3350>

Summary:

THE ARR HORIZONTE CARBON PROJECT, as described in the Project Description and Monitoring Report Document, met all relevant requirements of the VCS standard, and the methodology was correctly applied. Implementation of the grouped project will result in direct forest conservation attributable to project activities and will primarily result in long-term average estimated removals of 2,686,131.95 tCO₂e over 35 years in the first instance. Besides, the project generates net GHG removals of 1,900,911.33 tCO₂e and 1,710,813 tradable credits (VCUs) applying a VCS credit buffer (VBC) of 10% for the monitoring period from 02/November/2017 to 21/February/2022.

CONTENTS

CONTENTS	4
1 INTRODUCTION	6
1.1 Objective	6
1.2 Scope and Criteria	6
1.3 Level of Assurance	7
1.4 Summary Description of the Project	7
2 VALIDATION AND VERIFICATION PROCESS	8
2.1 Method and Criteria	8
2.2 Document Review	10
2.3 Interviews	10
2.5 Site Inspections	16
2.6 Resolution of Findings	43
2.6.1 Forward Action Requests	44
3 VALIDATION FINDINGS	44
3.1 Project Details	44
3.1.1 Project type, technologies and measures implemented, and eligibility of the project.	44
3.1.2 Project design, including eligibility criteria for grouped projects	45
3.1.3 Project proponent and other entities involved in the project.	45
3.1.4 Ownership	46
3.1.5 Project start date	47
3.1.6 Project crediting period	47
3.1.7 Project scale and estimated GHG removals	47
3.1.8 Project location	49
3.1.9 Conditions prior to project initiation	49
3.1.10 Project compliance with applicable laws, statutes, and other regulatory frameworks	49
3.1.11 Participation under other GHG programs	50

3.1.12	Other forms of credit	50
3.1.13	Sustainable development contributions	50
3.1.14	Additional information relevant to the project	52
3.2	Safeguards	52
3.2.1	No Net Harm	52
3.2.2	Local Stakeholder Consultation	53
3.2.3	Environmental Impact	53
3.2.4	Public Comments	53
3.2.5	AFOLU-Specific Safeguards	54
3.3	Application of Methodology	56
3.3.1	Title and Reference	56
3.3.2	Applicability	56
3.3.3	Project Boundary	59
3.3.4	Baseline Scenario	61
3.3.5	Additionality	65
3.3.6	Quantification of GHG Removals	65
3.3.7	Methodology Deviations	67
3.3.8	Monitoring Plan	67
3.4	Non-Permanence Risk Analysis	70
4	VERIFICATION FINDINGS	73
4.1	Project Implementation Status	73
4.1.1	Sustainable Development	74
4.2	Quality of Evidence to Determine GHG Emission Reductions and Removals	74
5	VALIDATION AND VERIFICATION CONCLUSION	76
	APPENDIX 1: DOCUMENTATION PROVIDED BY THE PROJECT	77
	APPENDIX 2: FINDINGS	113
	APPENDIX 3: SAMPLING PLAN	130

1 INTRODUCTION

1.1 Objective

The purpose of the validation and verification process by Earthood Services Private Limited is to provide an independent assessment of the project against all criteria defined by the Verified Carbon Standard (VCS), in order to conclude whether the project, including project activity, design, implementation of the project, methodology applied and all documentation related with the development and implementation of the project, is compliant with the VCS standard and whether is in accordance with all rules and requirements applied for this type of project (AFOLU).

1.2 Scope and Criteria

The scope of the validation and verification is to establish that:

- The project meets all relevant criteria of the host country (Brazil), all the rules and requirements of the certification program.
- The Joint Project Description and Monitoring Report Document and other supporting documents provided are complete, in accordance with the latest applicable version, verifiable and in accordance with the requirements of the standard VCS, and of the applicable legislation under the legal framework of the carbon market in Brazil.
- The project complies with the conditions of the applied methodology.
- The project activity has been implemented in accordance with the Project Description and produces GHG removals.
- The actual monitoring systems and procedures comply with the systems and procedures described in the monitoring plan, including the approved methodology, modules, and applicable tools.
- The data is recorded and stored according to the monitoring methodology and calculations are appropriate and consistent.

This process includes the independent and objective revision to determine that the Project Description and Monitoring Report document meets the criteria defined by the following documents:

- VCS Standard v4.3
- VCS Program Guide v4.2
- VCS Methodology Requirements v4.2
- AFOLU Non-Permanence Risk Tool v4.0
- AR-ACM0003: Afforestation and Reforestation of Lands Except Wetlands, version 2 – A/R Large-scale Consolidated Methodology

- AR-TOOL02: “Combined tool to identify the baseline scenario and demonstrate additionality in A/R CDM project activities” – version 1
- AR-TOOL08: “Estimation of non-CO2 greenhouse gas (GHG) emissions resulting from burning of biomass attributable to an A/R CDM project activity” – version 04.0.0
- AR-TOOL12: “Estimation of carbon stocks and change in carbon stocks in dead wood and litter in A/R CDM project activities” – Version 03.1
- AR-TOOL14: “Estimation of carbon stocks and change in carbon stocks of trees and shrubs in A/R CDM project activities” – Version 04.2
- AR-TOOL15: “Estimation of the increase in GHG emissions attributable to displacement of pre-project agricultural activities in A/R CDM project activity” – version 02.0.
- AR-TOOL16: “Tool for estimation of change in soil organic carbon stocks due to the implementation of A/R CDM project activities” – version 01.1.0.
- GUIDELINES FOR OBJECTIVE DEMONSTRATION AND ASSESSMENT OF BARRIERS – version 1.

On the other hand, verification criteria are in accordance with ISO 14064-3:2006 and Validation and Verification manual v3.2.

1.3 Level of Assurance

The level of confidence is 95% of the validation and verification statement, agreed with the project proponent, as well as the manner and timing of gathering evidence or proof to obtain a reasonable level of confidence, in accordance with the provisions of the applicable requirements. Likewise, materiality is less than 5% for the project.

ESPL ensures the conformance of the project with VCS rules by considering a materiality threshold of less than 5% in terms of errors, omissions, and misrepresentations relative to total reported GHG emission removals.

1.4 Summary Description of the Project

Table 1 Summary of the project

Project name	THE ARR HORIZONTE CARBON PROJECT
Sectoral scope	14 - Afforestation, Forestation and Other Land Use
AFOLU Project category	Afforestation, Reforestation and Revegetation (ARR)
Project Proponent	Suzano S.A.
Baseline and monitoring methodology	AR-ACM0003 - “Afforestation and reforestation of lands except wetlands” – V 2.0

Location of the project activity	Mato Grosso do Sul State, Brazil
Project scale	Grouped project
Area	15,517.87 hectares in the first instance
Project crediting period	30 years From 02 November 2017 to 01 November 2047
Monitoring period	from 02/November/2017 to 21/February/2022
Validated LMA in the project lifetime	2,686,131.95 tCO ₂ e
Verified removals in the monitoring period	1,900,911.33 tCO ₂ e

2 VALIDATION AND VERIFICATION PROCESS

2.1 Method and Criteria

Validation and verification process consisted of the following four phases: i) desk review and examination of secondary sources of applicable information, ii) field assessment, iii) resolution of findings and iv) issuance of the final validation report with conclusions. The validation process is conducted in accordance with the criteria established by the VCS standard. The validation process included the following:

- Contract with the project proponent for the scope and appointment of validation team and technical review team.
- Completeness check of Project Description.
- Desk review of conformance to VCS rules, Project Description Document by the validation team and planning of onsite audit (site inspection to confirm project boundaries, check project description and interviews with stakeholders).
- Project conformance to the applied methodology, including the procedure for the demonstration of additionality specified in the methodology.
- Physical on-site inspection by the team audit (site inspection to confirm project boundaries, check project description, confirm stable forest area and interviews with stakeholders).
- Reporting and closure of findings (CARs/CLs/FARs) and preparation of draft validation report.
- Independent technical review of the draft validation report and final/revised documentation.

- Reporting and closure of TR comments/findings (CARs/CLs/FARs) and final approval for the decision made.
- Reports, calculation checks, QA/QC, and resolution of findings.
- Issuance of the draft of validation report.
- Independent technical review of the project documentation to confirm if the internal procedures established and implemented by ESPL were duly complied with and if said opinion or conclusion was reached objectively and in compliance with the applicable rules and requirements. The independent technical reviewer can approve the report in the way it was presented by the lead auditor or return it, with comments or findings that must be resolved by the validation team.
- Issuance of the final validation-verification report.

The sampling plan consisted included review of 100% of project documents, spreadsheets, cartographic information, all land ownership and carbon rights certificates, and all documents submitted as evidence for validation and verification. Regarding the field assessment, the data from the forest inventory of the project were taken into account and the number of samples to be evaluated for each stratum was determined considering a sampling error of less than 10%; according to the sample size obtained, the plots whose data were outside the normal distribution for their stratum were selected; the sample sizes obtained were the following for the 6 registered strata (correspondingly): 3, 2, 1, 3, 7, 1 (see Table 5). In addition, on-site inspections, and interviews with stakeholders, were scheduled². The audit team identified potential risks of errors, omissions, and misrepresentations related to the validation and verification criteria. Based on the selected approach, the audit team considers the selected sample design to be sufficient for decision making regarding the analysis of the project and its compliance with the applicable requirements. See Appendix 3: SAMPLING PLAN.

The lead auditor has extensive expertise in forestry, social, ecological and biodiversity issues in the region, speaks Spanish but also the local language of the project site and has extensive experience as an auditor qualified according to VCS requirements. As below:

Bibiana Duarte: Senior Lead Auditor. Forestry Engineer, qualified under the ISO 14064 and 14065 to lead validation and verification processes of Carbon Emission Reduction and removals projects for VCS standard and others. More than 10 years of work and relevant experience in ecological, biodiversity and social aspects in forestry projects. Main auditor since 2017, successfully auditing more than 40 carbon projects in Brazil, Colombia, and Peru. Currently living in Brazil.

Table 2 Audit team

Name	Role
Bibiana Duarte	Lead Auditor/Sectorial Specialist/technical expert

² Tracks and photos were recorded in a GIS system by the audit team and the interviews are available in ESPL's document management.

Table 3 Technical reviewer

Name	Role
Pablo Rodríguez	Technical reviewer and technical expert

The project was assessed for conformance to the criteria described in this report.

2.2 Document Review

The documentary review was performed on 8 to 12, August 2022, based on the information provided by the Project Proponent before the on-site visit (Appendix 1: DOCUMENTATION PROVIDED BY THE PROJECT). The auditor scrutinized all project documentation, ensure consistency with the type of project, validated the completeness, and identify possible deviation from VCS program or methodologies. The desk review included an examination of the project details, data and parameters, and quantification of GHG removals. The verification team conducted a desk review that included the following:

- A review of the Project Document and Monitoring report, the applied methodology, including applicable tools, modules, monitoring plan and quality assurance and quality control procedures.
- A review of the data and information submitted to verification its integrity.
- An evaluation of compliance with the applicable regulations to validate the regularity of the activity.
- An evaluation of documents proving the land tenure and / or carbon rights of the project.
- An evaluation of the controls envisaged to guarantee the quality of the information and the documentary control of the project.
- Other supporting documents (cartography, spreadsheets, etc.).

As part of the desk review, an office audit was carried out on the main points of the project that require attention.

2.3 Interviews

During the site inspections, a number of 9 interviews were conducted that were deemed relevant to compliance with the legal requirements and technical aspects of the project. The group of people for the interviews was selected based on their role they play in the project, their influence on the development of the project at the local or regional level, and their location in the project area. Accordingly, the interviewed were people from local institutions, cooperatives and associations, employees, and local community members.

Table 4 Interviews³

Interviewed	Role	Topic
Ademi Vispa dos Santos	São Tomé settlement	He mentions that he has lived in the settlement for 23 years, where 110 families live and have a total territory of 8.5 hectares. In addition to this, he highlights that milk production is developed in the settlement and that there is the Appraste association, which has 110 associates. In addition to this, he highlighted that he knows the company and knows some of the company's officials, that Suzano gives them inputs, grass seeds and technical assistance. They give them results of what they are doing. On the other hand, he also mentioned that he considers that no damage is being caused by the plantation. Additionally, he said that in the settlement they do not hunt, fish, or burn, in addition to the fact that there are no problems with invaders. About the carbon project, he mentioned that a meeting was held 40 days ago, which was attended by 6 people, and they talked about the project, it was mentioned that the settlement will not receive money, however they will be given social assistance and the possibility to develop some social project with them, since they have an agreement with the mayor's office. At this meeting he spoke about the reforestation of fruit trees. Finally, he mentioned that they communicate with Symbiosis (suzano's outsourced) every eight days, and that he considers the communication to be efficient.
Eloir Ribeiro, Marcia Cristina de Almeida and Andre Jose da Silva	President, vice president and treasurer of cooperation (Corpazul)	They mentioned that the cooperative has existed since 2014, they have 20 cooperating people, they also mentioned that when someone wants to enter the cooperative, first this person must fill out the entry application form, then the board of directors meets and they have 30 days to sign contract. In addition, they highlight that most of the cooperators are collectors and that they have 7 women in the cooperatives. Later, they mentioned that they have known Suzano for a long time, that before the project was implemented (approximately 5 years they mention); They mentioned that in 2021 Suzano sent them an invitation letter to socialize the carbon project. On the other hand, they point out that to establish a partnership with Suzano they had to have all their legal documentation up to date, and that in addition, in this partnership the company provided financing for the purchase of equipment for the cooperative, they established this partnership the last year.

3 Interviews were recorded by the audit team and are available in ESPL's document management.

Interviewed	Role	Topic
		About the carbon project, they mention that the company told them about it about a month ago, that two officials went to the cooperative to talk about it, the three of them and the two officials from Suzano were at the talks. They were told about the project in general, carbon removals and the carbon bond market. Likewise, they highlighted that a month ago they received a course from Suzano called 'Project Development'. Regarding communication, they stated that they communicate directly with an official, and that they consider that the communication is good and effective. On the other hand, they mentioned that they do not have any complaints or claims so far for the company, which has helped them a lot. On more personal issues, they highlighted that they all live there, both they and the aid workers, and that one of them, Eloir, has a son who works in Suzano. Finally, they affirmed that they do not know of any union and that they emphasize that the company has supported them a lot, that thanks to them they are acquiring many resources such as equipment, materials, etc. so they highlight the great support received from Suzano.
Mauro José du grande Júnior and Maissa do Acosta	Secretary of environment and agribusiness and Environment Director	Initially, the function of this secretary was discussed, where they mentioned that it is in charge of carrying out environmental licensing of infrastructures, that Suzano processed their corresponding licenses for which they made a technical visit to learn about their activities. Additionally, they mentioned that they know the company, that they have a close contact with it, that they have not received complaints of any kind from the company and that they maintain a good relationship, they highlighted that Suzano is accessible. On the other hand, they stated that they have a partnership with Suzano in environmental education and that in general the company is very open to establishing partnerships, which are very cooperative and collaborative, highlighting the one they have with Symbiosis. Likewise, they mentioned that the company must monitor fauna and that it has an internal control of the legality of the wood, where, in addition, the federal police also exercise control. Regarding projects in the area, they mentioned that there is an energy generation project from biomass and that they learned about the Suzano carbon project last week, the company told them about it and about the visit and auditorium process He also sent them an informative flyer.

Interviewed	Role	Topic
		They mentioned that the work carried out by the company is very good because about 90% of the farms that they bought and rented for the project were in a state of degradation. Regarding the legal reserve, they mentioned that the legal reserve areas and APPs are controlled by IMASUL, which in the municipality of must have 20% of the area in legal reserve, which cannot be APP and must have a buffer of 50 meters. Finally, they mentioned that communication with Suzano is direct and that she would like to receive a presentation or talk to learn more about the project.
José A. Moraes Juliana Petek	Secretary of economic development/ Chief of staff Planning director	They talked about what this mayor's office does, where they highlighted that the office is in charge of granting environmental licenses taking into account the mitigation measures established by the economic activities to be developed depending on their level of risk and the established guidelines. in the municipal master plan. Additionally, they mentioned that they have known the company for a long time, since approximately 1989, that at the time of its installation they processed their license in this office, mainly proposing mitigation measures focused on the social, tax and environmental spheres. They highlighted that the work carried out by the company is associated with the issue of sustainable development objectives and climate mitigation. They mentioned a study developed in 2016, called the Tres Lagoas Sustainable Plan, focused on four axes: governance, industry, environment and infrastructure. On the other hand, they mentioned that so far, no complaints have been received against the company, that it has a union, but that it has only requested an increase in salary and in a very calm and silent manner. Regarding the issue of complaints associated with emissions, they mention that very few have been received, that in addition to Suzano there are some chemical industries in the area, and that on average 2 or 3 complaints were received in 5 years, for which they affirmed that the company it does not have any negative affectation towards the neighbors of the area. In addition to this, they affirmed that they have several associations with the company, mainly in the field of education, environment and environmental police. Regarding the carbon project, they mentioned that Suzano spoke to them about its generalities and the audit process, she mentioned that she has had access to more specific information about the project because she also works in the Ministry of Regional Development.

Interviewed	Role	Topic
		Additionally, they highlighted that they do not have any other carbon project in the area, that hunting is not allowed in this state, that the use of fire is legal as long as it is controlled and authorized, and that there have been no invasion problems. Likewise, they mention that about 90% of the rural plots of the municipality have Eucalyptus, which they consider that Suzano has brought positive aspects to the area due to the fact that it had vegetation and very arid soils, with no forests. Regarding communication with the company, they mentioned that it is carried out with a specific official, and that it is effective and fast. Finally, regarding additional information, they highlighted that Suzano brings positive impacts to the municipality, that they have never had complaints about this company, that it has always been very responsible with its obligations, that although in the rainy season the roads are in poor condition, the company It does maintenance frequently, as these roads are shared with the communities in the area and in general, they maintain a good relationship.
Lorraine Lopes Sousa and Adriano Arruda	Consultant in social development and Coordinator of sustainable businesses	They mentioned that they have been associated with the company for 1 year Lorraine and 9 years Adriano. Additionally, they highlighted the existence of the following projects: an inclusive recycling project with cooperatives, specifically with Corpoazul; a project of native and ornamental plants with the rural community. On the other hand, they mention that they have a professional dialogue team to communicate the activities and generalities of the project. In addition, they highlighted that the methodologies for professional dialogue were designed based on previous experiences. Finally, they mentioned that a diagnosis was made with the cooperatives and that with the recycling project the waste from the operation has an adequate destination, where approximately 25 families separate the waste.
Wesley Sousa	Symbiosis – Company of Desenvolvimento social	He mentioned that his link with Suzano is given through the outsourced contract and he was hired to work on a project called APL, which is based on marketing milk in partnership with the community. In addition to this, he clarified that he heard about the carbon project and Symbiosis team held a meeting to disseminate information about the project to the community in the in the San Thome settlement, where he mentioned that approximately 10 people attended, but he mentions that he does not know what was specifically discussed because it was a specific technician who was sent to do the socialization.
Clara Santana, Nayara Rodriguez	Company environment team	They mentioned that Clara has been with the company for a year, Nayara for 5 years and Renato for 20 years, in addition to the fact

Interviewed	Role	Topic
and Renato Cipriano		that their work includes restoration and everything related to the legal reserve, the ecological corridors and the monitoring of fauna and flora. They highlighted that the restoration is carried out with native species and natural regeneration is carried out; Regarding the monitoring of fauna, they mentioned that they have 400 properties without legal commitment, that they monitor mammals, birds, ichthyofauna and arthropods and that they also determine the number of species, the number of threatened species and the number of endemic species. Regarding the frequency of monitoring, they highlighted that in the case of fauna it is carried out every three years and for flora every four years. The next monitoring will be in a month. On the other hand, they highlighted that they have a partnership with the Federal University of Matogrosso do Sul to study the edge effect in Dois Marias. Finally, they mentioned that the company does not use fire, but that they have had problems due to natural causes or the use of fire by neighbors, for which they have 24-hour surveillance towers equipped with cameras. In addition to this, they highlighted the use of fire as the main driver of deforestation, for which they also mentioned that the company has a team of personnel trained in fire cases (they mentioned fire events in 2020).
Ana Luiza Marcelo and Danielle Vasconcelos	Company monitoring equipment	They mentioned that they have been in the company for a year and a half, that she is in charge of characterizing the soil while he develops the topic of hydrography and topography. Additionally, between the two they are in charge of carrying out the eligibility analysis and the determination of the useful area and legal reserve area. Finally, they mentioned that they developed 20% of the ARL area, where they applied a buffer of 50 meters on each side and that, in addition, updates were made to the demarcation of PPAs and the application of hydrographic areas (with 30 meters of buffer) and springs (with 50 meters of buffer).
Marcel Raimundo	Forest Inventory Analyst	He initially mentioned that he is a forestry engineer and has been associated with the company for 1 year, among his tasks are contributing to the development of the inventory baseline, performing data processing, reviewing their consistency, generating the results of stock, growth, volume and strategic planning. Additionally, he mentioned that in the second level audit he evaluates how the information is uploaded to the management system and the parcels in the system are reviewed.

2.5 Site Inspections

As a part of the project verification, an on-site inspection was carried out through visits to THE ARR HORIZONTE CARBON PROJECT location in Mato Grosso do Sul State, Brazil during the days of 14 to August 20, 2022:

- Ensure that the geographic area of the project, as reported in the Project Design document and Monitoring report and its consistency with the annexes (GIS).
- Observe the Implementation status of the project and forest activities.
- Perform a risk-based review of the project area to cover the project boundary.
- Verifying possible substantial discrepancies between the activities described in the monitoring plan and those carried out on site.
- Verification of biomass aboveground through remeasurement of flora monitoring plots.
- Perform a risk-based review of the project area to ensure that the project is in conformance the eligibility requirements of the VCS requirements and the applicability conditions of the methodology.
- Confirmation that the quality control and quality assurance procedures were in place.

Table 5 Audit plan on site

Date	Topic
14/08/2022	Flight to Araçatuba
14/08/2022	To Tres Lagoas/MS
15/08/2022	Opening Meeting: Assistants: Julio Natalense-Suzano Rebecca Grandmaison- Suzano Marcela Pyles- WayCarbon
	Introduction of the lead auditor Presentation of the Audit team General Presentation and social projects Audit objective, scope and criteria, roles, and responsibilities Schedule discussion/remarks Review of the Audit plan. General Conditions of Service, Impartiality / Confidentiality. Confirmation of schedules and dates, interviews stakeholders, field check. Interview with project proponents CLA/CAR, Technical review Questions and answers session.

Date	Topic
15/08/2022	Interview with stakeholder: Geoprocessing Team -Ana Luiza Marcelo -Danielle Vasconcelos Eligibility, Project areas, corroboration of imagery dates (29/09/2007-07/08/2017-22/03/2022) GIS review -Fire events analyze. SIG work: GIS-review- classification Team MAF- Medio ambiente florestal (restauration and conservation) -Clara Santana -Nayara Rodriguez -Renato Cipriano Team DS- Social development -Lorraine Lopes Sousa -Adriano Arruda Team forest inventory Marcel Raimundo Plot measure: T1BU04-3 Site inspection: Project limits, Flora strata, fauna APPs review: Farm FIGUEIRA
16/08/2022	Interview with stakeholder: Wesley Sousa- Symbiosis Ademi vispa dos santos- Settle Sao Thome Communities/associations Ponte velha, Almanara and Sao Thomé Site inspection: Project limits, Flora strata, fauna APPs review SÃO JOSÉ SANTO ANTONIO IV (F-H267) VISTA ALEGRE II (F-H299) SÃO JOÃO IV (F-H288) MONTE ALTO (F-H287) Plots measure: T8AA02-1, T8AB53-1, T8AB23-4, T2AL08-1, T2A913-999, T8AB23-4.
17/08/2022	Interview with stakeholder: local authorities, environmental authority, and local communities Site inspection: Project limits, Flora strata, fauna APPs review: SANTA INES GLEBA C SANTA INES PONTAL DO BRIOSO MATINHA DO BRIOSO SUCURIU VISTA ALEGRE III SANTA TEREZINHA II SÃO LUCAS

Date	Topic
	Plots review: T1CI02-2, T6A012-4, T6A029-3, T6A019-108, T6A023-1, T6A012-1.
18/08/2022	Site inspection: Project limits, Flora strata, fauna APPs review BARRA DO CERVO ARETE RIO VERDE A JOAMAR MATÃO Plots review: T6B802-1, T6B905-1, T1BU07-4, T1BU09-7
19/08/2022	Public environmental agency: Mauro Jose Mario de grande Junior, Secretary of environment and agribusiness of tres lagoas Mayor and city hall, the president and city council José A. Moraes- Jefe de gabinete Site inspection: Project limits, Flora strata, fauna APPs review: BARRA DO MOEDA SÃO MIGUEL III RIO VERDE B DUAS MARIAS
19/08/2022	Audit desk-Document revision Documental management quality Fauna monitoring plan Land tenure Contracts and/or agreements Communication channel, Project email review Legal compliance Document management, capture, and compilation of Project information. GIS review- Additionally Financial Long-term definition Spreadsheet review Review of VCUs calculations in accordance with applied methodology and relevant tools.
19/08/2022	Closing Meeting: A general presentation of the partial conclusions and results of the audit, the CARs/CLAs/ detected. -Confirmation of dates to deliver final findings and resolution of findings.
20/08/2022	Flight to Campinas

The visit began with the opening meeting and subsequent site inspection with the lead auditor and the audited team. The activities, the boundaries of the project, the monitoring, the responsible persons and all the aspects to ensure the information provided by the project proponent. Confirmation of boundaries and activities was verified on site (track in yellow line) as shown below:

Figure 1 Site inspection⁴.

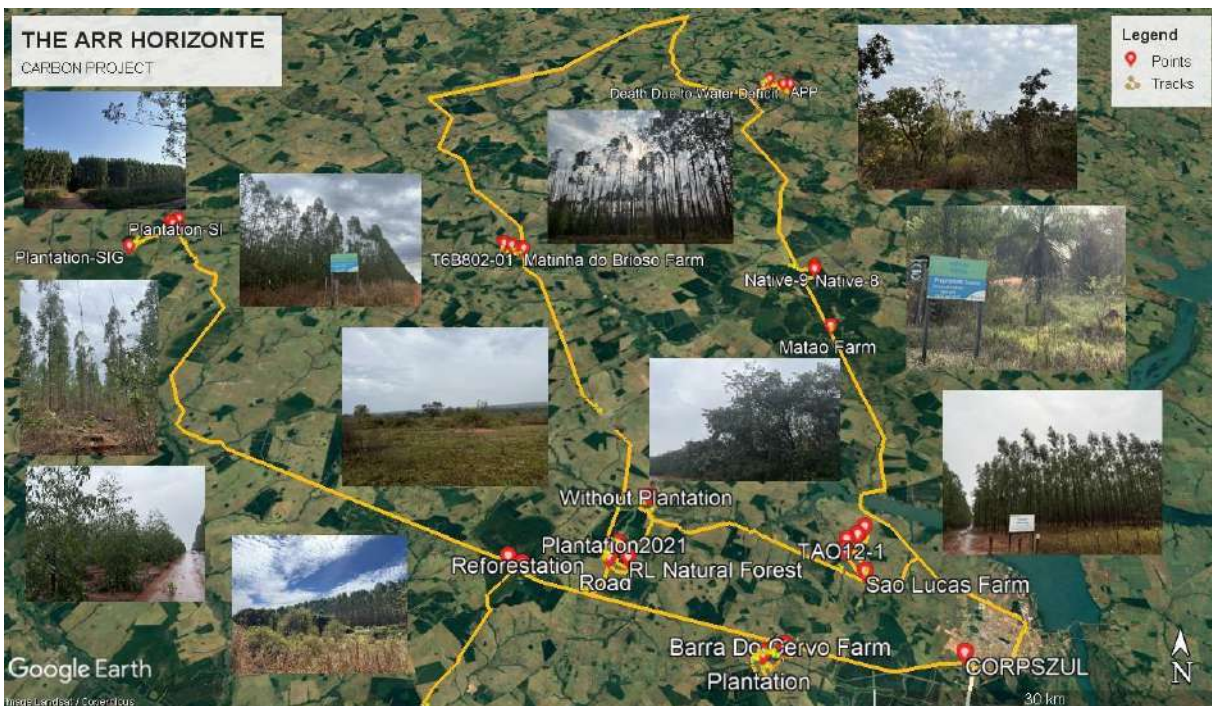
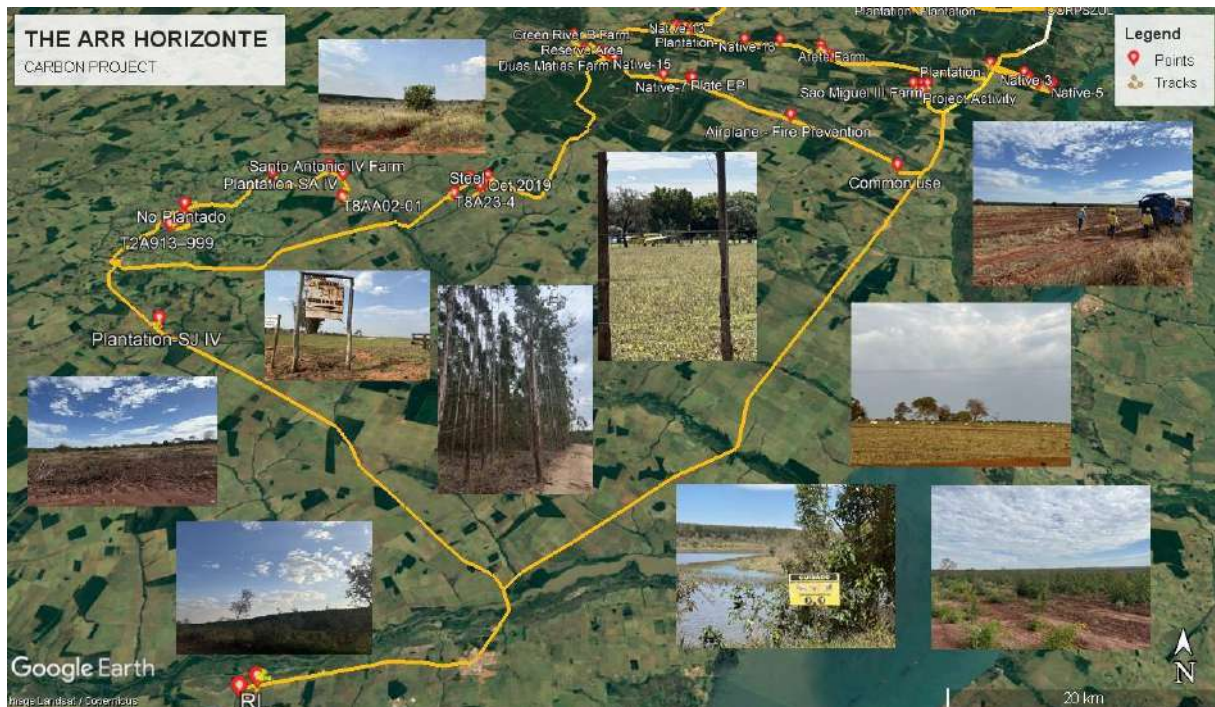


Figure 2 Site inspection⁴.

⁴ Tracks and photos were recorded in a GIS system by the audit team, and they are available in the document management of ESPL

Table 6 Check points

Site	Coordinate		Photo
	Latitude	Longitude	
Settle Saint Thomas	21° 10' 21.43"S	52° 41' 51.79"W	
Airplane - Fire Prevention	21° 4' 9.79"S	52° 6' 41.75"W	
CORPAZUL	20° 48' 44.94"S	51° 43' 53.26"W	

Site	Coordinate		Photo
	Latitude	Longitude	
Matinha doBrioso Farm	20° 19'6.35"S	52° 8'35.43"W	
Sao Lucas Farm	20° 44'16.20"S	51° 48'16.70"W	
Matao Farm	20° 26'22.76"S	51° 47'31.76"W	
Land Common use	21° 9'45.60"S	52° 0'15.93"W	

Site	Coordinate		Photo
	Latitude	Longitude	
Legal reserve	20°56'17.02"S	52° 3'9.94"W	
Arete Farm	20°56'45.16"S	52° 2'28.91"W	
Plot T1BU09-7	20°55'15.77"S	52° 3'15.97"W	

Site	Coordinate		Photo
	Latitude	Longitude	
Plot T1BU07-4	20°55'53.79"S	52° 3'17.07"W	
Plantation	20°48'52.32"S	51°54'19.51"W	
Plantation-	20°48'51.20"S	51°54'15.83"W	

Site	Coordinate		Photo
	Latitude	Longitude	
Figueira Farm	21°43'50.29"S	52°34'38.73"W	
Legal reserve	21°44'15.64"S	52°35'17.33"W	
Permanent preservation area and project plantation	19°58'19.16"S	51°46'54.31"W	

Site	Coordinate		Photo
	Latitude	Longitude	
Joamar I Farm	19°58'20.46"S	51°49'14.58"W	
Joamar Farm	19°57'36.98"S	51°48'37.48"W	
Marinha do Brioso Farm	20°19'6.80"S	52°8'36.01"W	

Site	Coordinate		Photo
	Latitude	Longitude	
Plot T6B802-01	20° 19'5.60"S	52° 8'51.17"W	
Legal reserve	21° 15'7.81"S	52° 46'53.21"W	
Monte Alto Farm	21° 13'26.06"S	52° 46'46.53"W	

Site	Coordinate		Photo
	Latitude	Longitude	
Plot T2A913-999	21° 15' 21.46"S	52° 47' 9.36"W	
Recent Plantation-	20° 57' 36.94"S	51° 50' 51.60"W	
Permanent preservation area	20° 18' 35.34"S	52° 10' 1.28"W	

Site	Coordinate		Photo
	Latitude	Longitude	
Pontal do Brioso Farm	20° 18' 47.29"S	52° 9' 27.94"W	
Permanent preservation area Santa Ines	20° 15' 59.92"S	52° 34' 26.62"W	
Santa Ines Farm	20° 16' 15.69"S	52° 35' 0.94"W	

Site	Coordinate		Photo
	Latitude	Longitude	
Plantation	20° 17'0.15"S	52° 34'8.10"W	
Plantation2017	20° 16'30.91"S	52° 34'41.81"W	
Santa Ines gleba Farm	20° 16'15.76"S	52° 35'0.91"W	
Plantation2021	20° 42'40.86"S	52° 1'46.72"W	

Site	Coordinate		Photo
	Latitude	Longitude	
Inner Road	20° 43'28.94"S	52° 2'17.25"W	
Legal reserve	20° 43'30.27"S	52° 1'14.57"W	
Santo Antonio IV Farm	21° 9'42.00"S	52° 38'13.63"W	
Plantation-SA IV	21° 10'32.88"S	52° 37'9.60"W	

Site	Coordinate		Photo
	Latitude	Longitude	
Plot T8AA02-01	21° 12' 53.50"S	52° 36' 47.56"W	
Plantation-SJ IV	21° 23' 18.62"S	52° 45' 18.17"W	
Reserve Area	20° 55' 46.56"S	52° 21' 26.52"W	

Site	Coordinate		Photo
	Latitude	Longitude	
Sao Joao	20°55'33.11"S	52°21'12.06"W	
Barra do Cervo Farm	20°48'25.74"S	51°53'11.10"W	
Plot T6A023-1	20°42'1.75"S	51°48'18.27"W	

Site	Coordinate		Photo
	Latitude	Longitude	
Plot T29P3	20°41'32.12"S	51°47'50.01"W	
Plot TA019P108	20°42'20.82"S	51°48'58.98"W	
Plot TA012-1	20°42'57.49"S	51°49'9.79"W	

Site	Coordinate		Photo
	Latitude	Longitude	
Project Activity onsite	21° 1'16.23"S	51° 56'45.66"W	
Legal reserve	21° 0'17.40"S	51° 56'22.27"W	
Sao Miguel III Farm	21° 0'21.02"S	51° 56'12.15"W	
firebreak.	21° 11'1.99"S	52° 28'42.79"W	

Site	Coordinate		Photo
	Latitude	Longitude	
Plot T8A23-4	21° 12' 36.31"S	52° 29' 34.19"W	
Plot T8AB53	21° 11' 49.81"S	52° 27' 57.23"W	
Areas to native plantations	20° 59' 30.87"S	51° 48' 24.05"W	

Site	Coordinate		Photo
	Latitude	Longitude	
Areas to native plantations	20° 59'44.10"S	51° 48'34.74"Wg	
Areas to native plantations	21° 0'10.87"S	51° 48'1.24"W	
Areas to native plantations	21° 0'23.21"S	51° 47'7.17"W	
Green River B Farm	20° 53'37.11"S	52° 22'19.71"W	

Site	Coordinate		Photo
	Latitude	Longitude	
Reforestation	20° 43'56.25"S	52° 7'4.23"W	
Reforestation	20° 43'29.79"S	52° 7'51.73"W	
Areas to native plantations	20° 59'32.18"S	52° 13'36.00"W	
Areas to native plantations	20° 59'36.70"S	52° 13'24.74"W	

Site	Coordinate		Photo
	Latitude	Longitude	
Fauna Plate	20°59'33.57"S	52°13'32.04"W	
Areas to native plantations	20°21'3.74"S	51°47'52.86"W	
Areas to native plantations	20°20'57.84"S	51°47'51.05"W	
Areas to native plantations	20°20'44.85"S	51°47'52.34"W	

Site	Coordinate		Photo
	Latitude	Longitude	
Areas to native plantations	20°59'11.42"S	52°15'31.09"W	
Duas Marias Farm	20°56'58.05"S	52°19'9.59"W	
Areas to native plantations	20°52'24.01"S	52°14'16.94"W	
Areas to native plantations	20°52'22.57"S	52°14'23.23"W	

Site	Coordinate		Photo
	Latitude	Longitude	
Areas to native plantations	20°56'45.35"S	52°19'17.52"W	
Areas to native plantations	20°56'18.89"S	52°19'40.75"W	
Areas to native plantations	20°55'44.56"S	52°20'17.47"W	
Areas to native plantations	20°54'26.90"S	52°6'17.94"W	

Site	Coordinate		Photo
	Latitude	Longitude	
Restoration areas	20° 54' 24.85"S	52° 9' 3.95"W	

In addition, during the site inspections it was possible to sight several species of fauna, which were photographed in the place and are presented below:

Table 7 Fauna sighted on site.

Sighting coordinates		Photo
Latitude	Longitude	
20° 59' 23.81"S	52° 14' 23.58"W	
21° 13' 5.86"S	52° 43' 59.74"W	

Sighting coordinates		Photo
Latitude	Longitude	
20° 22'57.27"S	52° 29'2.72"W	
20° 43'40.14"S	52° 1'15.01"W	
20° 20'36.26"S	52° 31'24.35"W	
20° 18'51.02"S	52° 32'46.39"W	

Sighting coordinates		Photo
Latitude	Longitude	
20° 33'59.34"S	52° 29'5.05"W	
20° 58'39.51"S	52° 18'1.14"W	

2.6 Resolution of Findings

The identification of the findings was determined after reviewing the documentation and the results of the on-site inspections. The findings relate to non-compliance with the requirements of the VCS standard, non-compliance with local environmental laws and rules and or approved methodological procedures. Project information must meet the requirements of the standards by presenting the correct evidence, being consistent with what has been validated, and being based on relevant, verifiable, and internationally recognized sources.

The on-site inspections allowed us to verify that the procedures for obtaining project information and data were relevant, reliable, and transparent. The sampling effort ensured that the relative importance result did not be less than 5%, which was agreed with the project proponent. The information and data were checked for consistency to ensure that there were no errors, omissions, or misrepresentations in the information.

A Corrective Action Request (CAR) shall be raised if one of the following situations occurs:

- Non-compliance with the monitoring plan or methodology are found in monitoring and reporting and has not been sufficiently documented by the project participants, or if the evidence provided to prove conformity is insufficient.
- Modifications to the implementation, operation and monitoring of the registered project activity has not been sufficiently documented by the project participants.

- Mistakes have been made in applying assumptions, data, or calculations of GHG removals which will impact the quantity of VCUs.
- Issues identified in a FAR during validation/verification to be verified during verification have not been resolved by the project participants.

A Clarification Request (CL) shall be raised if information is insufficient or not clear enough to determine whether the applicable VCS requirements have been met.

A Forward Action Request (FAR) is issued for actions if the monitoring and reporting require attention and/or adjustment for the next verification period.

The findings detected were: 08 corrective action requests (CAR) and 05 Requests for Clarification (CL). All finding included the issues raised, the responses provided by the project proponent and the final conclusions are included in Appendix 2: FINDINGS

2.6.1 Forward Action Requests

No FARs were raised during the validation of this project.

3 VALIDATION FINDINGS

3.1 Project Details

3.1.1 Project type, technologies and measures implemented, and eligibility of the project.

THE ARR HORIZONTE CARBON PROJECT is a grouped project whose activities and description are classified in scope 14 - Afforestation, Forestation and Other Land Use (AFOLU), specifically under the Afforestation, Reforestation and Revegetation (ARR), **as described in the VCS Joint PD + MR v06 section 1.1**. It first instance is located in Mato Grosso do Sul state, at the Cerrado Biome; and its purpose is to remove GHG emissions through plantation of Eucalyptus species in an area of 15,517.87 hectares, distributed in 41 farms owned by Suzano and with a process of harvest based on cycles of 7 years.

The project is not located in REDD+ program/project areas. Plantations were established on degraded pasture or sandy soils prior to the start of the project activity, and no native ecosystems were cleared for the development of the project activity. In addition, there has been no change in land use in the area of the project activity in the 10 years prior to the project start date, according with the supports provided by the project proponent.

The project proponent states in **VCS Joint PD + MR v06 Section 1.3** that no degradation of hydrologic functions has occurred or will occur in the area where the project will be developed, and that the region and biome in which the project area is located are not categorized as wetlands and no drainage activities will occur.

3.1.2 Project design, including eligibility criteria for grouped projects

According with **VCS Joint PD + MR v06 – section 1.4**, the project activities consist in commercial plantations of *Eucalyptus* in a total area of 15,517.87 hectares as a grouped project and in accordance with **VCS Standard v4.3 – section 3.5**, the project shall include one or more sets of eligibility criteria for the inclusion of new project activity instances, and THE ARR HORIZONTE CARBON PROJECT sets the following:

For the areas with eucalyptus planting, the following set of eligibility criteria must be followed:

- New areas must be certified or seek certification under a recognized and high-level market sustainability program, for example the FSC;
- Plant only eucalyptus species from the positive list provided by Suzano SA as Project proponent;
- The pre-existing land use of the grouped project instance area must be degraded pasture.

For the native vegetation recovery areas, the following set of eligibility criteria must be followed:

- Plantation of native species most adequate for the area in question;
- The baseline for these areas must be degraded pasture or sandy areas

The following set of criteria must be met regardless of the species to be planted at the project area.

- Land owned or leased by by Suzano SA as Project proponent ;
- Located at the Cerrado biome, state of Mato Grosso do Sul
- New areas must meet the applicability conditions set out in the methodology and relevant tools applied to the project;
- New areas must prove some characteristics in common under the additionality assessment according to the rationale applied in the project description
- New areas must be subject to the same baseline scenario as the determined by the project description;
- New areas must have a start date on or after the project start date as a first project instance, of 02/11/2017.

Besides, the project proponent include in section 1.4.1 of joint PD/MR information, adequate justifications and supports (such as cartographic and secondary information referenced in the joint PD/MR) about the compliance of the initial PAIs with the Eligibility Criteria of the grouped project set in the VCS Standard v4.3, item 3.5.15.

3.1.3 Project proponent and other entities involved in the project.

The project proponents are Suzano S.A. and as VCS PD Template v4.1 indicates, there is the contact information of proponents in section **1.5 of VCS Joint PD + MR v06**

Organization name	Suzano S.A.
Contact person	Julio Cesar Natalense
Title	Carbon Initiatives Executive Manager
Address	Brigadeiro Faria Lima Avenue, 1355. CEP 01452-919. São Paulo, SP. Brazil
Telephone	+55 11 99642 1051
Email	jcnatalense@suzano.com.br

3.1.4 Ownership

The project area is distributed in 41 areas owned or leased by Suzano S.A. and its controlled companies (see VCS Joint PD + MR v06 – section 1.7). **In agreement with VCS Standard v4.3 section 3.6**, the proponent demonstrate the legal right to control and operate the project in these areas.

During the assessment of documentary evidence of ownership, the Project proponent provided sufficient and updated documental evidence to proof the land tenure and therefore proof of rights, as below:

- Updated Real Estate Records indicating liens, debt, or court lawsuits relating to the Properties regarding the 20 (twenty) past years.
- Rural Lease Agreement
- Certificate issued by the relevant Real Estate Registry Office which the complete chain of domain its transfer from Public Domain to Private.
- CCIR (Rural Property Registry) before INCRA
- Geodesic Survey approved by INCRA
- Rural Real Property Tax (ITR) Return and proof of payment of ITR for the last 5 years exercises, Document of Information and Calculation of ITR - DIAT of every ITR Return made available.
- Proof of Enrollment of the Property with the Rural Environmental Registry (CAR), with the description of native vegetation area, preservation and protected environment and the identification of the Legal Reserve areas.

The properties in the first instance are:

Fazenda Almeida - Title nº 85.086 (Três Lagoas - MS), Chácara Barra do Cervo - Title nº 6.463 (Três Lagoas - MS), Fazenda São Miguel III/Parte 1 - Title nº 85.388 (Três Lagoas - MS), Fazenda Nossa Senhora - Title nº 86.091 (Três Lagoas - MS), Fazenda Monte Alto - Title nº 7.841 (Bataguassu - MS), Fazenda Figueira Gleba A - Title nº 14.029 (Bataguassu - MS), Fazenda São João IV ("São João Gleba A") - Title nº 13.694 (Bataguassu - MS), - Fazenda Jandaia - Title nº 8.645 (Brasilândia - MS), - Fazenda Joamar - Title nº 7.000 (Inocência - MS), - Fazenda Santa Tereza - Title nº 5.198 (Três Lagoas - MS), - Fazenda Santa Inês "Gleba C" - Title nº 72.214 (Três Lagoas - MS), - Fazenda Santa Inês Gleba "A","C","E"

and "F" - Title nº 68.798,72.213,77.905 and 68.800 (Três Lagoas - MS), - Fazenda Triângulo do Vale - Title nº 91.828 (Três Lagoas - MS), - Fazenda São Lucas - Title nº 46.390 (Três Lagoas - MS) and Fazenda Rio Verde -Title nº, XXXXXX (Brasilândia - MS), - Fazenda Matinha do Bioso -Title nº 81.654 (Três Lagoas - MS), - Fazenda Pontal do Bioso - Title nº 83.278 (Três Lagoas - MS), - Fazenda da Mata V -Title nº 87.151 (Três Lagoas - MS), - Fazenda Santa Terezinha -Title nº 81.621 (Três Lagoas - MS), - Fazenda Sucuriú - Title nº 88.693 (Três Lagoas), - Fazenda Santo Antônio Gleba A -Title nº 14.119 (Bataguassu - MS), - Fazenda São José -Title nº 12.685 (Brasilândia - MS), - Fazenda Barra do Moeda - Área Remanescente - Title nº 84.752 (Três Lagoas - MS), - Fazenda Horto Estradão Gleba C - Title nº 92.295 (Três Lagoas - MS), - Fazenda Laguna - Title nº 48.774 (Três Lagos - MS), - Fazenda Laguna - Title nº 85.823 (Três Lagoas - MS), - Fazenda Horto Matão - Title nº 45.506 (Três Lagoas - MS), - Fazenda Boa Esperança - Title nº 24.542 (Aparecida do Taboado - MS), - Fazenda São Marcos - Title nº 481 (Água Clara - MS), - Fazenda Ana Rosa - Title nº 81.398 (Três Lagoas - MS), - Fazenda Guará-Suiá - Title nº 8.945 (Brasilândia-MS), - Fazenda Vale do Gerivá - Title nº 6.456 (Brasilândia-MS), - Fazenda Bom Jesus - Title nº 7.462 (Brasilândia-MS), - Fazenda Paraíso - Title nº 7.424 (Brasilândia-MS), - Fazenda Cristo Redentor - Title nº 6.412 (Brasilândia-MS).

Additionally, the PP attached the lease format for future PAIs, where the specific times in which payments will be made are clearly established, the space is left to clarify the specific payment of each case and the corresponding clauses and obligations of both parties to the contract (see Appendix 1: DOCUMENTATION PROVIDED BY THE PROJECT/Verra_Validation and verification/Point 3/). The VVB concludes that current and future agreements are plausible according to the format established by the proponent (current agreements available at Appendix 1: DOCUMENTATION PROVIDED BY THE PROJECT/10082022/'PROJETO HORIZONTE_DOC AUD/'20220810 - auditoria/docs/'Sec. 1/1.7 Ownership/ Leased/).

3.1.5 Project start date

The project start date is 02-November-2017, day in which activities for preparing land for seedling were implemented at the first PUS, at Santa Inês (T5AM) and Monte Alto (T2A9) Farms, according with VCS Joint PD + MR v06 – section 1.8. The project proponent attached documentary evidence about the purchase of seedlings for planting in the "Monte Alto" area, which was 3 days before the project start date.

3.1.6 Project crediting period

According with VCS Joint PD + MR v06 – section 1.9, the project crediting period is 30 years; the start date of the crediting period is 02-November-2017; the end date is 01-November-2047 and both days are included. In accordance with VCS Standard v4.3 – section 3.8, the number of years does not exceed the maximum indicated.

3.1.7 Project scale and estimated GHG removals

The project proponent mentioned in VCS Joint PD + MR v06 – section 1.10 that project is considered as a Project, which is in accordance with VCS Standard v4.3 – section 3.9.1, besides, the project will remove

an average annual of removals by 86,995.21 tCO₂e and a total estimated GHG removals of 2,686,131.95 tCO₂e long-term average for its 35 years of project life, which corresponds with the thresholds to be classified as a project scale.

Year	Estimated GHG emission reductions or removals (tCO ₂ e)
02/11/2017 to 31/12/2017	5,057
01/01/2018 to 31/12/2018	314,292
01/01/2019 to 31/12/2019	726,444
01/01/2020 to 31/12/2020	1,348,861
01/01/2021 to 31/12/2021	1,952,291
01/01/2022 to 31/12/2022	2,640,621
01/01/2023 to 31/12/2023	3,308,834
01/01/2024 to 31/12/2024	3,857,816
01/01/2025 to 31/12/2025	2,748,405
01/01/2026 to 31/12/2026	2,747,970
01/01/2027 to 31/12/2027	2,050,515
01/01/2028 to 31/12/2028	2,710,889
01/01/2029 to 31/12/2029	2,786,928
01/01/2030 to 31/12/2030	3,351,149
01/01/2031 to 31/12/2031	3,912,109
01/01/2032 to 31/12/2032	2,813,485
01/01/2033 to 31/12/2033	2,825,482
01/01/2034 to 31/12/2034	2,140,458
01/01/2035 to 31/12/2035	2,811,987
01/01/2036 to 31/12/2036	2,895,338
01/01/2037 to 31/12/2037	3,465,595
01/01/2038 to 31/12/2038	4,028,826
01/01/2039 to 31/12/2039	2,931,976

Year	Estimated GHG emission reductions or removals (tCO ₂ e)
01/01/2040 to 31/12/2040	2,944,104
01/01/2041 to 31/12/2041	2,259,210
01/01/2042 to 31/12/2042	2,930,906
01/01/2043 to 31/12/2043	3,014,118
01/01/2044 to 31/12/2044	3,582,574
01/01/2045 to 31/12/2045	4,142,710
01/01/2046 to 31/12/2046	3,042,732
01/01/2047 to 31/12/2047	3,051,778
01/01/2048 to 31/12/2048	2,362,819
01/01/2049 to 31/12/2049	3,027,447
01/01/2050 to 01/11/2050	3,102,902
01/01/2051 to 31/12/2051	3,662,294
01/01/2052 to 01/11/2052	3,611,091
Total estimated ERs	99,110,028
Total number of crediting years	35
Average annual ERs	86,995.21

3.1.8 Project location

According to **VCS Joint PD + MR v06 – section 1.12**, THE ARR HORIZONTE CARBON PROJECT is situated Mato Grosso do Sul State, in a total area of 15,517.87 hectares. The project proponent provided a KML file in which is pointed each farm, in accordance with **VCS Standard v4.3 – section 3.10**.

3.1.9 Conditions prior to project initiation

The VCS Joint PD + MR **v06** (section 1.13) of the project includes a brief description of climate, hydrology, topography, demography and land use, soils, and vegetation of the project's zone in conformance with VCS PD Template v4.1 – section 1.13 and provided cartography information to support it.

3.1.10 Project compliance with applicable laws, statutes, and other regulatory frameworks

According to **VCS Joint PD + MR v06 – section 1.14**, project complies with the national statutes and other regulatory frameworks, including resolution CERH MS n° 25, from 3 March 2015, which states the criteria for grants and rights about the use of water resources; resolution SEMADE n° 9, from 13 May 2015, which states the standards and procedures for environmental licensing among other guidelines; law n° 12.727, from 17 October 2012, which defines general requirements about the vegetation protection, Permanent Preservation areas and Legal Reservation areas, the forestry exploitation; law n. 8.171/1991: National regulation for agriculture and instruments for agriculture, livestock, aquiculture and forestry, in Regulating Standard N. 31: provides for the use, storage, transport, and disposal of pesticides and other agricultural inputs; law no. 10.711, of August 5, 2003, which provides on the National Seed and Seedling System and makes other provisions; law No. 12651 of May 25, 2012 - Brazilian Forest Code, which determines the maintenance of preserved or restoring native vegetation in areas around springs or perennial water sources; INMETRO Ordinance No. 547, October 25, 2012, which outlines the requirements for obtaining and maintaining the Sustainable Forest Management Unit certificate; state Law no. 214, of March 25, 1981: which prohibits cutting trees from species in extinction and makes other provisions to avoid cutting the following endangered plant species; law 2.406, of January 29, 2002 which establishes the State Policy for Water Resources, creates the State System for the Management of Water Resources, and makes other provisions; decree No. 13,977, of June 5, 2014, which provides for the Rural Environmental Registry of Mato Grosso do Sul, the MS More Sustainable Program, and other provisions; CBMMS Technical Standard n. 45, of 2021 which provides for forest fire prevention and combat measures and IMASUL Ordinance n. 912, of June 02, 2021 which implements the Electronic Environmental Licensing system in the scope of the Environmental Institute of Mato Grosso do Sul; Decree No. 11.075, of May 19, 2022, which establishes the procedures for the elaboration of Sectoral Plans for Mitigation of Climate Changes referred to in the sole paragraph of art. 11 of Law No. 12,187, of December 29, 2009, and institutes the National System for the Reduction of Greenhouse Gas Emissions – Sinare.

3.1.11 Participation under other GHG programs

The **VCS Joint PD + MR v06 – section 1.14** makes it clear that the project does not participate under other GHG program and has not been rejected by any other GHG program.

3.1.12 Other forms of credit

According to **VCS Joint PD + MR v06 – section 1.16**, the activities that result on the GHG removal of the project are not included in any other emission trading programs or mechanisms that includes GHG allowance trading and has not sought for, nor is it interested in any other forms of environmental credit.

3.1.13 Sustainable development contributions

As **VCS Joint PD + MR v06 – section 1.17** mentions, the project will implement not only the activities related with carbon fixation through reforestation, but also several activities in benefit of local activities. It is also in line with the Brazilian NDC, which has a specific topic for the forestry and land use change sectors. The project is aligned to the following points:

- Enforcement of the forestry code: The project considers extra efforts on conservation and restoration of RL (Legal reserve) and APP (permanent preservation areas), in line with the forestry code.
- Afforestation and reforestation of 12 million Ha of forest until 2030: This project consists of ARR activities implementation.
- Enlarge the sustainable management with native vegetation system scale: The project encompasses native vegetation restoration.

In addition, in conformance with **VCS Standard v4.3 – section 3.16**, it contributes to at least three Sustainable Development Goals (SDGs), specifically, it contributes to nine SDGs:

- **Goal 1 – No Poverty:** The Inclusive Recycling project, to be implemented, targets people in social vulnerability conditions and under the poverty line to generate more income and strengthen the recycling cooperative structure. The Nursery Seedlings project, Rural and Territorial Development Program and Hives Program also contributes to this SDG.
- **Goal 8 – Decent work and economic growth:** The Inclusive Recycling and the Nursery Seedlings projects also contributes for this SDG promoting the generation of jobs in the lines of the local Recycling Cooperative and in the Cerrado native seedling nursery, with the goal of providing seedlings for the restoration activity. This ensures decent jobs for the population,
- **Goal 11 - Sustainable cities and communities:** The Inclusive Recycling project creates a new source of revenue for local families, where the solid residues will be handled in a correct way and with less disposal in landfills, helping with public health and other related socio-environmental problems.
- **Goal 12 – Responsible consumption and production:** The Inclusive Recycling project contributes for this goal, promoting the adequate management of a larger number of solid residues, thus increasing recycling and reuse activities and decreasing their generation and disposal in landfills.
- **Goal 13 – Climate action:** The project activity contributes for this goal, because of the emission removals promoted by the project.
- **Goal 15 – Life on land:** The project activity contributes for this goal, because of native restoration activity. In addition, the Nursery Seedling project will supply native species for the regeneration activities. The local fauna and flora are also frequently.

In addition, the project proponent state in section 1.17.1 of Joint PD+MR v3.0 that the SDG contributions will be monitored through the indicators of the activities to which they are linked:

- For the Inclusive Recycling Project, the number of partners supplying recyclable material, the volume of recyclable material delivered to the Arara Azul Cooperative, the number of collectors active in the activity, as well as measuring the evolution of the municipal index of recyclable material collection in the municipality of Três Lagoas directed to the Arara Azul cooperative, will be quantified.
- The SDG linked to the Native and Ornamental Seedling Production Project will be monitored through the quantification of the volume of species produced and the volume of areas restored based on the volume of seedlings sold. Furthermore, by establishing a connection with other

seedling production groups in the state of Mato Grosso do Sul, it will be possible to measure the representativeness of the production of seedlings with other territories.

- The SDGs linked to climate and biodiversity (13 and 15) will be monitored with the results in each monitored period of the Project.

The VVB concludes that the proponent demonstrates how the project activities, or additional activities implemented by the project proponent, contribute to sustainable development.

3.1.14 Additional information relevant to the project

Leakage management for AFOLU projects

According to **VCS Joint PD + MR v06 – section 1.18** and 4.3, the leakage of the project was determined as per AR-TOOL15, an A/R Methodological tool for the “Estimation of the increase in GHG emissions attributable to displacement of pre-project agricultural activities in A/R CDM project activity”, and because of the specific conditions of the zone and its characteristics prior the start of the project, the leakage was considered insignificant and accounted as zero.

Commercially sensitive information

The project proponent mentioned in **VCS Joint PD + MR v06 – section 1.18**, some detailed information about suzano’s inventory process was considered commercially sensitive due to the company’s operations, but all sensitive information was shared with the VVB team and was part of the documentation review during the audit process.

Participation under Other GHG Programs

The **VCS Joint PD + MR v06 – section 1.14** makes it clear that the project does not participate under other GHG program and has not been rejected by any other GHG program.

THE ARR HORIZONTE CARBON PROJECT complies with the validation criteria for projects set out in VCS Version 4. ESPL has reviewed the project description documents and subsequently carried out site visit interviews to confirm the fulfilment of stated criteria.

3.2 Safeguards

3.2.1 No Net Harm

According to **VCS Joint PD + MR v06 – section 2.1**, the project does not cause any potential negative environmental and socio-economic impacts for its implementation and development, therefore there is no highlight and mitigate by the project. In addition, the proponent emphasizes the project has only positive impacts to the local community (as described under section 1.17 of the report) and also mentioned that project take care of biodiversity and water resources and in order to ensure no net harm over these resources, the project monitors to assess its condition. Finally, the project proponent has provided

evidence that project activities will not impact local stakeholders, as confirmed by the audit team during interviews and site visits.

3.2.2 Local Stakeholder Consultation

The local stakeholder consultation targeted two main publics: local authorities and local communities, for the first one, the project proponent contacted them via e-mail, where a draft of the VCS PD was sent with a flyer developed to help understanding key concepts of project. Besides, the proponent created a specific e-mail for attending questions and request about the project (creditosedecarbono@suzano.com.br) and guaranteeing the ongoing communication.

About the consultation with local communities, the proponent conducted it in two ways because of the covid-19 pandemic. The first one was targeted the social entities and settlements, where meetings were held to explain the project, share the video and flyer prepared, so it could be publicized throughout the communities. The meetings were held with 3 local entities and 14 representative members on 26 and 28 July 2022.

The second way was targeted the rural public, where each neighbor was approached by the project proponent team to consult them on the matter, with the assistance of the flyers and video, to ensure that the information would be always available and on an appropriate format. On total, 55 neighbors were visited and 60 people were consulted from 21 to 30 July 2022.

Besides, the proponent provides the project's manual to manage the operational dialog with local communities and ensuring ongoing communication.

During the visit and interviews, the audit team was able to determine that the project proponent is considering all input from local stakeholders and providing information on project design and implementation, risks, costs and benefits, relevant laws and regulations and the VCS Program validation process. The outcome of this process is that stakeholders accept the project and recognize the benefits to improving their quality of life.

Besides, the project proponent clarify in section 2.2 of joint PD+MR there were no received any comments during the monitoring period audited in the disclosed channels.

3.2.3 Environmental Impact

As mentioned above and according to **VCS Joint PD + MR v06 – section 2.3**, the implementation and development of the project does not cause any potential environmental impact, the proponent provides support to highlight the benefits related with Eucalyptus plantation and about the implementation of the project in comparison with prior conditions.

3.2.4 Public Comments

The project proponent summarized in **VCS Joint PD + MR v06 – section 2.4** all the questions and comments received during its public comment period (08/08/2022 to 07/09/2022) and clarified all of them were answered promptly. In addition, the PP provided documentary evidence to support this section.

3.2.5 AFOLU-Specific Safeguards

- The local stakeholder identification process and the description of results.

This VVB reviewed the process for identifying local stakeholders likely impacted by the project and according to VCS Joint PD + MR v06 – section 2.5, the local stakeholder identification process was developed through its social inventory, which observes directly onsite and conduces interviews with local people and is conducted every 4 years, and are composed of any interested person, group of people or entity which may be subject to the impact of its activities; on total, 3 main communities, of which two association located on the maps below, and 55 neighbors were identified. The Project proponent has provided the map of identified settlements and neighborhoods. The proponent provided full details on the process of identifying Local stakeholder and a description of the results, particularly the interviews it conducted.

- Risks to local stakeholders due to project implementation and how the project will mitigate such risks.

Despite **VCS Joint PD + MR v06** mentioned the project only brings positive impacts for the community, it also mentions eventual negative impacts that may be identified by stakeholders due to project implementation is increase on noise, dust, smoke, lower levels on water courses, water pollution, increase on garbage, disorder, damage to property and local roads, impacts on fishing and hunting, and forest fires. To mitigate this impact, the project established a strategy of operational dialogue, which will occur before each harvest event to inform local stakeholders and to ensure a minimum disturbance and the project also set up an e-mail where local stakeholders can communicate doubts, complaints and claims. All pertinent demands must be registered at the SISPART system, and the Social Development area will follow up with the activities to mitigate any impact or to attend any demand.

- Risks to local stakeholder resources due to project implementation and how the project will mitigate such risks, including plans to ensure the project will not impact local stakeholders' property rights without the free, prior and informed consent.

According to VCS PD, the project is implemented on private properties and do not impact local stakeholder's property rights, the proponent has a procedure for solving conflicts on land use claims and rights, which is based on prioritizing an amicable resolution between the parties. The ownership support was provided by Suzano SA as a project proponent.

- Processes to ensure ongoing communication and consultation, including a grievance redress procedure to resolve any conflicts that may arise between the project proponent and local stakeholders.

To ensure ongoing communication, Suzano SA as a project proponent provides as the e-mail created for this purpose as the manual designed to management operational dialog with stakeholders.

In addition, the project proponent provided information on the project design and implementation, including the results of monitoring; the risks, costs, and benefits that the project may bring to local stakeholders; relevant laws and regulations covering workers' rights; and the VCS program review process and on-site visit by the validation/verification body, and provided supporting documentation.

On the other hand, the PP mentioned in section 2.1 of joint PD+MR that the use of fertilizers and defensives help in soil preparation and forest growth and its possible adverse impacts are the misuse or overuse of them; Suzano has well defined processes and procedures by a specific department of Soil, Nutrition and Forest Management and also established guidelines for the preparation and application of fertilizers and pesticides in order to avoid the adverse impacts (the following documentation were attached as a support: '[CONFIDENTIAL] Auditoria_Externa_SNM_2022.pdf', '[CONFIDENTIAL] Manual Adubação Manual.pdf', '[CONFIDENTIAL] Manual Adubação Mecanizada.pdf', '[CONFIDENTIAL] PH_Controle de fertilizantes_2017 2022.xlsx').

Besides, the project proponent also includes the following information about the AFOLU-Specific Safeguards in section 2.5 of joint PD+MR:

- There were not identified any legal or customary tenure/access rights to territories and resources, including collective and/or conflicting rights, held by local stakeholders since the project is developed in a private area; the PP clarified that there are 3 communities near to the project area but none of them are in the project area; the project proponent provided documentary evidence to support the ownership (see section **Erro! Fonte de referência não encontrada.**). The project is in compliance with VCS Standard v4.3, 3.17.11 (2).
- The project proponent includes a description of the social, economic, and cultural diversity of the three main communities identified as stakeholders in section 2.5 of Joint PD + MR. The project is in compliance with VCS Standard v4.3, 3.17.11 (3).
- The project proponent indicated were no significant changes in the composition of the communities identified as a stakeholder. The project is in compliance with VCS Standard v4.3, 3.17.11 (4).
- The project proponent that the communities will be benefited in some way by the project and cited the improvement of rural roads with the frequent necessary maintenance carried out by the company as an example. The project is in compliance with VCS Standard v4.3, 3.17.11 (5).
- The project proponent clarified and attached evidence to support that the design and implementation of the project do not involve any discriminative or lead to sexual harassment. The project is in compliance with VCS Standard v4.3, 3.17.14.
- The project proponent clarified and attached documentary evidence to support the local stakeholder consultations has been performed in culturally appropriate manners. The project is in compliance with VCS Standard v4.3, 3.17.19.
- The project proponent clarified that the project is being undertaken with full consent of the communities, local and municipality government.

The audit team reviewed the tools identified by the project to comply with the safeguards and concluded that the project is taking the measures to prevent deterioration of essential social and economic elements and environmental rights and to prevent the occurrence of adverse impacts due to the design and implementation of the project.

3.3 Application of Methodology

3.3.1 Title and Reference

The project has applied the VCS methodology entitled Afforestation and Reforestation of Lands Except Wetlands (AR-ACM0003), version 2 – A/R Large-scale Consolidated Methodology and the following tools:

- AFOLU Non-Permanence Risk Tool v4.0
- AR-TOOL02: “Combined tool to identify the baseline scenario and demonstrate additionality in A/R CDM project activities” – version 1
- AR-TOOL08: “Estimation of non-CO2 greenhouse gas (GHG) emissions resulting from burning of biomass attributable to an A/R CDM project activity” – version 04.0.0
- AR-TOOL12: “Estimation of carbon stocks and change in carbon stocks in dead wood and litter in A/R CDM project activities” – Version 03.1
- AR-TOOL14: “Estimation of carbon stocks and change in carbon stocks of trees and shrubs in A/R CDM project activities” – Version 04.2
- AR-TOOL15: “Estimation of the increase in GHG emissions attributable to displacement of pre-project agricultural activities in A/R CDM project activity” – version 02.0.
- AR-TOOL16: “Estimation of change in soil organic carbon stocks due to the implementation of A/R CDM project activities – version 1.1.0.

3.3.2 Applicability

- Afforestation and Reforestation of Lands Except Wetlands (AR-ACM0003), version 2 – A/R Large-scale Consolidated Methodology

Table 8 Applicability conditions of the methodology AR-ACM0003

Condition	Applicability	VVB assessment
a) The land subject to the project activity does not fall in wetland category	The project is located in the Cerrado biome, which has a vegetation similar to a savannah and has no flooded area or characteristics that could be categorize as wetland.	It was confirmed during the site visits and analysis of information geographic provided by the project proponent.

Condition	Applicability	VVB assessment
b) Soil disturbance attributable to the project activity does not cover more than 10 per cent of area in each of the following types of land, when these lands are included within the project boundary: (i) Land containing organic soils. (ii) Land which, in the baseline, is subjected to land-use and management practices and receives inputs listed in appendices 1 and 2 to this methodology.	As indicated under the section 1.13 VCS Joint PD + MR v06 , the project is not located at lands containing organic soils and the baseline of the project is defined as extensive cattle ranching, as per the additionality analysis.	It was confirmed during the site visits and analysis of information geographic provided by the project proponent.

- AFOLU Non-Permanence Risk Tool v4.0

It has no internal applicability conditions and according to VCS Standard v4.3 - 3.2.9, all AFOLU project shall applied AFOLU Non-Permanence Risk Tool.

- AR-TOOL02: “Combined tool to identify the baseline scenario and demonstrate additionality in A/R CDM project activities” – version 1.

Table 9 Applicability conditions of the tool AR-TOOL02 – v1

Condition	Applicability	VVB assessment
a) Forestation of the land within the proposed project boundary performed with or without being registered as the A/R CDM project activity shall not lead to violation of any applicable law even if the law is not enforced.	The project does not lead to violation of any applicable law, as identified in section 1.14 of VCS Joint PD + MR v06	It was confirmed during the documentary review.
b) This tool is not applicable to small - scale afforestation and reforestation project activities.	This is not a small-scale because the projected net anthropogenic GHG removals exceed 8.000 tCO2e/year and is not developed by a low-income community and individuals.	It was supported with the definitions of the CDM.

- AR-TOOL08: “Estimation of non-CO2 greenhouse gas (GHG) emissions resulting from burning of biomass attributable to an A/R CDM project activity” – version 04.0.0

Table 10 Applicability conditions of the tool AR-TOOL08– v4.0

Condition	Applicability	VVB assessment
a) The tool is applicable to all occurrence of fire within the project boundary.	The proponent clarifies that project activity does not include burning biomass but in case of a loss event caused by fire this tool will be applied.	It was confirmed during the site visits and documentary review.
b) Non-CO2 GHG emissions resulting from any occurrence of fire within the project boundary shall be accounted for each incidence of fire which affects an area greater than the minimum threshold area reported by the host Party for the purpose of defining forest, provided that the accumulated area affected by such fires in a given year is $\geq 5\%$ of the project area.	The proponent clarifies that project activity does not include burning biomass but in case of a loss event caused by fire this tool will be applied.	It was confirmed during the site visits and documentary review.

- AR-TOOL12: “Estimation of carbon stocks and change in carbon stocks in dead wood and litter in A/R CDM project activities” – Version 03.1

This tool has no internal applicability conditions.

- AR-TOOL14: “Estimation of carbon stocks and change in carbon stocks of trees and shrubs in A/R CDM project activities” – Version 04.2

This tool has no internal applicability conditions.

- AR-TOOL15: “Estimation of the increase in GHG emissions attributable to displacement of pre-project agricultural activities in A/R CDM project activity” – version 02.0.

Table 11 Applicability conditions of the tool AR-TOOL15– v2.0

Condition	Applicability	VVB assessment
This tool is not applicable if the displacement of agricultural activities is expected to cause, directly or indirectly, any drainage of wetlands or peat lands.	This project activity does not cause the displacement of agricultural activities, the activity implemented before the project was extensive cattle ranching. The project also does not cause directly or indirectly the drainage of wetlands or peat lands.	It was confirmed during the site visits and analysis of information geographic provided by the project proponent. Nevertheless, it is necessary to provides support of the prior activities in this area.

- AR-TOOL16: “Estimation of change in soil organic carbon stocks due to the implementation of A/R CDM project activities – version 1.1.0.

Table 12 Applicability conditions of the tool AR-TOOL16– v1.1.0

Condition	Applicability	VVB assessment
a) The areas of land to which this tool is applied: (i) Do not fall into wetland1 category; or (ii) Do not contain organic soils as defined in “Annex A: glossary” of the IPCC GPG LULUCF 2003; (iii) Are not subject to any of the land management practices and application of inputs as listed in the Tables 1 and 2.	The tool will not be applied. Nevertheless, as mentioned previously under the AR-ACM0003 applicability conditions, this project does not fall into wetland category.	The tool will not be applied for the first instance.
b) The A/R CDM project activity meets the following conditions: (i) Litter remains on site and is not removed in the A/R CDM project activity; and (ii) Soil disturbance attributable to the A/R CDM project activity, if any, is: - In accordance with appropriate soil conservation practices, e.g., follows the land contours; - Limited to soil disturbance for site preparation before planting and such disturbance is not repeated in less than twenty years.	The tool will not be applied, as the harvest cycles are due to occur each seven years. As per the project management practices, the litter is not removed from the site, and the soil disturbance is limited, given the project implements the best practices available at the market for soil preparation, plantation and harvest.	It was supported with the site visits.

The VVB concludes that the project meets the applicability conditions of the methodology (AR-ACM0003 - “Afforestation and reforestation of lands except wetlands” – V 2.0) and selected tools, the project proponent has included supporting documentation and provided adequate justification to confirm compliance with the conditions, as is described in each table (tables 8 to 12).

3.3.3 Project Boundary

Table 13 GHG sources

Source		Gas	Included?	Justification/Explanation
Baseline	Above and below ground biomass	CO ₂	Yes	This is the major carbon pool subject to project activity as per the ACM0003 definitions. This pool is represented by isolated trees and grassland, which will be harvested for implementing this project. For each area where suppression of sparse trees may be necessary, the suppression license will be provided for VVB assessment, and such carbon stock will be dully accounted by the project.
		CH ₄	No	This is not a requirement of the methodology
		N ₂ O	No	This is not a requirement of the methodology
		CO ₂	Yes	Carbon stock in this pool is expected to increase due to implementation of the project activity. The tools for

Source		Gas	Included?	Justification/Explanation
	Dead wood and litter			accounting such pools have no internal applicability conditions.
		CH ₄	No	This is not a requirement of the methodology
		N ₂ O	No	This is not a requirement of the methodology
	Soil Organic Carbon	CO ₂	Yes	Carbon stock in this pool is expected to increase due to implementation of the project activity. The tool for accounting this pool have internal applicability conditions that are met for this second project activity in specific and will only be accounted for under areas where native vegetation is being implemented.
		CH ₄	No	This is not a requirement of the methodology
		N ₂ O	No	This is not a requirement of the methodology
	Burning of woody biomass	CO ₂	No	CO ₂ emissions due to burning of biomass are accounted as change in carbon stock
		CH ₄	No	The project proponents will not burn biomass for site preparation or forest management.
		N ₂ O	No	The project proponents will not burn biomass for site preparation or forest management.
Project	Above and below ground biomass	CO ₂	Yes	This is the major carbon pool subject to project activity as per the ACM0003 definitions. This pool is expected to increase with the implementation of the project activity.
		CH ₄	No	This is not a requirement of the methodology
		N ₂ O	No	This is not a requirement of the methodology
	Dead wood and litter	CO ₂	Yes	Carbon stock in this pool is expected to increase due to implementation of the project activity. The tools for accounting such pools have no internal applicability conditions.
		CH ₄	No	This is not a requirement of the methodology
		N ₂ O	No	This is not a requirement of the methodology
	Soil Organic Carbon	CO ₂	Yes	Carbon stock in this pool is expected to increase due to implementation of the project activity. The tool for accounting this pool have internal applicability conditions that are met for this second project activity in specific, and will only be accounted for under areas where native vegetation is being implemented.
		CH ₄	No	This is not a requirement of the methodology
		N ₂ O	No	This is not a requirement of the methodology

Source	Gas	Included?	Justification/Explanation
Burning of woody biomass	CO ₂	No	CO ₂ emissions due to burning of biomass are accounted as change in carbon stock
	CH ₄	No	The project proponents will not burn biomass for site preparation or forest management.
	N ₂ O	No	The project proponents will not burn biomass for site preparation or forest management.

The project proponent defines the project area, to include 15,517.87 hectares (as a first instance). After the validation of the project, additional areas may be added there in accordance with the criteria of the certification program in its latest version and the approved methodology.

GHG sources, temporal boundaries, location, and area were confirmed by verifying the consistency between the project design document, the files submitted by the project proponent with the project boundaries, and the site visit.

Given the justifications, assumptions and supporting information provided, as well as the project design, the audit team deems that project boundaries are correctly defined and in consistent with the applicable methodology and VCS requirements.

3.3.4 Baseline Scenario

The baseline scenario consists of large areas of grassland with sparse trees in the landscape. The grazing areas, mostly occupied by extensive livestock, consist of raising cattle on pasture. This is usually done without large investments and using large areas that are considered ideal for the so-called beef cattle rearing.

The baseline scenario has been justified applying the AR-TOOL02, “Combined tool to identify the baseline scenario and demonstrate additionality in A/R CDM project activities” (VCS Joint PD + MR v06 – section 3.4 and 3.5); the VVB review analyzes step by step this process comparing with methodology requirements:

- STEP 0. Preliminary screening based on the starting date of the A/R project activity.

The proponent mentions that they were interested since 2017 in credit proceeds for their planting, and they mention the letter of prior consideration to CDM. In addition, the start date of the project activity is of 02 November 2017, after 31 December 1999, as required by the AR-TOOL02.

- STEP 1. Identification of alternative scenarios

This step is divided in two parts, the first one is *Identify credible alternative land use scenarios*, where four scenarios were identified: continuation of extensive cattle farming, afforestation of the land within the limits of the Project carried out without registration as an AFOLU VCS project activity, land use within the project boundary for soy farming and land use within the project boundary for sugar cane farming. All

of them were supported by secondary information such as agricultural census, articles, data from official organizations and spatial planning.

The second part is *consistency of credible alternative land use scenarios with enforced mandatory applicable laws and regulations*, in this case Suzano SA as project proponent listed applicable laws for each scenario and demonstrated that all land use scenarios identified are following all mandatory applicable legal and regulatory requirements.

- STEP 2. Barrier analysis

This step consists in identify barriers that would prevent the implementation of at least one alternative land use scenarios, and it is divided in three parts, the first one is the Identification of barriers that would prevent the implementation of at least one alternative land use scenarios, in this case the proponent identified the following barriers: barriers related to local tradition of land use, institutional barriers, technological barriers, investment barriers, and barriers by social conditions. Suzano SA also analyzed each barrier against each scenario based on secondary information, and provided transparent and documented evidence, and offer conservative interpretations of this documented evidence, as to how it demonstrates the existence and significance of all the identified barriers.

The next part is the elimination of land use scenarios that are prevented by the identified barriers, and according to the analysis made above by the proponent, the scenarios 2, 3 and 4 are affected by the identified barriers, therefore they are eliminated. The final part is determination of baseline scenario, which corresponds to the first scenario, as it is still applicable despite the identified barriers.

Table 14 Scenarios identified by the project proponent with their corresponding barriers

SCENARIO BARRIER	SCENARIO 01: Continuation of extensive cattle farming	SCENARIO 02: Afforestation of the land within the limits of the Project carried out without registration as an AFOLU VCS project activity	SCENARIO 03: Land use within the project boundary for soy farming	SCENARIO 04: Land use within the project boundary for sugarcane farming
Barriers related to local tradition of land use		X	X	X
Institutional barriers		X		
Technological barriers		X	X	
Barrier to investment		X		
Barriers by social conditions		X	X	X

As part of the assessment, the ESPL analyzed the barriers identified and the documentary evidence provided by the project proponent against the 'GUIDELINES FOR OBJECTIVE DEMONSTRATION AND ASSESSMENT OF BARRIERS – version 1:

Table 15 Assessment of barriers

	Guideline	VVB assessment
1	While demonstrating barriers related to the lack of access to capital, technologies and skilled labour, the project proponents shall provide information on the nature of the companies and entities involved in the financing and implementation of the project: • While demonstrating barriers related to the lack of access to capital, information should include nature of company, organization and its ownership and financial information. • While demonstrating barriers related to technologies and skilled labor, information should include nature of company, organization and its ownership, and previous experience with similar project (that is under consideration for CDM) in other locations.	The proponent provided support on the technological developments of the company and the experience of some of its members related to carbon projects.
2	The barrier test in Step 3 of the Tool for the demonstration and assessment of additionality states that '<i>If the CDM does not alleviate the identified barriers that prevent the proposed project activity from occurring, then the project activity is not additional.</i>' Demonstrate in an objective way how the CDM alleviates each of the identified barriers to a level that the project is not prevented any more from occurring by any of the barriers. Provide transparent and documented evidence and offer conservative interpretations of this documented evidence. Anecdotal evidence can be included, but alone is not sufficient proof.	The proponent demonstrated that the barriers that prevent the development of the activity proposed by the project can be alleviated, adequate documentary evidence was provided.
3	In order to make an objective claim for a specific barrier, the PDD confirms the existence of the barrier by using evidence sources listed in the Tool for the demonstration and assessment of additionality¹ and the Combined tool to identify the baseline scenario and demonstrate additionality,² by demonstrating, for each of the barrier, that in similar circumstances (in similar industries/sectors, in companies of similar size and ownership structure, in similar projects) the barriers actually prevented the implementation of other project(s).	The proponent demonstrated the existence of the barriers identified through documentary support and secondary information.
4	Barriers that can be mitigated by additional financial means can be quantified and represented as costs and should not be identified as a barrier for implementation of project while conducting the barrier analysis, but rather should be considered in the framework of investment analysis.	The proponent obtained only one scenario after applying step 2, so it was not necessary to carry out an investment analysis.

	Guideline	VVB assessment
5	Barriers related to increased risks of damage (i.e., that the equipment is damaged due to technological barriers, lack of know-how etc.) can be quantified by the calculation of probability of loss and loss expenses, if the underlying data and assumptions can be objectively and transparently justified.	The proponent did not evaluate this type of barrier.
6	In case the PPs make the claim for investment barriers, they should demonstrate in the PDD that the financing of the project was assured only due to the benefit of the CDM. Therefore, it should be demonstrated that the loan approval (or other significant financing decision(s)) by the lender takes explicitly the CDM registration into account.	The project proponent demonstrated the project is assured only due to the benefit of the CDM.
7	For projects in Least Developed Countries, it is sufficient to transparently describe the relevant barriers, as less stringency is needed with regards to data availability in the actual demonstration of barrier, as compared to the projects in other countries. Projects in Least Developed Countries are not bound by the provisions in this guideline and may use other approaches that are more adapted to the local circumstances.	The proponent provided adequate documentary evidence.

- STEP 3. Investment analysis (if needed)

According to the methodology, when the forestation without the AFOLU VCS project activity is not included in the list of land use scenarios not prevented by any barrier and the list contains only one scenario, it shall proceed to step 4, and in this applies for this case.

- STEP 4. Common practice analysis

In this step, the proponent highlights that eucalyptus plantation is not common in the state, citing the last agricultural census to stated only 3,3% of the State area is dedicated to forest plantation. Besides, the project proponent mentioned the native revegetation activity is even more important when deforestation is put into perspective, taking into account the highest deforestation rates under the Cerrado biome, with 33,5% of the deforested areas.

On the other hand, the project proponent stated there are three projects registered as ARR projects at the VCS database in the state, which are similar to the present project, however, THE ARR HORIZONTE CARBON PROJECT, will be implemented in a strategic location and can be described as a bigger forestation project, with a proposed forestation area of 14,427.66 ha with eucalyptus plantations and 1,090 ha of native revegetation, on a higher dimension than the other registered projects, which combined cover an area of 1,217 ha.

In addition, the project proponent also highlighted that the way this project activity was designed is unusual even for the project proponent business, where it takes responsibility not only for planting the eucalyptus areas, but to restore native vegetation outside RLs and APPs and to recover the legally required areas, which are inside the RLs and APPs for the leased lands. Another great highlight of this project are the additional social activities, that will bring benefits to the local community.

During the site visit, the audit team verified that this project is being implemented in a region where deforestation has occurred in the past. The audit team deems that the assumptions, rationale and data used in determining the baseline scenario are adequately justified and can be considered reasonable.

3.3.5 Additionality

The additionality was demonstrated applying the AR-TOOL02, “Combined tool to identify the baseline scenario and demonstrate additionality in A/R CDM project activities”, which is described above.

3.3.6 Quantification of GHG Removals

The quantification of GHG Removals from baseline and project were determined by means of the AR-ACM0003 - Afforestation and Reforestation of Lands Except Wetlands, version 2 – A/R Large-scale Consolidated methodology (VCS Joint PD + MR v06 – section 4), a step-by-step process that was reviewed by the audit team, taking into account the requirements of the methodology and tools applied and checking all supports for assumptions and sources of data.

- Quantification of baseline emissions.

The baseline emissions were determined by AR-ACM0003 - Afforestation and Reforestation of Lands Except Wetlands, version 2 – A/R Large-scale Consolidated Methodology, it was reviewed step by step and was compared with methodology requirements. For baseline net GHG removals by sinks, in accordance with AR-ACM0003, the equation number 1 of methodology was applied. Data and values used are described below:

- Carbon stock in tree

The proponent highlights although the trees present under the baseline are sparse and limited, the phytophysiology of the area has been characterized as degraded pasture and exposed soil. The present trees at the first project activity area will be removed by the project proponent, which presented the legal authorizations - CANI for this procedure.

The mean pre-project tree crown cover is 1.03%, less than 20% of the threshold tree crown cover defined by the DNA (6%), as required by the AR-TOOL0014. And in addition, in accordance with the AR-TOOL0014 and its conditions, changes in carbon stock in shrubs and trees at the baseline are estimated as zero since scenarios including erosion and bare lands can be seen on project areas (compliance with paragraph 12 of tool).

- Carbon stock in shrubs

It is assumed that the carbon stock in shrub biomass is zero in the baseline scenario for both project activities, because changes in above- and below-ground biomass carbon stock of non-arboreal vegetation on degraded soil in the baseline scenario is not plausible.

- Changes in carbon stock in trees, litter, and dead wood baseline

For this variable, the proponent explains that the AR-TOOL12 tool was applied, section 6.2 and 7.2.

- Quantification of project emissions.

The project emissions were determined by AR-ACM0003 - Afforestation and Reforestation of Lands Except Wetlands, version 2 – A/R Large-scale Consolidated Methodology, it was reviewed step by step and was compared with methodology requirements. For actual net GHG removals by sinks, in accordance with AR-ACM0003, the equation number 2 of methodology was applied.

- Stratification

In conformance with section 5.3 of AR-ACM0003 methodology, stratification was defined, including farm identification, production unit, area and planting date; it is in VCS Joint PD + MR v06 – table 6 and also the proponent provided an Excel with this information.

- Change in carbon stock.

It was determined by equation 3 of AR-ACM0003 methodology and first of all, the proponent clarifies that the below-ground biomass is not compromised when the above-ground biomass is harvested and provided documentary evidence to support it; as long as the Eucalyptus stand is renewed and the above ground biomass grows again, the below ground biomass is assumed to remain constant in relation to harvesting and replanting operations, and the same applies to the stock of litter and dead wood. Due to the application of the methodology AR-ACM0003, this stock behavior cannot be clearly visualized, and are devalued for the eucalyptus activity. This consideration is conservative.

- Estimation for Change in carbon stock in tree and shrub biomass:

For Eucalyptus plantations, the AR-TOOL14 methodology - section 8.2 - is applied, the proponent emphasizes that the estimation of the tree stock was based on local past experiences and literature, also evaluating the context of the area (climate, soil, management, and species).

For Native Reforestation, the AR-ACM0003 and AR-TOOL14, section 8.2 is applied, the proponent highlights that the estimation was also based on local past experiences and literature, also evaluating the context of the area (climate, soil, management, and species).

- Estimation for Change in carbon stock in litter and dead wood:

For the estimates of carbon stock in dead wood and litter, the AR-TOOL12 topics 6.2 and 7.2 were applied, respectively; the project proponent highlights neither the carbon stocks will be removed from the project area, as identified at its operational procedures, which is in accordance with the tool applied.

- Estimation for Change in carbon stock in soil organic carbon:

For eucalyptus plantations, the proponent clarifies in the project boundary that this aspect is not taken into account in this case, therefore it corresponds to 0.

For native reforestation, the proponent mentions it will be estimated as per AR-TOOL0016, applying equations number 1, 4, 6 and 8.

- Increase in non-CO2 GHG emissions:

For this case, the project proponent clarifies no burning activity will be implemented by the project proponent in any of the project areas, therefore, this date is accounted as zero. In addition, the proponent also highlights that in case of forest fires that surpasses a threshold of 5% of the project area, the AR-TOOL08 must be applied, and all the required procedures for loss events will be dully applied.

In addition, about the permanence of carbon stocks, the project proponent highlighted in page 139 of VCS Joint PD + MR **v06** the eucalyptus plantations have the highest payback period, considered the revenues from the activity will only occur after harvesting cycles, which are to take place 7 years after the planting activity; besides, the pasture and degraded areas with exposed sandy soil recovery, using native species, which will not be submitted to harvesting events.

-Leakage, the proponent clarifies that it is expected that the project will not displace any agricultural activity in its development area, so leak emissions are insignificant, that is, 0. This is adequately supported by planning information from the *MapBiomass* online tool.

Subsequently, the values already calculated in equation 5 of the AR-ACM0003 methodology are replaced, and the net removals are obtained. The proponent provides an Excel calculation with all data and operations applied.

Finally, in accordance with VCS Standard v4.3 – section 3.2.22, the loss of carbon due to harvesting is include in the quantification of the project emissions and the long-term average GHG benefit is calculated by the equation present in this section, it was assessed and the VVB found it was adequately applied (3.2.22).

3.3.7 Methodology Deviations

According to VCS Joint PD + MR **v06** – section 3.6, the project has not applied any methodology deviations.

3.3.8 Monitoring Plan

The monitoring plan (MP) is in accordance with the applied methodology and methodological tools, and is intended to facilitate monitoring, recording, reporting, and verification activities necessary for assessment of the project performance and determination of the achieved removals in compliance with the approved methodology AR-ACM0003. It is fully described in VCS Joint PD + MR **v06** section 5, where the proponent describes data and parameters at validation, data and parameters monitored and the specific MP. It is supported by three documents provided by the proponent: procedures for calculating carbon stocks and variations, Field activities manual and Methodology Rede Suzano Carbon Biodiversity Inventory of Native Forests.

Table 16 Data and parameters available at validation (section 5.1 of VCS Joint PD + MR)

Parameter	Unit	Description	Value	Source
A	ha	Project Area	15,517.87	Identification of strata and project area boundaries, using Geographical Information Systems (GIS)
A_{l_bsl}	ha	Area of stratum i at baseline scenario	Different for each farm – Section 5.1 of VCS Joint PD + MR v06	Project activity area at each farm
CF	tC/t d.m.	Biomass proportion corresponding to carbon, named Carbon Fraction	0.47	AR-TOOL 14 “Estimation of carbon stocks and change in carbon stocks of trees and shrubs in A/R CDM project activities”, Version 04.2
D_{FOREST}	t d.m./ha	Mean above-ground biomass in forest in the region or country where the project is located	110.12	MIRANDA, et al. 2014. Regional variations in biomass distribution in Brazilian Savanna woodland. Data for biomass above and below ground for forest formations.
R_{TREE}	dimensionless	Root-shoot ratio for trees in the baseline	0.25	AR-TOOL 14 “Estimation of carbon stocks and change in carbon stocks of trees and shrubs in A/R CDM project activities”, Version 04.2.
CC_{TREE_BSL,i}	dimensionless	Crown cover of trees in baseline stratum i, at the start of the project activity, expressed as a fraction	1.01%	Shapefiles pointing trees authorized to be suppressed at the CANI, which are located inside the project area
DF_{DW}	%	Conservative default factor expressing carbon stock in dead wood as a percentage of carbon stock in tree biomass	1	AR-TOOL12 “Estimation of carbon stocks and change in carbon stocks in dead wood and litter in A/R CDM project activities”, Version 03.1.
DF_L	%	Conservative default factor expressing carbon stock in Litter as a percentage of carbon stock in tree biomass	1	AR-TOOL12 “Estimation of carbon stocks and change in carbon stocks in dead wood and litter in A/R CDM project activities”, Version 03.1.
A_{l_pa}	ha	Area of stratum i at project activity	Table 6 of VCS Joint PD + MR v06	Projected planting areas by stratum and specie
Mean annual Increment in Volume (IV)	m ³ ha-1yr-1	It is the average annual net increment in volume of trees to be planted on the project area, and it's used to calculate the Tree carbon stock on Eucalyptus plantations.	Different for each sp. - Section 5.1 of VCS Joint PD + MR v06	Based on previous inventory data for areas near the project area owned by Suzano SA
Aboveground net biomass growth	t.d.m/ha/yr	It is the average annual net increment in volume of native trees to be planted on the project area, and it's used to calculate the Tree carbon stock on native restoration activities.	For natural forests ≤20y – 7.00 For natural forests >20y – 2.00	2006 IPCC Guidelines for National Greenhouse Gas Inventories, chapter 4: Forest Land – table 4.9, value for tropical moist deciduous forest

Parameter	Unit	Description	Value	Source
Wood density (D)	t d.m./m ³	Wood density is used to convert the sparse trees volume into tree biomass under the project activity	Different for each sp. - Section 5.1 of VCS Joint PD + MR v06	Based on a databank which concentrates the information of density for species planted by Suzano SA
SOC _{REF,I}	tC/ha	SOC stock at the beginning of the A/R CDM project activity in stratum i of the areas of land	39.00	AR-TOOL16, version 1.1.0, table 3, value for tropical moist climate region and sandy soils
f _{LU,I}	Dimensionless	Relative stock change factor for baseline land-use in stratum i of the areas of land	1.00	AR-TOOL16, version 1.1.0, table 6, value for all climate regime
f _{MG,I}	Dimensionless	Relative stock change factor for baseline management regime in stratum i of the areas of land	0.70	AR-TOOL16, version 1.1.0, table 6, value for severely degraded level
f _{IN,I}	Dimensionless	Relative stock change factor for baseline input regime (e.g., crop residue returns, manure) in stratum i of the areas of land	1.00	AR-TOOL16, version 1.1.0, table 6, value for Low/Medium level

Table 17 Data and parameters monitored (section 5.2 of VCS Joint PD + MR)

Parameter	Unit	Description	Frequency and monitoring equipment	Source
A	ha	Project Area	Each time a verification is conducted – GPS (precision 1 -5 m) and Remote Sensing data	Survey databases of each polygon that is part of the Project and is under the control of the Project participants
A _i	ha	Area of stratum i	Each time a verification is conducted – GPS (precision 1 -5 m) and Remote Sensing data	Monitoring of strata and stand boundaries is done employing Geographical Information Systems (GIS) allowing the integration of data from different sources
Ap _i	m ²	Area of sample plot in stratum i.	Each time a verification is conducted – GPS and tape measure	Field measurement
N	dimensionless	Number of plots to be established in the project area	Each time a verification is conducted	Field measurement
Plot location	Latitude /longitude	Localization for each sampling plot	Each time a verification is conducted – GPS	Data field sampling
DBH	cm	Diameter at breast height of the trees	Each time a verification is conducted – Digital caliper and measuring tape	Field measurements in sample plots

Parameter	Unit	Description	Frequency and monitoring equipment	Source
H	m	Total height of trees	Each time a verification is conducted - clinometer	Field measurements in sample plots
T	year	Period between two successive estimations of carbon stock in trees and shrubs	Each time a verification is conducted	Verification records

The assessment team has checked all the parameters presented in the monitoring plan and comparing the requirements of the methodology. In that way, the MP contains all necessary parameters, with adequate descriptions as to source of data, measurements procedures, monitoring frequency, monitoring equipment and QA/QC procedures to be applied (from IPCC GPG LULUCF 2003). The selected monitoring frequency of the parameters is consistent with the requirements of methodology and MP complies with the requirement of AR-ACM0003, Version 02.0 - section 6.

3.4 Non-Permanence Risk Analysis

In accordance with VCS requirements, the proponent applied “AFOLU Non-permanence risk tool v4.0” to assess the risk according to internal risk, external risk, natural risk, and mitigation measures for minimizing risk. The project proponent provides the NPK report and the Excel of risk tool.

Table 18 Evaluation of the project risks

Risk	Assessment of rationale, assumptions, and justification	Assessment of quality of documentation and data provided	Conclusion
Internal risks			
Risk rating= 0			
Project management Risk rating= -4	The audit team evaluated the justification for the risk rating and the actions to mitigate the risk of illicit activities within the project area.	The documentation provided is the description of activities of mitigation and the experience of the project proponent that allowed for assessment by the audit team and is therefore of good quality.	Risk rating is appropriate. The VVB finds that the mitigation measures are appropriate to cover risk.
Financial viability Risk rating= 0	The audit team evaluated the justification for rating the risks on project cash flow breakeven point	The documentation provided is a financial analysis that allowed for assessment by the audit team and is therefore of good quality.	Risk rating is appropriate.
Opportunity cost Risk rating= -2	The audit team evaluated the justification for rating the risk and the mitigation since the project is has been active on the market for the last 100 years, and its eldest industry	The documentation provided is the description and supports on forest regulations that allowed for assessment by the audit team and is therefore of good quality.	Risk rating is appropriate.

Risk	Assessment of rationale, assumptions, and justification	Assessment of quality of documentation and data provided	Conclusion
	has been operation for more than 80 years.		
Project longevity Risk rating= 4	The audit team evaluated the justification for rating the risk and the mitigation on legal agreement or requirement to continue the management practice.	The documentation provided is the description and supports on possession and permitted uses of the land that allowed for assessment by the audit team and is therefore of good quality.	Risk rating is appropriate.
External risks Risk rating= 0			
Land Tenure and Resource Access/Impacts Risk rating= 2	The audit team evaluated the justification for rating the risk and the mitigation.	The documentation provided is the description and supports on forest and land tenure regulations that allowed for assessment by the audit team and is therefore of good quality.	Risk rating is appropriate.
Community Engagement Risk rating= -5	The audit team evaluated the justification for the risk rating on the consult to the stakeholders associated with the project area.	The documentation provided is a in socioeconomic study that allowed for assessment by the audit team and is therefore of good quality.	Risk rating is appropriate.
Political risk Risk rating= 0	The audit team evaluated the justification for rating the governance risk and the mitigation on Country implementing REDD+ Readiness or other activities.	The documentation provided is a description of the participation of Brazil in REDD+ activities and governance indicators that allowed for assessment by the audit team and is therefore of good quality.	Risk rating is appropriate.
Natural risks Risk rating= 0.5			
Fire Risk rating= 0.5	The audit team evaluated the justification for rating the fire risk and the actions of mitigation.	The documentation provided is the description of significance of the risk that allowed for assessment by the audit team and is therefore of good quality.	Risk rating is appropriate. The VVB finds that the mitigation measures are appropriate to cover risk. The other natural risks evaluated do not apply or are insignificant
Overall Non-Permanence Risk Rating Overall Risk Rating = 10			

The VVB carried out an assessment of the Non-Permanence-Risk-Report v3, all rationale, assumptions, justifications, documentation, and data used to support the risk rating.

.

4 VERIFICATION FINDINGS

4.1 Project Implementation Status

The audit team verified the following:

Table 19 Evaluation of the project implementation

Item	Verification
Presence of any material discrepancies between project implementation and the project description.	There were not find any material discrepancies between project implementation and the project description after the verification process.
The implementation status of the monitoring plan and the completeness of monitoring, including the suitability of the implemented monitoring system.	After the resolution of the findings (Appendix 2: FINDINGS) and validated the project description deviations, the monitoring plan has been implemented in accordance with what has been validated, the site assessments & observations, interviews and assessment of the documents provided by the project. In addition, the project attached to the corresponding cartographic information. Furthermore, the internal audit procedures described for the resolution of conflicts and non-conformities were verified, and the procedures for internal audits were verified.
The existence of any material discrepancies between the actual monitoring system, and the monitoring plan set out in the project description and the applied methodology.	There are no material discrepancies between the actual monitoring system, and the monitoring plan set out in the project description and the applied methodology.
Whether the project has participated or been rejected under any other GHG programs since validation or previous verification	The project has not participated or been rejected any other GHG programs.
Whether the project has received or sought any other form of environmental credit or has become eligible to do so since validation or previous verification.	The project has not received or sought any other form of environmental credit.
Whether the GHG emission reductions or removals generated by the project have become included in an emissions trading program or any other mechanism that includes GHG allowance trading.	The project is registered in the VCS standard, complying with the requirements of the standard. The project is not registered under another GHG program. There is no risk of double counting.
Whether the project has implemented the activities that result in the SD contributions described in the monitoring report.	The audit team carried out the documentary review and observations on the site and confirms that the project contributes to the UN sustainable development goal.

On field observations and interviews, the VVB verified that the technical activities of the project implemented during the second monitoring period (from 02/November/2017 to 21/February/2022) are in compliance with the project design and description. In addition, the data and parameters were verified through the recalculation, review of spreadsheets and geographic information.

As described in section 3.3.6, and in accordance with VCS Standard v4.3 – section 3.2.22, the loss of carbon due to harvesting is include in the quantification of the project emissions and the long-term average GHG benefit is calculated by the correspond equation (from Standard), it was assessed and the VVB found it was adequately applied.

The VVB verified through the onsite inspections and interviews that the social activities contribute to GHG removals, considering the results of their implementation and other positive impacts that are related to social activities such as trainings of forest management, environmental education, and institutional articulation, which were implemented during the current monitoring period.

The status of implementation of project activities, during the current monitoring period, promoted the expected benefits. This was evidenced in the field visits and interviews in which the benefits resulting from the project activities implemented by Suzano S.A. in the current monitoring period were verified.

Through field observations, interviews, and document review, the audit team confirmed that there are no significant discrepancies between project implementation and the project description. In summary, the audit team finds that the project was implemented as described in the project description.

4.1.1 Sustainable Development

The project will contribute to the following sustainable development goals through the implementation of its activities during the current monitoring period from 02/November/2017 to 21/February/2022, in accordance with the VCS Joint PD + MR **v06** v3.0- Section 1.17.2:

- **SDG 13:** the project proponent states by planting 12.121,87 ha of Eucalyptus, the project has removed 1,900,911.33 tCO₂e from the atmosphere during the monitoring period.

4.2 Quality of Evidence to Determine GHG Emission Reductions and Removals

The evidence used to determine the GHG removals of GEI was of sufficient quantity and appropriate quality⁵. The audit team took the following steps to assess the quantity and quality of the evidence for removals:

- Recalculation and assurance of areas from project shapefiles.
- Recalculation and assurance of the of GHG removals considering parameters, area, equations, etc.

⁵ According to Monitored ER File

- Comparison of what was recalculated with what was presented by the project proponent in its spreadsheet and the monitoring report.

The GHG removals ex-post estimates were determined by the project proponent using sufficient quantitative evidence and properly qualitative evidence, as it was verified by the audit team.

Table 20 Data and parameters monitored at this monitoring period.

Parameter	Value	Unit	Description	Source
A	12,121.87	ha	Project Area (planted area)	Survey databases of each polygon that is part of the Project and is under the control of the Project participants
A _i	Stratum 1 – 3,275.66 Stratum 2 – 2,438.70 Stratum 3 – 234.52 Stratum 4 – 714.07 Stratum 5 – 5,202.27 Stratum 6 – 256.65	ha	Area of stratum i	Monitoring of strata and stand boundaries is done employing Geographical Information Systems (GIS) allowing the integration of data from different sources
A _{p,i}	Stratum 1 – 41,200.00 Stratum 2 – 35,809.70 Stratum 3 – 9,600.00 Stratum 4 – 30,000.00 Stratum 5 – 200,800.00 Stratum 6 – 10,800.00 TOTAL AREA – 328,209.70	m ²	Area of sample plot in stratum I.	Field measurement
N	Stratum 1 – 103 Stratum 2 – 89 Stratum 3 – 24 Stratum 4 – 75 Stratum 5 – 502 Stratum 6 – 27 TOTAL – 820	dimension less	Number of plots to be established in the project area	Field measurement
Plot location	Available at spreadsheet “Monitored ER.xlsx”, Sheet “Parcels”	Latitude /longitude	Localization for each sampling plot	Data field sampling
DBH	Available at spreadsheet “Monitored ER.xlsx”, Sheet “Parcels data”	cm	Diameter at breast height of the trees	Field measurements in sample plots
H	Available at spreadsheet “Monitored ER.xlsx”, Sheet “Parcels data”	m	Total height of trees	Field measurements in sample plots
T	0	year	Period between two successive estimations of carbon stock in trees and shrubs	Verification records

5 VALIDATION AND VERIFICATION CONCLUSION

The project complies with the validation and verification criteria for projects set out in VCS. The project has been implemented in accordance with the validated project description and the deviations were justified.

The audit team concludes, with reasonable assurance, that the quantification of the net GHG removals, during the verification period, is free of material misstatement and complies with the verification criteria.

Monitoring period: from 02/November/2017 to 21/February/2022.

The audit team confirms, with reasonable assurance, that the project generates a net removal of GHG of 99,110,028 tCO₂e over 35 years, and 1,900,911.33 tCO₂e during the current monitoring period.

Table 21 Verified GHG removals in the verification period

Period	Baseline emissions or removals (tCO ₂ e)	Project emissions or removals (tCO ₂ e)	Leakage emissions (tCO ₂ e)	Net GHG removals (tCO ₂ e)	Buffer pool allocation 10%	VCUs eligible for Issuance
02/11/2017 to 31/12/2017	12.627,08	17.811,91		5,184.83	519.00	4,665
01/01/2018 to 31/12/2018	13.439,48	323.629,29		310,189.81	30,501.00	274,503
01/01/2019 to 31/12/2019	13.439,48	719.131,30		705,691.82	39,551.00	355,951
01/01/2020 to 31/12/2020	18.372,81	1.295.055,32		1,276,682.51	57,100.00	513,890
01/01/2021 to 31/12/2021	25.500,54	1.851.816,59		1,826,316.05	54,964.00	494,669
01/01/2022 to 21/2/2022	25.500,54	1.926.411,87		1,900,911.33	7,460.00	67,135
Total	25,500.54	1,926,411.87		1,900,911.33	190,095.00	1,710,813

Approved by



Dr. Kaviraj Singh
Managing Director
Earthood Services Privated Limited

Date: 23/02/2023
Place: Gurgaon, Haryana

APPENDIX 1: DOCUMENTATION PROVIDED BY THE PROJECT

Folders				Files							
**some cartographic files were simplified, such as .shapefile include the 7 file asociated to this type of data (.cpg, .dbf, .prj, .sbn, .sbx, .shp, .shx)											
02082022/				20220801 - DRAFT PD+MR_ARR Horizonte Carbon Project .docx							
				20220802 - DRAFT - Monitored ER.xlsx							
10082022/	PROJETO HORIZONTE DOC AUD/	20220810 - auditoria/	docs/	Non P. Risk/	1Internal/	Financ. Opport/	Estimated ER.xlsx				
							Monitored ER.xlsx				
							Non-Permanence-Risk-Report.docx				
							Non-Permanence-Risk-Report.pdf				
							PD+MR_ARR Horizonte Carbon Project.docx				
							PD+MR_ARR Horizonte Carbon Project.pdf				
							VCS-Risk-Report.xls				
							Data fin. an/	20220908 - Financial analysis.xlsx			
								Martha Júnior et al., 2011.pdf			
								Resultados_4T21.pdf			
								Assumptions Plantation Costs.docx			
								Carbon credit/	1107422_suzano_projetoreddafolu_v3.pdf		
									SVCM - The art of integrity.pdf		
								Funds contracts/	Purcha se Agreem ent/	BrWood.pdf	
										LAcan.pdf	
									Rural partner ship/	Quilombo.pdf	
										BRWOOD - 22.268_Contrato de Parceria Carobá.pdf	
								Land lease/	Lacan Parceria Agrícola.pdf		
									Quilombo.pdf		
								Social activities and native/	Relatório de Arrendamento de Terras.pdf		
									25_CB0004_Projetos_Recurso_Carbono REV.16.05.22.pptx		
								Man age	Native cost.pdf		
									Lista de espécies restauração MS.xlsx		

Folders						Files		
**some cartographic files were simplified, such as .shapefile include the 7 file asociated to this type of data (.cpg, .dbf, .prj, .sbn, .sbx, .shp, .shx)								
						CV/	Listagem Clones_INFORMAÇ!O RESTRITA.xlsx	
							relatorioiba2021.pdf	
							CB0004_Curriculo-ClaraLBS-2022.pdf	
							JULIO NATALENSE.msg	
							Zagonel.msg	
					2External/		Governance Score.xlsx	
					3Natural/	Incêndios florestais.docx		
						Manejo Integrado da Sanidade e Proteç!o Florestal.pdf		
						Procedimento_implantaç!o florestal.pdf		
						Três Lagoas - IMA-FM_COC-005083_POR.pdf		
						c) Marcuzzo et al., 2012.pdf		
						d) Lopes e Nunes, 2011 p 90.pdf		
						d) Preve et al., 2017.pdf		
						d) Saadi, 1993.pdf		
						dti_chuva-macro-ms_poisson_120421 (1).pdf		
						dti_chuva-ms_poisson-espacial_140421 (1).pdf		
						dti_ms_utm_estoque-medio_maio2021 (1).pdf		
						dti_simulacao-chuva-weibull-macro-ms_160421 (1).pdf		
					Sec. 1/	1.3 Eligibility/	Ecosystem conversion/	TRES_LAGOAS_ANO_2006_FAZENDA_T1A0.pdf
								TRES_LAGOAS_ANO_2006_FAZENDA_T1B5.pdf
								TRES_LAGOAS_ANO_2006_FAZENDA_T1B8.pdf
								TRES_LAGOAS_ANO_2006_FAZENDA_T1BU.pdf
								TRES_LAGOAS_ANO_2006_FAZENDA_T1CF.pdf
								TRES_LAGOAS_ANO_2006_FAZENDA_T1CI.pdf
								TRES_LAGOAS_ANO_2006_FAZENDA_T1CQ.pdf
								TRES_LAGOAS_ANO_2006_FAZENDA_T2A9.pdf
								TRES_LAGOAS_ANO_2006_FAZENDA_T2AA.pdf

Folders						Files
**some cartographic files were simplified, such as .shapefile include the 7 file asociated to this type of data (.cpg, .dbf, .prj, .sbn, .sbx, .shp, .shx)						
						TRES_LAGOAS_ANO_2006_FAZENDA_T2AL.pdf
						TRES_LAGOAS_ANO_2006_FAZENDA_T2BC.pdf
						TRES_LAGOAS_ANO_2006_FAZENDA_T3AJ.pdf
						TRES_LAGOAS_ANO_2006_FAZENDA_T3AW.pdf
						TRES_LAGOAS_ANO_2006_FAZENDA_T3AY.pdf
						TRES_LAGOAS_ANO_2006_FAZENDA_T4AD.pdf
						TRES_LAGOAS_ANO_2006_FAZENDA_T4AL.pdf
						TRES_LAGOAS_ANO_2006_FAZENDA_T5AB.pdf
						TRES_LAGOAS_ANO_2006_FAZENDA_T5AM.pdf
						TRES_LAGOAS_ANO_2006_FAZENDA_T5AN.pdf
						TRES_LAGOAS_ANO_2006_FAZENDA_T5AP.pdf
						TRES_LAGOAS_ANO_2006_FAZENDA_T6A1.pdf
						TRES_LAGOAS_ANO_2006_FAZENDA_T6AO.pdf
						TRES_LAGOAS_ANO_2006_FAZENDA_T6AT.pdf
						TRES_LAGOAS_ANO_2006_FAZENDA_T6B8.pdf
						TRES_LAGOAS_ANO_2006_FAZENDA_T6B9.pdf
						TRES_LAGOAS_ANO_2006_FAZENDA_T6BG.pdf
						TRES_LAGOAS_ANO_2006_FAZENDA_T6CC.pdf
						TRES_LAGOAS_ANO_2006_FAZENDA_T8AA.pdf
						TRES_LAGOAS_ANO_2006_FAZENDA_T8AB.pdf
						TRES_LAGOAS_ANO_2006_FAZENDA_T8AE.pdf
						TRES_LAGOAS_ANO_2006_FAZENDA_T8AJ.pdf

Folders						Files
**some cartographic files were simplified, such as .shapefile include the 7 file asociated to this type of data (.cpg, .dbf, .prj, .sbn, .sbx, .shp, .shx)						
						TRES_LAGOAS_ANO_2006_FAZENDA_T8AL.pdf
						TRES_LAGOAS_ANO_2006_FAZENDA_T8AM.pdf
						TRES_LAGOAS_ANO_2006_FAZENDA_T8AQ.pdf
						TRES_LAGOAS_ANO_2006_FAZENDA_T8AR.pdf
						TRES_LAGOAS_ANO_2006_FAZENDA_T8AS.pdf
						TRES_LAGOAS_ANO_2006_FAZENDA_T8AT.pdf
						TRES_LAGOAS_ANO_2008_FAZENDA_T1A0.pdf
						TRES_LAGOAS_ANO_2008_FAZENDA_T1B5.pdf
						TRES_LAGOAS_ANO_2008_FAZENDA_T1B8.pdf
						TRES_LAGOAS_ANO_2008_FAZENDA_T1BU.pdf
						TRES_LAGOAS_ANO_2008_FAZENDA_T1CF.pdf
						TRES_LAGOAS_ANO_2008_FAZENDA_T1CI.pdf
						TRES_LAGOAS_ANO_2008_FAZENDA_T1CQ.pdf
						TRES_LAGOAS_ANO_2008_FAZENDA_T2A9.pdf
						TRES_LAGOAS_ANO_2008_FAZENDA_T2AA.pdf
						TRES_LAGOAS_ANO_2008_FAZENDA_T2AL.pdf
						TRES_LAGOAS_ANO_2008_FAZENDA_T2BC.pdf
						TRES_LAGOAS_ANO_2008_FAZENDA_T3AJ.pdf
						TRES_LAGOAS_ANO_2008_FAZENDA_T3AW.pdf
						TRES_LAGOAS_ANO_2008_FAZENDA_T3AY.pdf
						TRES_LAGOAS_ANO_2008_FAZENDA_T4AD.pdf
						TRES_LAGOAS_ANO_2008_FAZENDA_T4AL.pdf

Folders						Files
**some cartographic files were simplified, such as .shapefile include the 7 file asociated to this type of data (.cpg, .dbf, .prj, .sbn, .sbx, .shp, .shx)						
						TRES_LAGOAS_ANO_2008_FAZENDA_T5AB.pdf
						TRES_LAGOAS_ANO_2008_FAZENDA_T5AM.pdf
						TRES_LAGOAS_ANO_2008_FAZENDA_T5AN.pdf
						TRES_LAGOAS_ANO_2008_FAZENDA_T5AP.pdf
						TRES_LAGOAS_ANO_2008_FAZENDA_T6A1.pdf
						TRES_LAGOAS_ANO_2008_FAZENDA_T6AO.pdf
						TRES_LAGOAS_ANO_2008_FAZENDA_T6AT.pdf
						TRES_LAGOAS_ANO_2008_FAZENDA_T6B8.pdf
						TRES_LAGOAS_ANO_2008_FAZENDA_T6B9.pdf
						TRES_LAGOAS_ANO_2008_FAZENDA_T6BG.pdf
						TRES_LAGOAS_ANO_2008_FAZENDA_T6CC.pdf
						TRES_LAGOAS_ANO_2008_FAZENDA_T8AA.pdf
						TRES_LAGOAS_ANO_2008_FAZENDA_T8AB.pdf
						TRES_LAGOAS_ANO_2008_FAZENDA_T8AE.pdf
						TRES_LAGOAS_ANO_2008_FAZENDA_T8AJ.pdf
						TRES_LAGOAS_ANO_2008_FAZENDA_T8AL.pdf
						TRES_LAGOAS_ANO_2008_FAZENDA_T8AM.pdf
						TRES_LAGOAS_ANO_2008_FAZENDA_T8AQ.pdf
						TRES_LAGOAS_ANO_2008_FAZENDA_T8AR.pdf
						TRES_LAGOAS_ANO_2008_FAZENDA_T8AS.pdf
						TRES_LAGOAS_ANO_2008_FAZENDA_T8AT.pdf
						TRES_LAGOAS_CERRADO_ANO_2005_2014_FAZENDA_T6CG.pdf

82

Folders						Files
**some cartographic files were simplified, such as .shapefile include the 7 file associated to this type of data (.cpg, .dbf, .prj, .sbn, .sbx, .shp, .shx)						
						T5AN Contract.pdf
						T6A1 Aditive.pdf
						T6A1 Contract.pdf
						T6AO Aditive.pdf
						T6AO Contract.pdf
						T6B8 Aditive.pdf
						T6B8 Contract.pdf
						T6B9 Aditive.pdf
						T6B9 Contract.pdf
						T6CC Aditive.pdf
						T6CC Contract.pdf
						T6CE Aditive.pdf
						T6CE Contract.pdf
						T6CG Aditive.pdf
						T6CG Contract.pdf
						T8AA Aditive.pdf
						T8AA Contract.pdf
						T8AB Aditive.pdf
						T8AB Contract.pdf
						T8BA Aditive.pdf
						T8BA Contract.pdf
					"Suzanos"/	T1A0 - CAR ESTADUAL.PDF
						T1A0 - Matricula 84752.pdf
						T1B5 - CAR Estadual.pdf
						T1B5 - CAR Federal.pdf
						T1B5 - Matrícula 35001.PDF
						T1CF - CAR ESTADUAL.BLOCO II.PDF
						T1CF - CAR ESTADUAL.PDF
						T1CF - CAR FEDERAL BLOCO II.pdf
						T1CF - CAR FEDERAL.pdf
						T1CF - Matricula 85823.pdf
						T1CF - Matrícula 48774.pdf

Folders						Files
**some cartographic files were simplified, such as .shapefile include the 7 file associated to this type of data (.cpg, .dbf, .prj, .sbn, .sbx, .shp, .shx)						
						T3AJ - Car Estadual.pdf
						T3AJ - Car Federal.pdf
						T3AJ - Matrícula 45506.PDF
						T3AW - CAR ESTADUAL.PDF
						T3AW - Matrícula 24542.PDF
						T4AL - Car Estadual.PDF
						T4AL - Matrícula 481.PDF
						T5AP - CAR Estadual.pdf
						T5AP - CAR Federal.pdf
						T5AP - Matrícula 81398.PDF
						T8AE - Car Estadual.PDF
						T8AE - Matrícula 8945.PDF
						T8AL - Car Estadual.PDF
						T8AL - Matrícula 6456.PDF
						T8AQ - CAR ESTADUAL.PDF
						T8AQ - Matrícula 7462.PDF
						T8AR - Car Estadual.PDF
						T8AR - Matrícula 7424.PDF
						T8AS - Car Federal.pdf
						T8AS - Car estadual.pdf
						T8AS - Matrícula 6412.PDF
				1.8 Start Date/		Projeto Horizonte_SAC_02_08_22 (1).xlsx
				1.11 Description/		10_CB0002_Procedimento_implantaç;o florestal.pdf
						DOCUMENTO TÉCNICO_restauraç;o.pdf
				1.13 Conditions prior/		19.1_CB0004_Processo de amostragem de solo e planta_Rev02.pptx
						19.2_CB0004_Análise Solos Horizonte_Fertilidade e Textura.xls
				1.17 Sust. Dev/		25_CB0004_Projetos_Recurso_Carbono REV.16.05.22.pptx
			Sec. 2/	2.1 No net harm/		3_PO.24.01.0002- GAIA.pdf
						Monitoramento Biodiversidade MS - 2021.pdf

Folders					Files				
**some cartographic files were simplified, such as .shapefile include the 7 file asociated to this type of data (.cpg, .dbf, .prj, .sbn, .sbx, .shp, .shx)									
				2.2 Local stakeholder/	Pesence list - comunity.pdf				
					Presence list - Neighbors.pdf				
					Relaç!o de vizinhos_V2.xlsx				
					SUZANO CARBONO_INGLES (1).mp4				
					SUZANO CARBONO_PORT.mp4				
					Treinamento_DS_Projeto de Carbono Horizonte.pptx				
					folder_45x30cm_horizonte.pdf				
					VWB site visit info/	WhatsApp Image 2022-08-01 at 15.10.34 (1).jpeg			
						WhatsApp Image 2022-08-01 at 15.10.34.jpeg			
						WhatsApp Image 2022-08-01 at 15.10.35 (1).jpeg			
						WhatsApp Image 2022-08-01 at 15.10.35 (2).jpeg			
						WhatsApp Image 2022-08-01 at 15.10.35.jpeg			
						WhatsApp Image 2022-08-01 at 15.10.36 (1).jpeg			
						WhatsApp Image 2022-08-01 at 15.10.36.jpeg			
				2.5 AFOLU Specific/	4_Código de Conduta _ ING _ Suzano.pdf				
					4_Código de Conduta _ PT _ Suzano.pdf				
					4_Livreto-CodConduta_Suzano_PT.pdf				
					4_PC000012_Corporate Human Rights Policy.pdf				
					4_Politica_Diversidade-e-Inclus!o.pdf				
					4_versaoDocumento.do.pdf				
					Diálogo Operacional.pdf				
					Manual de Gest!o de Relacionamento.pdf				
				Sec. 3/	Adicionalitv/	Step 0/		CMD prior consideration submit.png	
						step 1/	1.a/	Agrianual, 2020.docx	
								CAMPOS, 2011.pdf	
								DURIGAN, 2011.pdf	
					FACCIN, 2017.pdf				

Folders							Files
**some cartographic files were simplified, such as .shapefile include the 7 file asociated to this type of data (.cpg, .dbf, .prj, .sbn, .sbx, .shp, .shx)							
							FERREIRA, 2019.pdf
							Governo Federal - MS soy exportation.png
							IBA Report 2020.pdf
							IBGE - MS Results.pdf
							IBGE - sugar cane 2017.pdf
							KUHLMANN, 2011.pdf
							RODRIGUES, 2020.pdf
							IRMOA, 2020.pdf
					1.b/		Law 11.105.pdf
					1.b/		Law 12.727.pdf
					1.b/		Law 13.366.pdf
					1.b/		Law 5.025.pdf
					1.b/		Law 6938.pdf
					1.b/		Law 8.171.pdf
					Step 2/		7.DTO-(PREPARO DE SOLO)-CERRADO.xlsm
					Step 2/		7_Projeto Cerrado - DTO- REPORT 2.pdf
					Step 2/		Almeida.pdf
					Step 2/		Brighenti.pdf
					Step 2/		Frente Parlamentar da Agropecuária.pdf
					Step 2/		IBGE - Censo Agropecuário - MS.csv
					Step 2/		Ortigoza.pdf
					Step 2/		Suzano - Tech center.pdf
					Step 3/		Reis, 2020.pdf
					Step 4/		25_CB0004_Projetos_Recurso_Carbono REV.16.05.22.pptx
					Step 4/		ACM0003 - 2079.pdf
					Step 4/		AMC0003 - 1663.pdf
				Sec. 4/	Baseline/		Land use.pdf
				Sec. 4/	Baseline/		Miranda et al 2014.pdf
				Sec. 4/	Sparse trees/		ARETE (T1BU).pdf
				Sec. 4/	Sparse trees/		ARIRANHA (T5AB).pdf
				Sec. 4/	Sparse trees/		BARRA DO CERVO (T1CI).pdf

Folders						Files
**some cartographic files were simplified, such as .shapefile include the 7 file asociated to this type of data (.cpg, .dbf, .prj, .sbn, .sbx, .shp, .shx)						
						FIGUEIRA (T2AA).pdf
						JOAMAR (T3AY).pdf
						MATINHA DO BRIOSO (T6B8).pdf
						MONTE ALTO (T2A9).pdf
						NOSSA SENHORA DE Fátima (T1CU).pdf
						PONTAL DO BRIOSO (T6B9).pdf
						Projeto Horizonte.pdf
						RIO VERDE B (T8AT).pdf
						SANTA IN-S (T5AN).pdf
						SANTA IN-S GLEBA C (T5AM).pdf
						SANTA TEREZINHA II (T6CE).pdf
						SANTO ANTONIO IV (T8AA).pdf
						São JOSÉ (T8BA).pdf
						São JOÃO IV (T2AL).pdf
						São LUCAS (T6AO).pdf
						TRIângULO DO VALE (T6A1).pdf
						VISTA ALEGRE II (T8AB).pdf
						VISTA ALEGRE III (T6CC).pdf
				Project Removal/		AIV and Density.pdf
						Eucalyptus - implantaçã;o florestal.pdf
						Native implementation plan.docx
						Native schedule.xlsx
						Procedimentos para cálculo de estoques.pdf
						Projeto Horizonte_SAC_02_08_22 (1).xlsx
						Relatório 0067-2018 Suzano Stape Agnaldo 59 amostras Euca.doc
					Implementation License/	IP Faz Monte Alto 1802_2017.pdf
						IP Faz Ana Rosa 2143_2017.pdf
						IP Faz Ana Rosa 2314_2018.pdf
						IP Faz Ariranha 1858_2015.pdf
						IP Faz Ariranha 52_2020.pdf
						IP Faz Barra do Cervo 2086_2019.pdf

Folders						Files
**some cartographic files were simplified, such as .shapefile include the 7 file associated to this type of data (.cpg, .dbf, .prj, .sbn, .sbx, .shp, .shx)						
						IP Faz Bentevi 2041_2017.pdf
						IP Faz Boa Esperança 767_2018.pdf
						IP Faz Bom Jesus 636_2016.pdf
						IP Faz Brasileira 2473_2017.pdf
						IP Faz Buriti 1603_2016.pdf
						IP Faz Buriti 24_2022.pdf
						IP Faz Buriti 957_2019.pdf
						IP Faz Casa Branca 1639_2017.pdf
						IP Faz Casa Branca 341_2017.pdf
						IP Faz Colorado II 1899_2019.pdf
						IP Faz Coqueirinho 1557_2017.pdf
						IP Faz Cristo Redentor 161_2019.pdf
						IP Faz Curucaca 102_2020.pdf
						IP Faz Domingos Mungo 42_2022.pdf
						IP Faz Estrela 2230_2017.pdf
						IP Faz Figueiras 37_2018.pdf
						IP Faz Guará-Suiá 1807_2018.pdf
						IP Faz Guará-Suiá 2053_2018.pdf
						IP Faz Guará-Suiá 83_2018.pdf
						IP Faz Indaia 2479_2017.pdf
						IP Faz Ipê 1380_2017.pdf
						IP Faz Iracema I 661_2021.pdf
						IP Faz Jandaia 1055_2019.pdf
						IP Faz Jandaia 245_2020.pdf
						IP Faz Joamar 2415_2017.pdf
						IP Faz Laguna 1737_2017.pdf
						IP Faz Laguna 516_2021.pdf
						IP Faz Matinha do Bioso 2191_2017.pdf
						IP Faz Matão 407_2017.pdf
						IP Faz Morada do Sol 454_2019.pdf
						IP Faz Morada do Sol 510_2021.pdf
						IP Faz Paranoá 647_2021.pdf

Folders						Files
**some cartographic files were simplified, such as .shapefile include the 7 file associated to this type of data (.cpg, .dbf, .prj, .sbn, .sbx, .shp, .shx)						
						IP Faz Paraíso 1525_2019.pdf
						IP Faz Pilares II 1136_2017.pdf
						IP Faz Pontal do Brioso 2236_2017.pdf
						IP Faz Santa Cecilia 2326_2017.pdf
						IP Faz Santa Ines Gleba A e C 1106_2017.pdf
						IP Faz Santa Ines Gleba C 880_2017.pdf
						IP Faz Santa Ines Gleba E e F 988_2017.pdf
						IP Faz Santa Terezinha II 375_2021.pdf
						IP Faz Santo Antonio IV 712_2017.pdf
						IP Faz Sucuriu 746_2021.pdf
						IP Faz S ^o José 1738_2017.pdf
						IP Faz S ^o Jo ^o IV 1991_2017.pdf
						IP Faz S ^o Lucas 1407_2017.pdf
						IP Faz S ^o Marcos 1381_2017.pdf
						IP Faz S ^o Marcos 1700_2015.pdf
						IP Faz S ^o Marcos 845_2019.pdf
						IP Faz Taboca 2154_2017.pdf
						IP Faz Taboca 2215_2018.pdf
						IP Faz Triangulo do Vale 836_2017.pdf
						IP Faz Vale do Gerivá 309_2020.pdf
						IP Faz Vale do Gerivá 51_2020.pdf
						IP Faz Vale do Gerivá 640_2019.pdf
						IP Faz Vista Alegre II 1280_2019.pdf
						IP Faz Vista Alegre III 340_2020.pdf
						IP Horto Duas Marias 357_2017.pdf
						IP Horto Duas Marias 715_2015.pdf
						IP Horto Duas Marias 727_2019.pdf
						IP Horto Duas Marias 803_2015.pdf
						IP Horto Estrad ^o 1053_2019.pdf
						IP Horto Estrad ^o 1542_2019.pdf
						IP Horto Estrad ^o 1727_2017.pdf
						IP Horto Estrad ^o 2193_2017.pdf

Folders						Files
**some cartographic files were simplified, such as .shapefile include the 7 file associated to this type of data (.cpg, .dbf, .prj, .sbn, .sbx, .shp, .shx)						
						IP Horto Estrad'o 512_2021.pdf
						IP Horto Estrad'o 596_2017.pdf
						IP Horto Estrad'o 708_2017.pdf
						IP Horto Estrad'o 885_2015.pdf
						IP Horto Flor da Serra 1361_2017.pdf
						IP Horto Mat'o 1144_2018.pdf
						IP Horto Mat'o 1324_2015.pdf
						IP Horto Mat'o 1519_2018.pdf
						IP Horto Mat'o 1727_2018.pdf
						IP Horto Mat'o 1735_2017.pdf
						IP Horto Mat'o 199_2018.pdf
						IP Horto Mat'o 2289_2018.pdf
						IP Horto Mat'o 2356_2017.pdf
						IP Horto Mat'o 286_2018.pdf
						IP Horto Mat'o 311_2016.pdf
						IP Horto Mat'o 32_2021.pdf
						IP Horto Mat'o 330_2019.pdf
						IP Horto Mat'o 895_2019.pdf
						IP Horto Mat'o 994_2018.pdf
						IP Horto Moeda 1162_2016.pdf
						IP Horto Moeda 1571_2017.pdf
						IP Horto Moeda 198_2018.pdf
						IP Horto Moeda 2056_2018.pdf
						IP Horto Moeda 2476_2017.pdf
						IP Horto Moeda 397_2019.pdf
						IP Horto Moeda 413_2018.pdf
						IP Horto Moeda 876_2015.pdf
						IP Horto Moeda 989_2017.pdf
						IP Horto Rio Verde A 155_2019.pdf
						IP Horto Rio Verde A 1644_2017.pdf
						IP Horto Rio Verde A 214_2018.pdf
						IP Horto Rio Verde A 251_2020.pdf

Folders						Files
**some cartographic files were simplified, such as .shapefile include the 7 file asociated to this type of data (.cpg, .dbf, .prj, .sbn, .sbx, .shp, .shx)						
						IP Horto Rio Verde A 252_2020.pdf
						IP Horto Rio Verde A 2535_2016.pdf
						IP Horto Rio Verde A 30_2021.pdf
						IP Horto Rio Verde A 31_2021.pdf
						IP Horto Rio Verde A 464_2017.pdf
						IP Horto Rio Verde A 478_2016.pdf
						IP Horto Rio Verde A 480_2019.pdf
						IP Horto Rio Verde A 481_2021.pdf
						IP Horto Rio Verde A 483_2021.pdf
						IP Horto Rio Verde A 508_2016.pdf
						IP Horto Rio Verde A 740_2019.pdf
						IP Horto Rio Verde A 858_2016.pdf
						IP Horto Rio Verde B 1092_2018.pdf
						IP Horto Rio Verde B 116_2020.pdf
						IP Horto Rio Verde B 126_2016.pdf
						IP Horto Rio Verde B 1352_2016.pdf
						IP Horto Rio Verde B 216_2019.pdf
						IP Horto Rio Verde B 2522_2016.pdf
						IP Horto Rio Verde B 315_2020.pdf
						IP Horto Rio Verde B 398_2017.pdf
						IP Horto Rio Verde B 420_2019.pdf
						IP Horto Rio Verde B 425_2018.pdf
						IP Horto Rio Verde B 507_2016.pdf
						IP Horto Rio Verde B 716_2018.pdf
						IP Horto Rio Verde B 732_2019.pdf
						IP Horto Rio Verde B 969_2016.pdf
						IP Nossa Senhora de Fátima 793_2021.pdf
				Sec. 5/		Manual de Atividades de Campo.pdf
						Metodologia SCB (002).docx
						Procedimentos para cálculo de estoques.pdf
				Sec. 6/		Base_Enviada_Rebecca_rev_10.08.2022.xlsx
						CB0004_Dados eucalipto.xlsx

Folders			Files		
**some carthographic files were simplified, such as .shapefile include the 7 file asociated to this type of data (.cpg, .dbf, .prj, .sbn, .sbx, .shp, .shx)					
		Mapas_Geoprocessamento/	##Área do projeto - Projeto Horizonte.pdf		
			Area_projeto_horizonte.shapfile		
			Área do Projeto - Projeto Horizonte.mxd		
		PD completo/	20220801 - DRAFT PD+MR_ARR Horizonte Carbon Project .docx		
			20220802 - DRAFT - Monitored ER.xlsx		
			Doc_Inventário Florestal_04_08_22.xlsx		
26092022/	0 Findings Auditoria rodada 1/	CAR 01/	Fazenda Joamar/	Requisição 20306 Minuta Joamar CO2- APROVADA 19.09 (autenticado).pdf	
				Summary.pdf	
		Ponto 1 e 2/	Evidencias Documentos Fazendas .xlsx		
			evidencia upload pasta 1 horizonte/	2022.09.06.Matricula 11823.Brasilandia.pdf	
				2022.09.06.Matricula 12685.Brasilandia.pdf	
				2022.09.06.Matricula 24542.Aparecida do Taboado.pdf	
				2022.09.06.Matricula 45506.Tres Lagoas.pdf	
				2022.09.06.Matricula 46390.Tres Lagoas.pdf	
				2022.09.06.Matricula 481.Agua Clara.pdf	
				2022.09.06.Matricula 48774.Tres Lagoas.pdf	
				2022.09.06.Matricula 6412.Brasilandia.pdf	
				2022.09.06.Matricula 6456.Brasilandia.pdf	
				2022.09.06.Matricula 6463.Tres Lagoas.pdf	
				2022.09.06.Matricula 7424.Brasilandia.pdf	
				2022.09.06.Matricula 7462.Brasilandia.pdf	
				2022.09.06.Matricula 81398.Tres Lagoas.pdf	
				2022.09.06.Matricula 81621.Tres Lagoas.pdf	
				2022.09.06.Matricula 85388.Tres Lagoas.pdf	
				2022.09.06.Matricula 85823.Tres Lagoas.pdf	
				2022.09.06.Matricula 86091.Tres Lagoas.pdf	
				2022.09.06.Matricula 8645.Brasilandia.pdf	
				2022.09.06.Matricula 88693.Tres Lagoas.pdf	
				2022.09.06.Matricula 8945.Brasilandia.pdf	
				2022.09.08.Matricula 87151.Tres Lagoas.pdf	

Folders				Files
**some cartographic files were simplified, such as .shapefile include the 7 file asociated to this type of data (.cpg, .dbf, .prj, .sbn, .sbx, .shp, .shx)				
			evidencia upload pasta 2 horizonte/	2022.09.12.Matricula 84752.Tres Lagoas.pdf
				2022.09.06.Matricula 12807.Brasilandia.pdf
				2022.09.06.Matricula 14029.Bataguassu.pdf
				2022.09.06.Matricula 3369.Tres Lagoas.pdf
				2022.09.06.Matricula 34216.Tres Lagoas.pdf
				2022.09.06.Matricula 5198.Agua Clara.pdf
				2022.09.06.Matricula 6208.Inocencia.pdf
				2022.09.06.Matricula 6429.Brasilandia.pdf
				2022.09.06.Matricula 6463.Tres Lagoas.pdf
				2022.09.06.Matricula 68798.Tres Lagoas.pdf
				2022.09.06.Matricula 72214.Tres Lagoas.pdf
				2022.09.06.Matricula 81654.Tres Lagoas.pdf
				2022.09.06.Matricula 83278.Tres Lagoas.pdf
				2022.09.06.Matricula 85086.Tres Lagoas.pdf
				2022.09.06.Matricula 92295.Tres Lagoas.pdf
				2022.09.06.Matricula 92416.Tres Lagoas.pdf
				2022.09.06.Matricula 93856.Tres Lagoas.pdf
				2022.09.06.Matricula 93857.Tres Lagoas.pdf
				2022.09.06.Matricula 93858.Tres Lagoas.pdf
				2022.09.06.Matricula 93859.Tres Lagoas.pdf
				2022.09.06.Matricula 93860.Tres Lagoas.pdf
				2022.09.06.Matricula 9951.Brasilandia.pdf
			Ponto 3/	Suzano-Fato-Relevante-Aprovao-Incorporao-Fibria-(v.-Ingls).pdf
		CAR 02/	Ponto 3/	Areas_projeto_Horizontev2.shapefile
				Áreas de Implantação e nativas - ANA ROSA.pdf
				Áreas de Implantação e nativas - ARETE.pdf
				Áreas de Implantação e nativas - ARIRANHA.pdf
				Áreas de Implantação e nativas - BARRA DO CERVO.pdf
				Áreas de Implantação e nativas - BARRA DO MOEDA.pdf

Folders				Files
**some cartographic files were simplified, such as .shapefile include the 7 file asociated to this type of data (.cpg, .dbf, .prj, .sbn, .sbx, .shp, .shx)				
				Áreas de Implantação e nativas - BOA ESPERANÇA III.pdf
				Áreas de Implantação e nativas - BOM JESUS.pdf
				Áreas de Implantação e nativas - BRASILEIRA.pdf
				Áreas de Implantação e nativas - CASA BRANCA.pdf
				Áreas de Implantação e nativas - CRISTO REDENTOR.pdf
				Áreas de Implantação e nativas - CURUCACA.pdf
				Áreas de Implantação e nativas - DUAS MARIAS.pdf
				Áreas de Implantação e nativas - ESTRADÃO.pdf
				Áreas de Implantação e nativas - FIGUEIRA.pdf
				Áreas de Implantação e nativas - FLOR DA SERRA.pdf
				Áreas de Implantação e nativas - JANDAIA.pdf
				Áreas de Implantação e nativas - JOAMAR.pdf
				Áreas de Implantação e nativas - LAGUNA.pdf
				Áreas de Implantação e nativas - MATINHA DO BRIOSO.pdf
				Áreas de Implantação e nativas - MATÃO.pdf
				Áreas de Implantação e nativas - MONTE ALTO.pdf
				Áreas de Implantação e nativas - NOSSA SENHORA DE FÁTIMA.pdf
				Áreas de Implantação e nativas - PALMITO.pdf
				Áreas de Implantação e nativas - PARAÍSO.pdf
				Áreas de Implantação e nativas - PONTAL DO BRIOSO.pdf
				Áreas de Implantação e nativas - Projeto HorizonteV3.pdf
				Áreas de Implantação e nativas - RIO VERDE A.pdf
				Áreas de Implantação e nativas - RIO VERDE B.pdf
				Áreas de Implantação e nativas - SANTA INÊS GLEBA C.pdf
				Áreas de Implantação e nativas - SANTA INÊS.pdf
				Áreas de Implantação e nativas - SANTA TEREZINHA II.pdf
				Áreas de Implantação e nativas - SANTO ANTONIO IV.pdf

Folders				Files
**some cartographic files were simplified, such as .shapefile include the 7 file asociated to this type of data (.cpg, .dbf, .prj, .sbn, .sbx, .shp, .shx)				
				Áreas de Implantação e nativas - SAO JOSÉ.pdf
				Áreas de Implantação e nativas - SAO JOÃO IV.pdf
				Áreas de Implantação e nativas - SAO LUCAS.pdf
				Áreas de Implantação e nativas - SAO MARCOS.pdf
				Áreas de Implantação e nativas - SAO MIGUEL III.pdf
				Áreas de Implantação e nativas - SUCURIU.pdf
				Áreas de Implantação e nativas - TRIÂNGULO DO VALE.pdf
				Áreas de Implantação e nativas - VALE DO GERIVÁ.pdf
				Áreas de Implantação e nativas - VISTA ALEGRE II.pdf
				Áreas de Implantação e nativas - VISTA ALEGRE III.pdf
			Áreas de Implantação/	Áreas de Implantação - ARETE.pdf
				Áreas de Implantação - ARIRANHA.pdf
				Áreas de Implantação - BARRA DO CERVO.pdf
				Áreas de Implantação - BARRA DO MOEDA.pdf
				Áreas de Implantação - BOA ESPERANÇA III.pdf
				Áreas de Implantação - BOM JESUS.pdf
				Áreas de Implantação - BRASILEIRA.pdf
				Áreas de Implantação - DUAS MARIAS.pdf
				Áreas de Implantação - FIGUEIRA.pdf
				Áreas de Implantação - JANDAIA.pdf
				Áreas de Implantação - JOAMAR.pdf
				Áreas de Implantação - MATINHA DO BRIOSO.pdf
				Áreas de Implantação - MONTE ALTO.pdf
				Áreas de Implantação - NOSSA SENHORA DE FÁTIMA.pdf
				Áreas de Implantação - PARAÍSO.pdf
				Áreas de Implantação - PONTAL DO BRIOSO.pdf
				Áreas de Implantação - RIO VERDE A.pdf
				Áreas de Implantação - RIO VERDE B.pdf
				Áreas de Implantação - SANTA INÊS GLEBA C.pdf
				Áreas de Implantação - SANTA INÊS.pdf

Folders					Files
**some cartographic files were simplified, such as .shapefile include the 7 file asociated to this type of data (.cpg, .dbf, .prj, .sbn, .sbx, .shp, .shx)					
					Áreas de Implantação - SANTA TEREZINHA II.pdf
					Áreas de Implantação - SANTO ANTONIO IV.pdf
					Áreas de Implantação - SAO JOSÉ.pdf
					Áreas de Implantação - SAO JOÃO IV.pdf
					Áreas de Implantação - SAO LUCAS.pdf
					Áreas de Implantação - SAO MIGUEL III.pdf
					Áreas de Implantação - SUCURIU.pdf
					Áreas de Implantação - TRIÂNGULO DO VALE.pdf
					Áreas de Implantação - VISTA ALEGRE II.pdf
					Áreas de Implantação - VISTA ALEGRE III.pdf
					Áreas de Implantação e nativas - Projeto HorizonteV3.pdf
				Áreas de plantio de Nativas/	Áreas de plantio de nativas - ANA ROSA.pdf
					Áreas de plantio de nativas - BARRA DO MOEDA.pdf
					Áreas de plantio de nativas - BOA ESPERANÇA III.pdf
					Áreas de plantio de nativas - BOM JESUS.pdf
					Áreas de plantio de nativas - BRASILEIRA.pdf
					Áreas de plantio de nativas - CASA BRANCA.pdf
					Áreas de plantio de nativas - CRISTO REDENTOR.pdf
					Áreas de plantio de nativas - CURUCACA.pdf
					Áreas de plantio de nativas - DUAS MARIAS.pdf
					Áreas de plantio de nativas - ESTRADÃO.pdf
					Áreas de plantio de nativas - FLOR DA SERRA.pdf
					Áreas de plantio de nativas - GUARA-SUIA.pdf
					Áreas de plantio de nativas - LAGUNA.pdf
					Áreas de plantio de nativas - MATÃO.pdf
					Áreas de plantio de nativas - PALMITO.pdf
					Áreas de plantio de nativas - PARAÍSO.pdf
					Áreas de plantio de nativas - Projeto HorizonteV3.pdf
					Áreas de plantio de nativas - RIO VERDE A.pdf
					Áreas de plantio de nativas - RIO VERDE B.pdf
					Áreas de plantio de nativas - SÃO MARCOS.pdf

Folders				Files
**some cartographic files were simplified, such as .shapefile include the 7 file asociated to this type of data (.cpg, .dbf, .prj, .sbn, .sbx, .shp, .shx)				
				Áreas de plantio de nativas - VALE DO GERIVÁ.pdf
			Ponto 4/	CB0004_Dados eucalipto.xlsx
				Parcelas_-_CB0004.shapefile
		CAR 04/	RE Transferring projects from accounts and request for release of one of the project proponents.msg	
			Screenshot - Verra registry page - ARR Horizonte Carbon Project.GIF	
		CAR 09/	Ponto 1/	Land cover by pasture - Mapbiomas - Colletion 7.pdf
				MapBiomas - Pastagem.pptx
			Ponto 2/	Attachment 5- Procedimento_implantação florestal_MS_71796_PO.12.02.001_47_05.pdf
				alvarenga-et al-2010.pdf
				bayer-et al-2000.pdf
				fialho-et al-2018.pdf
				gatto-et al-2010.pdf
			Ponto 3/	miranda-et al-2014.pdf
			Ponto 5/	Emission and removals v4.xlsx
			Ponto 6/	20220908 - Monitored ER v2.xlsx
		CAR 10/	Land use and land cover in 2006/	TRES_LAGOAS_ANO_2006_FAZENDA_T1A0.pdf
				TRES_LAGOAS_ANO_2006_FAZENDA_T1B5.pdf
				TRES_LAGOAS_ANO_2006_FAZENDA_T1B8.pdf
				TRES_LAGOAS_ANO_2006_FAZENDA_T1BU.pdf
				TRES_LAGOAS_ANO_2006_FAZENDA_T1CF.pdf
				TRES_LAGOAS_ANO_2006_FAZENDA_T1CI.pdf
				TRES_LAGOAS_ANO_2006_FAZENDA_T1CQ.pdf
				TRES_LAGOAS_ANO_2006_FAZENDA_T2A9.pdf
				TRES_LAGOAS_ANO_2006_FAZENDA_T2AA.pdf
				TRES_LAGOAS_ANO_2006_FAZENDA_T2AL.pdf
				TRES_LAGOAS_ANO_2006_FAZENDA_T2BC.pdf
				TRES_LAGOAS_ANO_2006_FAZENDA_T3AJ.pdf
				TRES_LAGOAS_ANO_2006_FAZENDA_T3AW.pdf
				TRES_LAGOAS_ANO_2006_FAZENDA_T3AY.pdf
				TRES_LAGOAS_ANO_2006_FAZENDA_T4AD.pdf

Folders				Files
**some cartographic files were simplified, such as .shapefile include the 7 file asociated to this type of data (.cpg, .dbf, .prj, .sbn, .sbx, .shp, .shx)				
				TRES_LAGOAS_ANO_2006_FAZENDA_T4AL.pdf
				TRES_LAGOAS_ANO_2006_FAZENDA_T5AB.pdf
				TRES_LAGOAS_ANO_2006_FAZENDA_T5AM.pdf
				TRES_LAGOAS_ANO_2006_FAZENDA_T5AN.pdf
				TRES_LAGOAS_ANO_2006_FAZENDA_T5AP.pdf
				TRES_LAGOAS_ANO_2006_FAZENDA_T6A1.pdf
				TRES_LAGOAS_ANO_2006_FAZENDA_T6AO.pdf
				TRES_LAGOAS_ANO_2006_FAZENDA_T6AT.pdf
				TRES_LAGOAS_ANO_2006_FAZENDA_T6B8.pdf
				TRES_LAGOAS_ANO_2006_FAZENDA_T6B9.pdf
				TRES_LAGOAS_ANO_2006_FAZENDA_T6BG.pdf
				TRES_LAGOAS_ANO_2006_FAZENDA_T6CC.pdf
				TRES_LAGOAS_ANO_2006_FAZENDA_T8AA.pdf
				TRES_LAGOAS_ANO_2006_FAZENDA_T8AB.pdf
				TRES_LAGOAS_ANO_2006_FAZENDA_T8AE.pdf
				TRES_LAGOAS_ANO_2006_FAZENDA_T8AJ.pdf
				TRES_LAGOAS_ANO_2006_FAZENDA_T8AL.pdf
				TRES_LAGOAS_ANO_2006_FAZENDA_T8AM.pdf
				TRES_LAGOAS_ANO_2006_FAZENDA_T8AQ.pdf
				TRES_LAGOAS_ANO_2006_FAZENDA_T8AR.pdf
				TRES_LAGOAS_ANO_2006_FAZENDA_T8AS.pdf
				TRES_LAGOAS_ANO_2006_FAZENDA_T8AT.pdf
				TRES_LAGOAS_ANO_2008_FAZENDA_T1A0.pdf
				TRES_LAGOAS_ANO_2008_FAZENDA_T1B5.pdf
				TRES_LAGOAS_ANO_2008_FAZENDA_T1B8.pdf
				TRES_LAGOAS_ANO_2008_FAZENDA_T1BU.pdf
				TRES_LAGOAS_ANO_2008_FAZENDA_T1CF.pdf
				TRES_LAGOAS_ANO_2008_FAZENDA_T1Cl.pdf
				TRES_LAGOAS_ANO_2008_FAZENDA_T1CQ.pdf
				TRES_LAGOAS_ANO_2008_FAZENDA_T2A9.pdf
				TRES_LAGOAS_ANO_2008_FAZENDA_T2AA.pdf
				TRES_LAGOAS_ANO_2008_FAZENDA_T2AL.pdf

Folders				Files
**some cartographic files were simplified, such as .shapefile include the 7 file asociated to this type of data (.cpg, .dbf, .prj, .sbn, .sbx, .shp, .shx)				
				TRES_LAGOAS_ANO_2008_FAZENDA_T2BC.pdf
				TRES_LAGOAS_ANO_2008_FAZENDA_T3AJ.pdf
				TRES_LAGOAS_ANO_2008_FAZENDA_T3AW.pdf
				TRES_LAGOAS_ANO_2008_FAZENDA_T3AY.pdf
				TRES_LAGOAS_ANO_2008_FAZENDA_T4AD.pdf
				TRES_LAGOAS_ANO_2008_FAZENDA_T4AL.pdf
				TRES_LAGOAS_ANO_2008_FAZENDA_T5AB.pdf
				TRES_LAGOAS_ANO_2008_FAZENDA_T5AM.pdf
				TRES_LAGOAS_ANO_2008_FAZENDA_T5AN.pdf
				TRES_LAGOAS_ANO_2008_FAZENDA_T5AP.pdf
				TRES_LAGOAS_ANO_2008_FAZENDA_T6A1.pdf
				TRES_LAGOAS_ANO_2008_FAZENDA_T6AO.pdf
				TRES_LAGOAS_ANO_2008_FAZENDA_T6AT.pdf
				TRES_LAGOAS_ANO_2008_FAZENDA_T6B8.pdf
				TRES_LAGOAS_ANO_2008_FAZENDA_T6B9.pdf
				TRES_LAGOAS_ANO_2008_FAZENDA_T6BG.pdf
				TRES_LAGOAS_ANO_2008_FAZENDA_T6CC.pdf
				TRES_LAGOAS_ANO_2008_FAZENDA_T8AA.pdf
				TRES_LAGOAS_ANO_2008_FAZENDA_T8AB.pdf
				TRES_LAGOAS_ANO_2008_FAZENDA_T8AE.pdf
				TRES_LAGOAS_ANO_2008_FAZENDA_T8AJ.pdf
				TRES_LAGOAS_ANO_2008_FAZENDA_T8AL.pdf
				TRES_LAGOAS_ANO_2008_FAZENDA_T8AM.pdf
				TRES_LAGOAS_ANO_2008_FAZENDA_T8AQ.pdf
				TRES_LAGOAS_ANO_2008_FAZENDA_T8AR.pdf
				TRES_LAGOAS_ANO_2008_FAZENDA_T8AS.pdf
				TRES_LAGOAS_ANO_2008_FAZENDA_T8AT.pdf
				TRES_LAGOAS_CERRADO_ANO_2005_2014_FAZEND A_T6CG.pdf
				TRES_LAGOAS_CERRADO_ANO_2006_2014_FAZEND A_T6CE.pdf
				TRES_LAGOAS_CERRADO_ANO_2006_2014_FAZEND A_T8BA.pdf

Folders				Files		
**some cartographic files were simplified, such as .shapefile include the 7 file asociated to this type of data (.cpg, .dbf, .prj, .sbn, .sbx, .shp, .shx)						
				TRES_LAGOAS_CERRADO_ANO_2014_2022_FAZEND A_T6CE.pdf		
				TRES_LAGOAS_CERRADO_ANO_2014_2022_FAZEND A_T6CG.pdf		
				TRES_LAGOAS_CERRADO_ANO_2014_2022_FAZEND A_T8BA.pdf		
			Ponto 2/		DadosBase_220912.xlsx	
			Characterization of the areas to be restored/	Pastagem_PST_1.PNG		
				Savana Arborizada_PSR_Pasto Sujo Ralo_1.PNG		
				attachment 4 - 1.Relatório final_ETAPA 2.pdf		
				Uso e Cobertura do Solo - ANA ROSA (C1BO).pdf		
				Uso e Cobertura do Solo - ARETE (T1BU).pdf		
				Uso e Cobertura do Solo - ARIRANHA (T5AB).pdf		
				Uso e Cobertura do Solo - BARRA DO CERVO (T1CI).pdf		
				Uso e Cobertura do Solo - BARRA DO MOEDA (T1AO).pdf		
				Uso e Cobertura do Solo - BOA ESPERANÇA III (T3AW).pdf		
			Land use and cover/	Uso e Cobertura do Solo - BOM JESUS (T8AQ).pdf		
				Uso e Cobertura do Solo - BRASILEIRA (T8AJ).pdf		
				Uso e Cobertura do Solo - BURITI (T1B3).pdf		
				Uso e Cobertura do Solo - CASA BRANCA (T1B8).pdf		
				Uso e Cobertura do Solo - CRISTO REDENTOR (T8AS).pdf		
				Uso e Cobertura do Solo - CURUCACA (T6AT).pdf		
				Uso e Cobertura do Solo - DUAS MARIAS (T8AM).pdf		
				Uso e Cobertura do Solo - ESTRADÃO (T1B5).pdf		
				Uso e Cobertura do Solo - FIGUEIRA (T2AA).pdf		

Folders					Files
**some cartographic files were simplified, such as .shapefile include the 7 file asociated to this type of data (.cpg, .dbf, .prj, .sbn, .sbx, .shp, .shx)					
					Uso e Cobertura do Solo - FLOR DA SERRA (T6BG).pdf
					Uso e Cobertura do Solo - GUARA-SUIA (T8AE).pdf
					Uso e Cobertura do Solo - JANDAIA (T2BC).pdf
					Uso e Cobertura do Solo - JOAMAR (T3AY).pdf
					Uso e Cobertura do Solo - LAGUNA (T1CF).pdf
					Uso e Cobertura do Solo - MATINHA DO BRIOSO (T6B8).pdf
					Uso e Cobertura do Solo - MATÃO (T3AJ).pdf
					Uso e Cobertura do Solo - MONTE ALTO (T2A9).pdf
					Uso e Cobertura do Solo - MORADA DO SOL (T1BO).pdf
					Uso e Cobertura do Solo - NOSSA SENHORA DE FÁTIMA (T1CU).pdf
					Uso e Cobertura do Solo - PALMITO (T1B2).pdf
					Uso e Cobertura do Solo - PARAÍSO (T8AR).pdf
					Uso e Cobertura do Solo - PONTAL DO BRIOSO (T6B9).pdf
					Uso e Cobertura do Solo - RIO VERDE A (T4AD).pdf
					Uso e Cobertura do Solo - RIO VERDE B (T8AT).pdf
					Uso e Cobertura do Solo - SANTA INES (T5AN).pdf
					Uso e Cobertura do Solo - SANTA INES GLEBA C (T5AM).pdf
					Uso e Cobertura do Solo - SANTA TEREZINHA II (T6CE).pdf
					Uso e Cobertura do Solo - SANTO ANTONIO IV (T8AA).pdf
					Uso e Cobertura do Solo - SUCURIU (T6CG).pdf
					Uso e Cobertura do Solo - SÃO JOSÉ (T8BA).pdf
					Uso e Cobertura do Solo - SÃO JOÃO IV (T2AL).pdf
					Uso e Cobertura do Solo - SÃO LUCAS (T6AO).pdf

Folders					Files
**some cartographic files were simplified, such as .shapefile include the 7 file asociated to this type of data (.cpg, .dbf, .prj, .sbn, .sbx, .shp, .shx)					
					Uso e Cobertura do Solo - SÃO MARCOS (T4AL).pdf
					Uso e Cobertura do Solo - SÃO MIGUEL III (T1CQ).pdf
					Uso e Cobertura do Solo - TRIANGULO DO VALE (T6A1).pdf
					Uso e Cobertura do Solo - VALE DO GERIVÁ (T8AL).pdf
					Uso e Cobertura do Solo - VISTA ALEGRE II (T8AB).pdf
					Uso e Cobertura do Solo - VISTA ALEGRE III (T6CC).pdf
		Ponto 7/	Evidencia planejamento restauração nativas Suzano/	Shp s/	PPT 4_Apresentação do Planejamento dos Programas e Projetos 2022 (1).pptx
					Semana de Planejamento 2022 - Equipe Desenvolvimento Social MS (3) (2).pdf
					Planejado x Realizado Restauração.xlsx
					areas_HorizonteXareas_restauracao (1).kmz
					APPRL.shapefile
					Area_projeto_Horizontev3.shapefile
					Areas_Restauraç!o.shapefile
		CAR 11/	references/		COMPLEXO SOJA - Caracterização e Desafios Tecnológicos.pdf
					Diagnóstico_e_desafios_da_agricultura_brasil eira.pdf
					almeida-2019.pdf
					oliveira-et al-2019.pdf
					ortigoza-et al-2016.pdf
		CAR 12/			renato-lopes.pdf
					20220920 - Non-Permanence-Risk-Report - v2 - clean version.docx
					20220920 - Non-Permanence-Risk-Report - v2 - clean version.pdf
					20220920 - Non-Permanence-Risk-Report - v2 - track changes.docx
		CAR 13/			rocha-et al-2019.pdf
					AA Corte de Arvores Nativas Isoladas Faz São José VII 2261_2021.pdf

Folders			Files
**some cartographic files were simplified, such as .shapefile include the 7 file asociated to this type of data (.cpg, .dbf, .prj, .sbn, .sbx, .shp, .shx)			
			AA Corte de Arvores Nativas Isoladas Faz Ana Rosa 648_2018.pdf
			AA Corte de Arvores Nativas Isoladas Faz Ana Rosa 958_2018.pdf
			AA Corte de Arvores Nativas Isoladas Faz Barra do Cervo 90_2020.pdf
			AA Corte de Arvores Nativas Isoladas Faz Figueiras 1059_2017.pdf
			AA Corte de Arvores Nativas Isoladas Faz Joamar 985_2017.pdf
			AA Corte de Arvores Nativas Isoladas Faz Nossa Senhora de Fatima 2496_2021.pdf
			AA Corte de Arvores Nativas Isoladas Faz Rio Verde A 443_2018.pdf
			AA Corte de Arvores Nativas Isoladas Faz Rio Verde B 417_2019.pdf
			AA Corte de Arvores Nativas Isoladas Faz Rio Verde B 781_2017.pdf
			AA Corte de Arvores Nativas Isoladas Faz Santa Terezinha I 1409_2021.pdf
			AA Corte de Arvores Nativas Isoladas Faz São João IV 905_2017.pdf
			AA Corte de Arvores Nativas Isoladas Faz Vista Alegre II 855_2019.pdf
			AA Corte de Arvores Nativas Isoladas Faz Vista Alegre III 1136_2020.pdf
			AA Corte de Nativas Isoladas Faz Arete 70_2018.pdf
			AA Corte de Nativas Isoladas Faz Laguna 558_2017.pdf
			AA Corte de Nativas Isoladas Faz Matinha do Bioso 862_2017.pdf
			AA Corte de Nativas Isoladas Faz Monte Alto 629_2017.pdf
			AA Corte de Nativas Isoladas Faz Santa Ines Gleba C 275_2017.pdf
			AA Corte de Nativas Isoladas Faz Santa Ines Gleba E 255_2017.pdf
			AA Corte de Nativas Isoladas Faz Santo Antonio IV 351_2017.pdf

Folders			Files
**some cartographic files were simplified, such as .shapefile include the 7 file associated to this type of data (.cpg, .dbf, .prj, .sbn, .sbx, .shp, .shx)			
			AA Corte de Nativas Isoladas Faz São Lucas 549_2017.pdf
			AA Corte de Nativas Isoladas Faz Triangulo do Vale 357_2017.pdf
			AA Corte de Nativas Isoladas_Faz Ariranha 846_2016.pdf
		CL 03/	Ponto 1/ Emission and removals v4.xlsx
			Ponto 2/ Areas_projeto_Horizontev2.kmz
			Areas_projeto_Horizontev2.shapefile
		CL 05/	7649.PDF
			CQ NF 3943.pdf
			IP Faz Monte Alto 1802_2017.pdf
			IP Faz Santa Ines Gleba C 880_2017.pdf
		CL 06/	Ponto 1/ Projetos_Recurso_Carbono REV.16.05.22.pptx
			Ponto 3/ 180801_ods_metas_nac_dos_obj_de_desenv_sustent_n_propos_de_adequa.pdf
			IP Faz Monte Alto 1802_2017.pdf
			IP Faz Ana Rosa 2143_2017.pdf
			IP Faz Ana Rosa 2314_2018.pdf
			IP Faz Ariranha 1858_2015.pdf
			IP Faz Ariranha 52_2020.pdf
			IP Faz Barra do Cervo 2086_2019.pdf
			IP Faz Bentevi 2041_2017.pdf
			IP Faz Boa Esperança 767_2018.pdf
			Ponto 4/ IP Faz Bom Jesus 636_2016.pdf
			IP Faz Brasileira 2473_2017.pdf
			IP Faz Buriti 1603_2016.pdf
			IP Faz Buriti 24_2022.pdf
			IP Faz Buriti 957_2019.pdf
			IP Faz Casa Branca 1639_2017.pdf
			IP Faz Casa Branca 341_2017.pdf
			IP Faz Colorado II 1899_2019.pdf
			IP Faz Coqueirinho 1557_2017.pdf

Folders				Files
**some cartographic files were simplified, such as .shapefile include the 7 file associated to this type of data (.cpg, .dbf, .prj, .sbn, .sbx, .shp, .shx)				
				IP Faz Cristo Redentor 161_2019.pdf
				IP Faz Curucaca 102_2020.pdf
				IP Faz Domingos Mungo 42_2022.pdf
				IP Faz Estrela 2230_2017.pdf
				IP Faz Figueiras 37_2018.pdf
				IP Faz Guar-Sui 1807_2018.pdf
				IP Faz Guar-Sui 2053_2018.pdf
				IP Faz Guar-Sui 83_2018.pdf
				IP Faz Indaia 2479_2017.pdf
				IP Faz Ip 1380_2017.pdf
				IP Faz Iracema I 661_2021.pdf
				IP Faz Jandaia 1055_2019.pdf
				IP Faz Jandaia 245_2020.pdf
				IP Faz Joamar 2415_2017.pdf
				IP Faz Laguna 1737_2017.pdf
				IP Faz Laguna 516_2021.pdf
				IP Faz Matinha do Bioso 2191_2017.pdf
				IP Faz Mato 407_2017.pdf
				IP Faz Morada do Sol 454_2019.pdf
				IP Faz Morada do Sol 510_2021.pdf
				IP Faz Parano 647_2021.pdf
				IP Faz Paraso 1525_2019.pdf
				IP Faz Pilares II 1136_2017.pdf
				IP Faz Pontal do Bioso 2236_2017.pdf
				IP Faz Santa Cecilia 2326_2017.pdf
				IP Faz Santa Ines Gleba A e C 1106_2017.pdf
				IP Faz Santa Ines Gleba C 880_2017.pdf
				IP Faz Santa Ines Gleba E e F 988_2017.pdf
				IP Faz Santa Terezinha II 375_2021.pdf
				IP Faz Santo Antonio IV 712_2017.pdf
				IP Faz Sucuriu 746_2021.pdf
				IP Faz So Jos 1738_2017.pdf

Folders				Files
**some cartographic files were simplified, such as .shapefile include the 7 file asociated to this type of data (.cpg, .dbf, .prj, .sbn, .sbx, .shp, .shx)				
				IP Faz São João IV 1991_2017.pdf
				IP Faz São Lucas 1407_2017.pdf
				IP Faz São Marcos 1381_2017.pdf
				IP Faz São Marcos 1700_2015.pdf
				IP Faz São Marcos 845_2019.pdf
				IP Faz Taboca 2154_2017.pdf
				IP Faz Taboca 2215_2018.pdf
				IP Faz Triangulo do Vale 836_2017.pdf
				IP Faz Vale do Gerivá 309_2020.pdf
				IP Faz Vale do Gerivá 51_2020.pdf
				IP Faz Vale do Gerivá 640_2019.pdf
				IP Faz Vista Alegre II 1280_2019.pdf
				IP Faz Vista Alegre III 340_2020.pdf
				IP Horto Duas Marias 357_2017.pdf
				IP Horto Duas Marias 715_2015.pdf
				IP Horto Duas Marias 727_2019.pdf
				IP Horto Duas Marias 803_2015.pdf
				IP Horto Estradão 1053_2019.pdf
				IP Horto Estradão 1542_2019.pdf
				IP Horto Estradão 1727_2017.pdf
				IP Horto Estradão 2193_2017.pdf
				IP Horto Estradão 512_2021.pdf
				IP Horto Estradão 596_2017.pdf
				IP Horto Estradão 708_2017.pdf
				IP Horto Estradão 885_2015.pdf
				IP Horto Flor da Serra 1361_2017.pdf
				IP Horto Matão 1144_2018.pdf
				IP Horto Matão 1324_2015.pdf
				IP Horto Matão 1519_2018.pdf
				IP Horto Matão 1727_2018.pdf
				IP Horto Matão 1735_2017.pdf
				IP Horto Matão 199_2018.pdf

Folders				Files
**some cartographic files were simplified, such as .shapefile include the 7 file asociated to this type of data (.cpg, .dbf, .prj, .sbn, .sbx, .shp, .shx)				
				IP Horto Matão 2289_2018.pdf
				IP Horto Matão 2356_2017.pdf
				IP Horto Matão 286_2018.pdf
				IP Horto Matão 311_2016.pdf
				IP Horto Matão 32_2021.pdf
				IP Horto Matão 330_2019.pdf
				IP Horto Matão 895_2019.pdf
				IP Horto Matão 994_2018.pdf
				IP Horto Moeda 1162_2016.pdf
				IP Horto Moeda 1571_2017.pdf
				IP Horto Moeda 198_2018.pdf
				IP Horto Moeda 2056_2018.pdf
				IP Horto Moeda 2476_2017.pdf
				IP Horto Moeda 397_2019.pdf
				IP Horto Moeda 413_2018.pdf
				IP Horto Moeda 876_2015.pdf
				IP Horto Moeda 989_2017.pdf
				IP Horto Rio Verde A 155_2019.pdf
				IP Horto Rio Verde A 1644_2017.pdf
				IP Horto Rio Verde A 214_2018.pdf
				IP Horto Rio Verde A 251_2020.pdf
				IP Horto Rio Verde A 252_2020.pdf
				IP Horto Rio Verde A 2535_2016.pdf
				IP Horto Rio Verde A 30_2021.pdf
				IP Horto Rio Verde A 31_2021.pdf
				IP Horto Rio Verde A 464_2017.pdf
				IP Horto Rio Verde A 478_2016.pdf
				IP Horto Rio Verde A 480_2019.pdf
				IP Horto Rio Verde A 481_2021.pdf
				IP Horto Rio Verde A 483_2021.pdf
				IP Horto Rio Verde A 508_2016.pdf
				IP Horto Rio Verde A 740_2019.pdf

Folders				Files
**some cartographic files were simplified, such as .shapefile include the 7 file associated to this type of data (.cpg, .dbf, .prj, .sbn, .sbx, .shp, .shx)				
				IP Horto Rio Verde A 858_2016.pdf
				IP Horto Rio Verde B 1092_2018.pdf
				IP Horto Rio Verde B 116_2020.pdf
				IP Horto Rio Verde B 126_2016.pdf
				IP Horto Rio Verde B 1352_2016.pdf
				IP Horto Rio Verde B 216_2019.pdf
				IP Horto Rio Verde B 2522_2016.pdf
				IP Horto Rio Verde B 315_2020.pdf
				IP Horto Rio Verde B 398_2017.pdf
				IP Horto Rio Verde B 420_2019.pdf
				IP Horto Rio Verde B 425_2018.pdf
				IP Horto Rio Verde B 507_2016.pdf
				IP Horto Rio Verde B 716_2018.pdf
				IP Horto Rio Verde B 732_2019.pdf
				IP Horto Rio Verde B 969_2016.pdf
				IP Nossa Senhora de Fátima 793_2021.pdf
			Ponto 5/	DO e Sispart.pptx
				Diálogo Operacional_PO.26.03.0001.pdf
				Identificação e Avaliação de Impactos Sociais.pdf
				Manual de Relacionamento_MS_MA.26.00.0001.pdf
				Relacionamento com Comunidades Urbanas e Rurais_PG.26.03.0001.pdf
			Ponto 6/	WhatsApp Image 2022-08-01 at 15.10.34 (1).jpeg
				WhatsApp Image 2022-08-01 at 15.10.34.jpeg
				WhatsApp Image 2022-08-01 at 15.10.35 (1).jpeg
				WhatsApp Image 2022-08-01 at 15.10.35 (2).jpeg
				WhatsApp Image 2022-08-01 at 15.10.35.jpeg
				WhatsApp Image 2022-08-01 at 15.10.36 (1).jpeg
				WhatsApp Image 2022-08-01 at 15.10.36.jpeg
			Ponto 8/	20220922_response_public_consultation.docx
				ARR Horizonte_Análise_Aliança[92].pdf

Folders				Files
**some cartographic files were simplified, such as .shapefile include the 7 file asociated to this type of data (.cpg, .dbf, .prj, .sbn, .sbx, .shp, .shx)				
8102022/	O Findings Auditoria rodada 2/	CAR 09/		ENC CASE9000 Project ID 3350 - THE ARR HORIZONTE CARBON PROJECT - VCS - Pipeline listing requested (under development).msg
				Re CASE9000 Project ID 3350 - THE ARR HORIZONTE CARBON PROJECT - VCS - Pipeline listing requested (under development).msg
			CL 07/	Ponto 2/
				4_e6f8f441-suzano-s.a.-unidade-três-lagoas-ima-fm-0005_por.pdf
				CERFLOR certificados.txt
				Suzano S.A. – Mato Grosso do Sul Unit - Certificado IMA-FM_COC-005083_IN.pdf
				Suzano S.A. – Unidade Mato Grosso do Sul - Certificado IMA-FM_COC-005083_PT.pdf
			CL 08/	Ponto 1/
				attachment 1-10_CB0002_Procedimento_implantação florestal_MS_71796_PO.12.02.001_47_05.pdf
				attachment 2-wood density.pdf
				attachment 3-c) MA.26.00.0001- Manual de Gestão de Relacionamento.pdf
			PD + resposta/	CDM.F28W. Audit Findings Horizonte.docx
				PD+MR_ARR Horizonte Carbon Project v3 - clean version F.pdf
				PD+MR_ARR Horizonte Carbon Project v3 - clean version.docx
				PD+MR_ARR Horizonte Carbon Project v3 - track changes.docx
			Planilhas de cálculos/	20220908 - Monitored ER v2.xlsx
				Emission and removals v4.xlsx
			Ponto 2/	alvarenga-et al-2010.pdf
				attatment 5 - Procedimento_implantação florestal_MS_71796_PO.12.02.001_47_05.pdf
				bayer-et al-2000.pdf
				fialho-et al-2018.pdf
				gatto-et al-2010.pdf
				miranda-et al-2002.pdf
			CL 03/	Area_projeto_Horizontev3.cpg
				Area_projeto_Horizontev3.dbf
				Area_projeto_Horizontev3.prj

Folders			Files
**some cartographic files were simplified, such as .shapefile include the 7 file asociated to this type of data (.cpg, .dbf, .prj, .sbn, .sbx, .shp, .shx)			
Verra_Validation and verification			Area_projeto_Horizontev3.sbn
			Area_projeto_Horizontev3.sbx
			Area_projeto_Horizontev3.shp
			Area_projeto_Horizontev3.shp.kmz
			Area_projeto_Horizontev3.shp.xml
			Area_projeto_Horizontev3.shx
			CL 06/
			SUZANO CARBONO_PORT.mp4
	PD + resposta/	CDM.F28W. Audit Findings Horizonte.docx	
		PD+MR_ARR Horizonte Carbon Project v4 - clean version.docx	
		PD+MR_ARR Horizonte Carbon Project v4 - clean version.pdf	
		PD+MR_ARR Horizonte Carbon Project v4 - track changes.docx	
	ENC CASE15429 Project ID 3350 - THE ARR HORIZONTE CARBON PROJECT - VCS - Registration and verification approval requested.msg		
	VCS Project Review Report_3350_11JAN2023_VO_Way.docx		
	PD + MR versions/	PD+MR_ARR Horizonte Carbon Project v5 - Clean version.docx	
PD+MR_ARR Horizonte Carbon Project v5 - Clean version.pdf			
PD+MR_ARR Horizonte Carbon Project v5 - track version.docx			
PD+MR_ARR Horizonte Carbon Project v5 - track version.pdf			
Point 1/	Non-Permanence-Risk-Report - v3- clean version.docx		
	Non-Permanence-Risk-Report - v3- clean.pdf		
	Non-Permanence-Risk-Report - v3- track version - Copia.docx		
	print.JPG		
Point 3/	[CONFIDENTIAL] 2023_Arendamento_MS_2 Ciclos.docx		
	[CONFIDENTIAL] 2023_CPA_Parceria com adiantamento.doc		
	[CONFIDENTIAL] RES Auditoria Verra Projeto Horizonte de Carbono Contratos.msg		
Point 4/	[CONFIDENTIAL] Auditoria_Externa_SNM_2022.pdf		
	[CONFIDENTIAL] Manual Adubação Manual.pdf		
	[CONFIDENTIAL] Manual Adubação Mecanizada.pdf		
	[CONFIDENTIAL] PH_Control de fertilizantes_2017 2022.xlsx		
Point 8/	Land cover by pasture - Mapbiomas - Colletion 7.pdf		

Folders		Files
**some cartographic files were simplified, such as .shapefile include the 7 file associated to this type of data (.cpg, .dbf, .prj, .sbn, .sbx, .shp, .shx)		
		MapBiomias - Pastagem.pptx
		links.txt
	Point 9 nd 11/	Estimated ER v5 LTA 35 frst cycle only - PC 35 anos.xlsx
		Monitored ER v3 - LTA 35 frst cycle only - PC 35 anos.xlsx
	Sistema catográfico/	Area_projeto_Horizontev3.shapefile
Round 2	Findings Verra-Ass.ESPL_ SuzWay.docx	
	ESPL - FD 01/	VCS Project Review Report_3350_11JAN2023_VO_Way.docx
	ESPL - FD 05/	29_CB0004_RES Dúvida FSC - Uso de fogo.msg
		Relatório de Diálogo Operacional_Crédito de Carbono.pdf
		WhatsApp Image 2022-08-01 at 15.10.34 (1).jpeg
		WhatsApp Image 2022-08-01 at 15.10.34.jpeg
		WhatsApp Image 2022-08-01 at 15.10.35 (1).jpeg
		WhatsApp Image 2022-08-01 at 15.10.35 (2).jpeg
		WhatsApp Image 2022-08-01 at 15.10.35.jpeg
		WhatsApp Image 2022-08-01 at 15.10.36 (1).jpeg
		WhatsApp Image 2022-08-01 at 15.10.36.jpeg
		Lista de presença sensibilização Arara Azul.pdf
		lista de presença sensibilização comunidade.pdf
		lista de presença sensibilização vizinhos.pdf
		lista de presença sensibilização vizinhos_II.pdf
		Agente do Bem_legado e conquista.pptx
		Book-Agente-do-bem_ (1).pdf
	ESPL - FD 06/	PC000002_Política de Código de Conduta.pdf
		Política Corporativa de Direitos Humanos.pdf
		PO.01.01.0021_Plano Anual de Estradas.pdf
		PO.01.01.0023_Programação de Estradas.pdf
	ESPL- FD 11/	Estimated ER v5 LTA 35 frst cycle only - PC 35 anos.xlsx
		Monitored ER v3 - LTA 35 frst cycle only - PC 35 anos.xlsx
	PD.MR versions/	PD+MR_ARR Horizonte Carbon Project v6 - Clean version.docx
		PD+MR_ARR Horizonte Carbon Project v6 - Clean version.pdf
		PD+MR_ARR Horizonte Carbon Project v6 - track version.docx

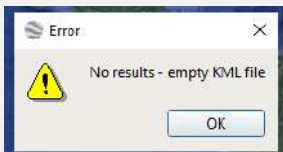
Folders		Files
**some cartographic files were simplified, such as .shapefile include the 7 file associated to this type of data (.cpg, .dbf, .prj, .sbn, .sbx, .shp, .shx)		
		PD+MR_ARR Horizonte Carbon Project v6 - track version.pdf
Round 3		CodigoConduta_Web.pdf
		FD6_Projeto Horizonte_.pptx
		Findings Verra-Ass.ESPL_ SuzWay2.docx
		[Confidencial] Ambientação_RH.pptx
		[Confidencial] Procedimento_RH_Fluxo.pdf

APPENDIX 2: FINDINGS

CAR ID	01
Description of CAR	Date: 31/08/2022
VCS-Standard_v4.3, 3.6. <i>Project and jurisdictional proponents shall demonstrate that they have the legal right to control and operate project or program activities.</i> In reviewing the land ownership documents, the following issues were identified. 22 Rural Lease Agreements were provided with contract addenda attached. Only one Contract (Joamar Farm - Title nº 7.000) does not contain an Addendum. 1. Of the available registrations of the leases, all are out of date, including the 13 owned by Suzano. The Project Proponent is asked to update the registrations of the leases and their “certidões”. 2. We also note that the registrations of some lease agreements are still pending. The Project Proponent is requested to provide the lease agreements of (i) Chácara Barra do Cervo - Title No. 6,463; (ii) Fazenda Figueira - Title No. 5,858, 6,568 and 6,622; (iii) Fazenda Joamar - Title No. 7,000; (iv) Fazenda Ariranha - Title No. 6,301; (v) Santa Inês Farm "Gleba C" - Title No. 72,214; (vi) Fazenda Santa Inês Gleba "A","C","E" and "F" - Title No. 68,798,72,213,77,905 and 68,800; (vii) Triângulo do Vale Farm - Title No. 3,369; and (viii) Sítio Boa Visita - Title No. 12,205 3. Although we are aware of the acquisition of Fibria by Suzano, we have not been able to identify this fact in the documents submitted. The Project Proponent is requested to clarify the situation and provide sufficient documentation to clarify the situation of the landowners in the above cases.	
Project participant response	Date: 23/09/2022
❖ The Addendum contract of Joamar Farm - Title nº 7.000, was attached. 1. All registrations of the leases have been updated and attached in the shared folder with VVB. 2. All registrations of the leases have been updated and attached in the shared folder with VVB. 1) 3. In São Paulo, April 1st, 2019 – Suzano S.A. (“Company”), informed shareholders and the market in general that in the Extraordinary Shareholders Meeting of the Company, held on the date hereof (“ESM”), the merger of Fibria Celulose S.A. (“Fibria”), wholly owned subsidiary of the Company, was approved, with the transfer of all of its equity to the Company and its consequent winding up (“Merger”), provided that the capital stock of the Company will not change due to the Merger. As a result of the Merger, the Company will succeed Fibria in all of its rights and obligations. The official public document can be found on the webpage: https://s1.q4cdn.com/987436133/files/doc_news/notice_to_the_market/Suzano-Fato-Relevante-Aprovao-Incorporao-Fibria-(v.-Ingls).pdf	
Documentation provided by project participant	
“Fazenda Joamar” folder: Requisição 20306 Minuta Joamar CO2- APROVADA 19.09 (autenticado) and “Summary.pdf.” - The registrations of the leases updated on shared folder “CAR 01 – Ponto 1 e 2” - Suzano-Fato-Relevante-Aprovao-Incorporao-Fibria-(v.-Ingls)	

CAR ID	01
DOE 1 st assessment	Date: 20/10/2022
we can conclude, in general, that Suzano has possession of part of the Properties as lessee and also as owner of the others	
Finding closed successfully	

CAR ID	02
Description of CAR	Date: 31/08/2022
ISO 14064-2 A.3.6, 5.9. VCS-Standard_v4- 3.15.2 VCS-Program-Guide_v4, 1.1: <i>“Such updated documents still form part of version 4, and the VCS Program edition should be referred to as VCS Version 4 regardless of the version numbers of the individual program documents”</i> However, in some sections of the PD+MR_ARR Horizonte Carbon Project V2.0, the Project Proponent refers to the VCS Standard v4.2., and there is no evidence that the project use the current version of the VCS standard is 4.3. Some Reference errors found in the PD+MR_ARR Horizonte Carbon Project V2.0. The project proponent is requested to update the reports appropriately. There is no evidence that the supports of the figures of the PD&MR maps are attached. The project proponent is requested to include all cartographic information in accordance with the project area. The project proponent is requested to provide the plots ubication in a cartographic system (shp, kmz, etc.)	
Project participant response	Date: 23/09/2022
• Corrections made on the version 3 of the Project Description. • Corrections made on the version 3 of the Project Description. • All maps have been updated in the PD, as well as the project area. The updated cartographic information is available in the shared folder: “CAR 2, ponto 3”. • Plots ubication in a cartographic system is available in the shared folder: “CAR 2, Ponto 4”.	
Documentation provided by project participant	
• <i>Project Description, version 3</i> • Updated cartographic information • “CB0004_Dados eucalipto.xlsx” and “Parcelas Inv. CB0004.zip”	
DOE 1 st assessment	Date: 03/10/2022
The PP provided ‘PD+MR_ARR Horizonte Carbon Project v3’, which use the current version of the VCS standard and does not have reference errors. The PP provided cartographic information is consistent with the project area.	
Finding closed successfully	

CL ID	03	Date: 31/08/2022
Description of CL		
VCS-Program-Guide_v4, 3.15.2 <i>Quality management procedures to manage data and information shall be applied and established. Where applicable, procedures to account for uncertainty in data and parameters shall be applied in accordance with the requirements set out in the methodology.</i> Some inconsistencies were detected between file <i>PD+MR_ARR Horizonte Carbon Project v2.0</i> and file <i>Estimated ER</i>. The project area does not match between the documents, calculations, cartographic information found during the onsite visit. The Project proponent is requested to define the final project areas in PAI1 and consistency between all documents provided to this VVB.		
Project participant response		Date 23/09/2022
- All <i>Estimated ER</i> values have been revised in the spreadsheets and updated in the Project Description, version 3. Inconsistencies between file <i>PD+MR_ARR Horizonte Carbon Project</i> and file <i>Estimated ER</i> was updated. - Updates were made to the project area, calculations and cartographic information. In addition, we clarified in section 1.12 which areas have already been planted and which will still be planted, as requested during field visits. - Project area was updated. Eucalyptus plantation areas were checked and corrected when displaced. Restoration areas were corrected by two applied filters: (1) polygons smaller than 0.5 hectares were removed from the project area and (2) areas with initial secondary vegetation, classified in 2021 (evidence in document “1.Relatório final_ETAPA 2” attached), were removed from the project area. With that, the total project area was updated to 15,426 hectares.		
Documentation provided by project participant		
<i>Project Description, version 3</i> - Updated cartographic information on “Ponto 2” folder. <i>“Emission and removals v4”</i>		
DOE 1st assessment		Date: 03/10/2022
The PP provided ‘<i>PD+MR_ARR Horizonte Carbon Project v3</i>’ and ‘<i>Emission and removals v4</i>’, which does not have inconsistencies between them. However, The KML file support provided by the PP is not available. 		
Project participant response		Date: 04/10/2022
Cartographic data were update (shapefile with the Project area)		
Documentation provided by project participant		
Updated cartographic information on “CL 03 - Ponto 2” folder.		
DOE assessment		Date: 20/10/2022
The project proponent updated the indicated cartographic information and it is now available.		
Finding closed successfully		

CAR ID	04	Date: 31/08/2022
Description of CAR		
VCS-Standard_v4, 1.5		
Program Definitions 2022 “<i>The individual or organization that has overall control and responsibility for the project, or an individual or organization that together with others, each of which is also a project proponent, has overall control or responsibility for the project. The entity(s) that can demonstrate project ownership in respect of the project.</i>” In the listing of representation states Suzano S.A. and Waycarbon Soluções Ambientais e Projetos de Carbono LTDA. As Project proponent. However, there is no legal support of the Project proponent, Suzano S.A. and Waycarbon Soluções Ambientais e Projetos de Carbono LTDA.		
Project participant response		Date: 23/09/2022
The transfer was completed on 08/19/2022 at 17:39. Below, there is screenshot of the project registration page of Verra VCS where the only proponent of the ARR Horizonte Carbon Project is Suzano. Attached are the email exchanges between the Suzano and Verra, in which the withdrawal of Waycarbon as a project proponent is confirmed.		
Documentation provided by project participant		
1. Screenshot - Verra registry page - ARR Horizonte Carbon Project 2. Email: RE Transferring projects from accounts and request for release of one of the project proponents		
DOE 1st assessment		Date 03/10/2022
The PP attached emails with Verra and a Screenshot of Verra page		
Finding closed successfully		

CL ID	05	Date: 31/08/2022
Description of CL		
VCS-Standard_v4, 3.7: <i>The project start date of an AFOLU project is the date on which activities that led to the generation of GHG emission reductions or removals are implemented.</i>		
VCS-Project-Description-Template-v4.1, 1.8 “ <i>Indicate, and provide justification for, the project start date, specifying the day, month and year</i> ”		
There is no evidence in the file” <i>Projeto Horizonte_SAC_02_08_22.xlsx</i>” a valid support for the start of soil preparation activities. The project proponent must justify and document for the project start date.		
Project participant response		Date: 23/09/2022
An official invoice referring to the purchase of seedlings for planting in the "Monte Alto" area was attached to the shared folder. This invoice was issued 3 days before planting, that is, 3 days before the project start date (02 November 2017). In addition, it was attached the invoice referring to the purchase of limestone for soil preparation at the Santa Inês farm on 01/10/2017.		
Documentation provided by project participant		
• CQ NF 3943.pdf • 7649.pdf		
DOE 1st assessment		Date 03/10/2022

CL ID	05	Date: 31/08/2022
Description of CL		
The PP provided documentary evidence about the purchase of seedlings for planting in the "Monte Alto" area.		
Finding closed successfully		

CL ID	06	Date: 31/08/2022
Description of CL		
1. There is no evidence to demonstrate how social activities (programs named Inclusive Recycling and the Nursery for Native and Ornamental Seedlings) contributed to GHG ERRs during the monitoring period. 2. There is no evidence of the supports to demonstrate the project's contributions to the SDGs in compliance with numeral 3.16.2 of the VCS standard: <i>"The project proponent shall demonstrate how the project activities, or additional activities implemented by the project proponent, contribute to sustainable development, as defined by and tracked against the United Nations Sustainable Development Goals (SDGs)"</i>. 3. VCS. Section 1.11. The Project Proponent is requested to indicate how the project contributes to achieving any nationally stated sustainable development priorities and how the goals would be monitored. 4. There is no evidence of communication to IMASUL as part of compliance with the resolution SEMADE n° 9, from 13 May 2015. 5. PD+MR_ARR Horizonte Carbon Project v2.0, numeral 2.2. The protocol and the results of the implementation of the SISPART (System of Interested Parties, in Portuguese) are not evidenced. VCS Standard, v4. Section 3.17.5, VCS-Project-Description-Template-v4.-2.2 <i>"The project proponent shall demonstrate to the validation/verification body what action it has taken in respect of the local stakeholder consultation as part of validation..."</i> 6. The Project proponent is required to clearly demonstrate how communicated the process of VCS Program verification and the validation/verification body's site visit as per the requirement. 8. There is no evidence the compliance of the requirement 3.17.6 of the VCS Standard: <i>"All projects are subject to a 30-day public comment period"</i>, and of the VCS-Joint-Project-Description-Monitoring-Report-Template-v4.1, numeral 2.4, <i>Demonstrate how due account of all and any comments received during the public comment period has been taken. Include details on any updates to the project design or demonstrate the insignificance or irrelevance of comments.</i> The project proponent is requested to update said numeral and provide sufficient evidence to meet the criteria.		
Project participant response		Date: 23/09/2022
1. These social activities did not contribute with GHG removals during this first monitoring period. Inclusive Recycling and the Nursery for Native and Ornamental Seedlings will be implemented with carbon credit revenue. Description included in the PDD+MR sections 1.1 and 1.11. 2. According to the document " 022 Q1 VCS PROGRAM UPDATE: OVERVIEW OF SUBSTANTIVE UPDATES TO PROGRAM RULES & REQUIREMENTS" by Verra, available at: https://verra.org/wp-content/uploads/2022/01/VCS-Summary-of-Effective-Dates-2022-Q1.pdf , "Projects that request registration with the VCS Program before 20 January 2023 shall demonstrate contributions to at least three SDGs by 20 January 2025." Then, the project's contributions to the SDGs in compliance with numeral 3.16.2 of the VCS standard will be completed on the following monitoring report, after 2023.		

CL ID	06	Date: 31/08/2022
Description of CL		
3. Included in the PDD+MR the national sustainable development goals related to the Project activities (sections 1.17.1 and 1.17.2) with reference in the document “ODS – Metas Nacionais dos Objetivos de Desenvolvimento Sustentável” from IPEA. 4. Evidence of communication as part of compliance with the resolution SEMADE nº 9, from 13 May 2015 has been attached in the shared folder: “CL 06 – Ponto 4”. The “Informativo de Plantio” document issued by IMASUL for each of the Project’s farms is the return of the planting communication. 5. Evidence is provided to support the protocol and the results of the implementation of the SISPART. The SISPART protocol is driven by four internal Suzano’s documents: “Identification and Assessment of Social Impacts”, “Relationship Manual”, “Operational Dialogue” and “Relationship with Urban and Rural Communities”. The SISPART result implementation is shown in “DO e Sispart” document. 6. The communication of the verification process of the VCS Program and the site visit of the validation/verification body was made through videos and messages disseminated by WhatsApp to all stakeholders. 8. The Horizonte ARR Carbon Project was open for public comment from 08/08/2022 to 07/09/2022. The comments were received on 21 September 2022. Due to the closing of the public consultation, section 2.4 of the Project Description has been updated in version 3, as indicated by VCS template. In addition, the answers to all questions are attached.		
Documentation provided by project participant		
1. <i>Projetos_Recurso_Carbono REV.16.05.22</i> 1. <i>180801_ods_metas_nac_dos_obj_de_desenv_susten_propos_de_adequa</i> 2. <i>“IP – Informativo de Plantio” for all project’s areas.</i> 3. Evidence of protocol and the results of the implementation of the SISPART • <i>DO e Sispart - .ppt presentation</i> • <i>Identificação e Avaliação de Impactos Sociais.pdf</i> • <i>Manual de Relacionamento_MS_MA.26.00.0001</i> • <i>Diálogo Operacional_PO.26.03.0001</i> • <i>Relacionamento com Comunidades Urbanas e Rurais_PG.26.03.0001</i> 4. Evidence of communication of the verification process and VVB visit i. <i>WhatsApp Image 2022-08-01 at 15.10.34 (1)</i> ii. <i>WhatsApp Image 2022-08-01 at 15.10.34</i> iii. <i>WhatsApp Image 2022-08-01 at 15.10.35 (1)</i> iv. <i>WhatsApp Image 2022-08-01 at 15.10.35 (2)</i> v. <i>WhatsApp Image 2022-08-01 at 15.10.35</i> vi. <i>WhatsApp Image 2022-08-01 at 15.10.36 (1)</i> vii. <i>WhatsApp Image 2022-08-01 at 15.10.36</i> 8. 20220922_response_public_consultation		
DOE assessment		Date: 03/10/2022
1. The PP clarified social activities did not contribute with GHG removals during this first monitoring period. 2. The project proponent clarified it will demonstrate SDG contributions before 2023. 3. The project proponent indicated how the project contributes to achieving some nationally stated sustainable development priorities, however, it is not clear how the goals would be monitored. 4. The project proponent attached the “Informativo de Plantio – (IP)” document issued by IMASUL for each of the Project’s farms as documentary evidence of communication as part of compliance with the resolution SEMADE nº 9, from 13 May 2015. 5. The project proponent attached documentary evidence to support the protocol and the results of the implementation of the SISPART. 6. The project proponent clarified communication of the verification process of the VCS Program and the site visit of the validation/verification body and provided screenshots of the broadcast		

CL ID	06	Date: 31/08/2022
Description of CL		
messages to support it. However, the messages included a video which is not attached in the documentary evidence. 3) 8. The project proponent updated the numeral 2.4 and provided documentary evidence to support it.		
Project participant response		Date: 05/10/2022
3. Indicators for monitoring activities related to the SDGs were included in version 4 of the PDD; 6. The video that was shared in the communication of the verification process has been shared in the audit folder;		
Documentation provided by project participant		
- SUZANO CARBONO_PORT - SUZANO CARBONO_INGLES (1) - PD+MR_ARR Horizonte Carbon Project v4		
DOE assessment		Date: 20/10/2022
3. The project proponent updated the PD, including information about the monitoring of contributions to the SDGs. 6. The project proponent attached the video that was shared with local stakeholders as documentary evidence.		
Finding closed successfully		

CL ID	07	Date: 31/08/2022
Description of CL		
VCS-Joint-Project-Description-Monitoring-Report-Template-v4.1, 1.14 <i>Identify and demonstrate compliance of the project with all and any relevant local, regional and national laws, statutes and regulatory frameworks.</i> In the section 1.14 there is no evidence the compliance and supports of the Decree 11.07/2022 of carbon markets in Brazil. There is no evidence that the first instance is certified under a recognized and high-level, market sustainability program, for example the FSC, as described in the project eligibility in the section 1.3 of PD+MR_ARR Horizonte Carbon Project v2.0.		
Project participant response		Date: 22/09/2022
- The compliance of Horizonte ARR project with the Decree 11.07/2022 of carbon markets in Brazil was included in the Project Description, version 3, section 1.14. - FSC and CERFLOR certificates were attached in the shared folder.		
Documentation provided by project participant		
- Project Description, version 3 - FSC and CERFLOR certificates 4_e6f8f441-suzano-s.a.-unidade-três-lagoas-ima-fm-0005_por - Suzano S.A. – Mato Grosso do Sul Unit - Certificado IMA-FM_COC-005083_IN - Suzano S.A. – Unidade Mato Grosso do Sul -Certificado IMA-FM_COC-005083_PT - CERFLOR certificados		
DOE assessment		Date: 03/10/2022

CL ID	07	Date: 31/08/2022
Description of CL		
The project proponent updated the PD+MR_ARR section 1.14, including the compliance with the Decree 11.075/2022. In addition, the project proponent attached certificates of FSC and CERFLOR, which are in force to date.		
Finding closed successfully		

CL ID	08	Date: 31/08/2022
Description of CL		
VCS Standard, v4-3.4.2 All information in the project description shall be presumed to be available for public review, though commercially sensitive information may be protected, as set out in the VCS Program document Registration and Issuance Process, where it can be demonstrated that such information is commercially sensitive. The validation/verification body shall check that any information designated by the project proponent as commercially sensitive meets the VCS Program definition of commercially sensitive information. Information in the project description related to the determination of the baseline scenario, demonstration of additionality, and estimation and monitoring of GHG emission reductions and removals shall not be considered to be commercially sensitive and shall be provided in the public versions of the project description. The Project Proponent is requested to indicate whether any commercially sensitive information has been excluded from the public version of the project description and briefly describe the items to which such information pertains. The Project proponent is asked to provide an additional complete version of the project description that includes commercially sensitive information, explaining that Verra will not post or make this version public.		
Project participant response		Date: 23/09/2022
- Commercially sensitive information was indicated in the project, along with a brief description of its contents. - Attachments with sensitive information will be shared with Verra.		
Documentation provided by project participant		
- Project Description, version 3 - Commercially sensitive informations (Shared folder: CL 08 – Ponto 1) - attachment 1-10_CB0002_Procedimento_implantação florestal_MS_71796_PO.12.02.001_47_05 - attachment 3-c) MA.26.00.0001- Manual de Gestão de Relacionamento - attachment 2-wood density		
DOE assessment		Date: 03/10/2022
The project proponent updated the PD+MR_ARR, where it indicated there is commercially sensitive information that has been excluded from the public version of the project description and it provided briefly description. In addition, the project proponent attached commercially sensitive information.		
Finding closed successfully		

CAR ID	09	Date: 31/08/2022
Description of CAR		
PD+MR_ARR Horizonte Carbon Project v2.0, numeral 4.2.2, 5.1, 6.3 and 6.4 1. The conditions that apply to the tool ar-am-tool-15-v2.0 (numeral 9 and 10), for which the leaks are zero, are not evidenced. The supports of the justification for considering the leakages as zero are not evidenced. The project proponent is requested to develop the tool and provide sufficient evidence to confirm the assessments fully and adequately. 2. There is no evidence to support the claim in sections 4.2.2 and 6.3.2 of PD &MR that belowground biomass is not compromised when aboveground biomass is harvested, or during replanting. 3. In section 4.2.2 of PD+MR_ARR Horizonte Carbon Project v2.0, there is no evidence of local experience to date (Suzano's eucalyptus planting in the state of Mato Grosso do Sul), and literature for project estimates of carbon stocks in eucalyptus trees and native reforestation. 4. In the parameter Ai_bsl, the definition of the areas by farms and not by the strata defined by the project is not clear. 5. The growth models of the forest species are not evident and the removals in the first years of growth of the plantations are not clear. 6. Annual quantification is not clear, considering the start and end dates of the monitoring period (e.g., year 1 is from 02/11/2017 to 01/11/2018). The duration of the monitoring period would be 4 years and four months, but the ex-post quantification is done for 6 years.		
Project participant response		Date: 23/09/2022
- In the tool ar-am-tool-15-v2.0 (numeral 9 and 10), it is stats that: <i>"9: Note 1. Displacement of an agricultural activity by itself does not result in leakage emission. Leakage emission occurs when the displacement leads to an increase in GHG emissions relative to the GHG emissions attributable to the activity as it exists within the project boundary. [...]"</i> 7. <i>Leakage emission attributable to the displacement of grazing activities under the following conditions is considered insignificant and hence accounted as zero: (a) Animals are displaced to existing grazing land and the total number of animals in the receiving grazing land (displaced and existing) does not exceed the carrying capacity of the grazing land;"</i> For leakage assessment, we consider the displacement of livestock activity outside the project boundaries in possible scenarios of increased GHG emissions, as indicated in number 9 of the tool: (1) opening of new areas for livestock and (2) increasing the number of animals outside the project areas. As indicated in number 10 of the tool, when animals are displaced to existing grazing land and the total number of animals in the receiving grazing land (displaced and existing) does not exceed the carrying capacity of the grazing land, leakage emission is considered insignificant. To corroborate leakage emission accounted as zero, we provide additional evidence that between the first monitoring period of the ARR Horizonte Carbon Project (2017-2020), pasture areas decreased by 5%⁶, and the number of head of cattle reduced by 12%⁷. Hence, it is likely that the animals have been displaced to existing pastures and the total number of animals on the receiving pastures (displaced and existing) has not exceeded the capacity of the pastures. - The minimum cultivation system used by Suzano S.A. helps to balance soil preparation and maintenance of forest residues (litter, dead wood and other residues), in addition, during the harvest operation, the stumps are left in the area and during soil preparation, the soil is lowered,		

⁶ MAPBIOMAS, Coleção 7 (1985-2021). Available at: <<https://mapbiomas.org/>>

⁷ Instituto Brasileiro de Geografia e Estatística. Cidades e Estados – Mato Grosso do Sul. Available at: <<https://www.ibge.gov.br/cidades-e-estados/ms.html>>.

CAR ID	09	Date: 31/08/2022																									
Description of CAR																											
keeping the bellow ground biomass. Sections 4.2.2 and 6.3.2 of PD+MR_ARR Projeto Carbono Horizonte v3.0 have been updated to make this process clearer. - The text of section 4.2.2 of the PD+MR_ARR Projeto Carbono Horizonte v3.0 has been changed to bring clarity and support to Suzano's experience and the use of internal data. - Corrections were made in Project Description version 3. - As described in section 4.2 of Project Description, the growth model used was based on the IPCC 2003. For the estimation section, the values of the parameters applied in the forest growth models were based on values found in Suzano's internal database or on reference values from the literature. For eucalyptus plantations, data on average annual increment, Biomass expansion Factor and wood density came from Suzano's internal database, while for native plantations, the average annual aboveground biomass increment came from the literature. 4) Regarding the forest growth models and removals in the first years of growth, as the basis for calculating removals was the average annual increment of species and plantings did not start on 01/01 of each year, annual removals were calculated considering the day on which such plantings took place. For example, if in 2017 the plantations took place on 11/02 and 12/19, the total removal was multiplied respectively by 16% and 4%, to represent the amount removed from the planting date to 12/31. Likewise, if the 2018 plantings took place on 01/12 and 06/22, the annual removal was multiplied by 97% and 53%, respectively. To make it clearer, we put the period when removals were estimated or monitored in all spreadsheets and in tables of Project Description version 3.																											
Table 9 Net GHG emission reductions or removals <table><tr><th>Year</th><th>Estimated baseline emissions or removals (tCO₂e)</th><th>Estimated project emissions or removals (tCO₂e)</th><th>Estimated leakage emissions (tCO₂e)</th><th>Estimated net GHG emission reductions or removals (tCO₂e)</th></tr><tr><td>02/11/2017 to 31/12/2017</td><td>12,627.08</td><td>17,684.25</td><td></td><td>5,057</td></tr><tr><td>01/01/2018 to 31/12/2018</td><td>13,439.48</td><td>327,732.37</td><td></td><td>314,293</td></tr><tr><td>01/01/2019 to 31/12/2019</td><td>13,439.48</td><td>1,078,168.86</td><td></td><td>1,064,729</td></tr><tr><td>01/01/2020 to 31/12/2020</td><td>18,372.81</td><td>1,856,802.69</td><td></td><td>1,838,430</td></tr></table>			Year	Estimated baseline emissions or removals (tCO ₂ e)	Estimated project emissions or removals (tCO ₂ e)	Estimated leakage emissions (tCO ₂ e)	Estimated net GHG emission reductions or removals (tCO ₂ e)	02/11/2017 to 31/12/2017	12,627.08	17,684.25		5,057	01/01/2018 to 31/12/2018	13,439.48	327,732.37		314,293	01/01/2019 to 31/12/2019	13,439.48	1,078,168.86		1,064,729	01/01/2020 to 31/12/2020	18,372.81	1,856,802.69		1,838,430
Year	Estimated baseline emissions or removals (tCO ₂ e)	Estimated project emissions or removals (tCO ₂ e)	Estimated leakage emissions (tCO ₂ e)	Estimated net GHG emission reductions or removals (tCO ₂ e)																							
02/11/2017 to 31/12/2017	12,627.08	17,684.25		5,057																							
01/01/2018 to 31/12/2018	13,439.48	327,732.37		314,293																							
01/01/2019 to 31/12/2019	13,439.48	1,078,168.86		1,064,729																							
01/01/2020 to 31/12/2020	18,372.81	1,856,802.69		1,838,430																							
The presentation of annual removals during the monitoring period has been updated. The start and end day and month of each subperiod have been specified. For instance, “02/11/2017 to 31/12/2017”, the Removal Per period (t2 - t1) tCO2 eq/period was 5,184.83” This modification was made in the estimation and monitoring calculation sheets and in the Project Description version 3.																											

CAR ID	09	Date: 31/08/2022
--------	----	------------------

Description of CAR

Resume of project removals and emissions

Period	Estimated baseline emissions (tCO2e) - BE	Estimated project removals (tCO2e) - PE	Estimated Leakage emissions (tCO2e)	Estimated net GHG emission reductions or removals (tCO2e)	Removal Per Period - (t2 - t1) tCO2 eq/period	Buffer account	VCUs eligible for Issuance
02/11/2017 to 31/12/2017	12,627.08	17,811.91		5,184.83	5,184.83	519.00	4,665.00
01/01/2018 to 31/12/2018	13,439.48	323,629.29		310,189.81	305,004.98	30,501.00	274,503.00
01/01/2019 to 31/12/2019	13,439.48	719,131.30		705,691.82	395,502.01	39,551.00	355,951.00
01/01/2020 to 31/12/2020	18,372.81	1,295,055.32		1,276,682.51	570,990.69	57,100.00	513,890.00
01/01/2021 to 31/12/2021	25,500.54	1,851,816.59		1,826,316.05	549,633.54	54,964.00	494,669.00
01/01/2022 to 21/2/2022	25,500.54	1,926,411.87		1,900,911.33	74,595.28	7,460.00	67,135.00
TOTAL					1,900,911.33	190,095.00	1,710,813.00

Non permanence Risk assessment result

10%

Documentation provided by project participant

- 1- Land cover by pasture - Mapbiomas - Colletion 7.pdf
- 2- Project Description version 3
- 3- Emission and removals v4. xlsx
- 4- 20220908 - Monitored ER v2.xlsx
- 5- References: alvarenga-etal-2010; bayer-etal-2000; fialho-etal-2018; gatto-etal-2010; miranda-etal-2002; miranda-etal-2014
- 6- attatment 5 - Procedimento _implantação florestal _MS_71796_PO.12.02.001_47_05

DOE assessment

Date: 03/10/2022

1. The project proponent provided sufficient evidence to confirm the assessments fully and adequately of the tool.
2. The project proponent updated the sections 4.2.2 and 6.3.2 of PD+MR_ARR to clarify that belowground biomass is not compromised when aboveground biomass is harvested. However, files attached as supports are not available.

No podemos abrir este archivo

Hubo un problema.

Actualizar

3. The project proponent updated the PD+MR_ARR to bring clarity and support to Suzano's experience and the use of internal data. Besides, the project proponent provided documentary support.
4. The project proponent updated the PD+MR_ARR, in the parameter Ai_bsl, to clarify the definition of the areas by farms.
5. The project proponent clarified the growth model used in section 4.2 and the forest growth models and removals in the first years of growth.
6. The project proponent updated the presentation of annual removals during the monitoring period, indicating the specific day and month in each one.

Project participant response

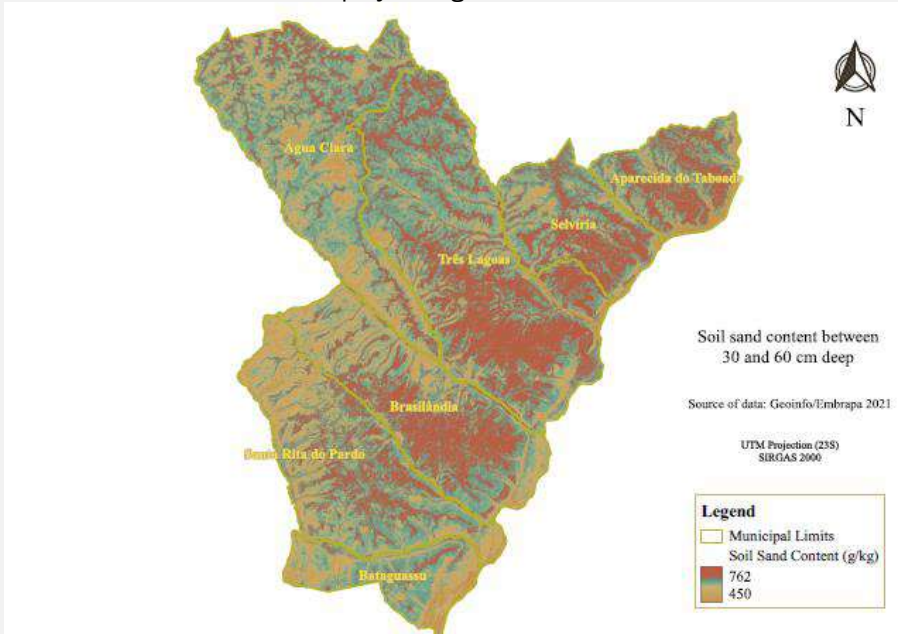
Date: 05/10/2022

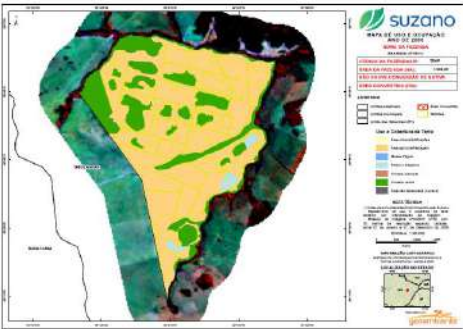
2. Files was shared again with the audit team, now with allowed access. Also, it was shared the links of each literary reference.

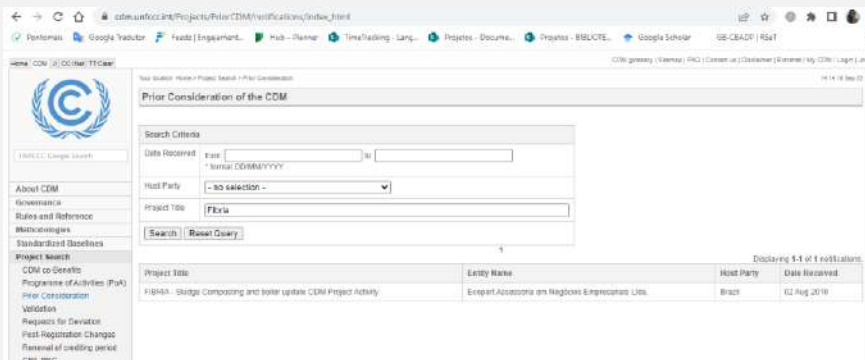
Documentation provided by project participant

- bayer-etal-2000 ([https://www.scielo.br/j/rbcs/a/bm3sc555L6CfWyndYrDJLYh/?format=pdf&lang=pt#:~:text=\(1996\)%20determinaram%20uma%20redu%C3%A7%C3%A3o%20de,solo%20para%20atmosfera%20at%C3%A9%202020.](https://www.scielo.br/j/rbcs/a/bm3sc555L6CfWyndYrDJLYh/?format=pdf&lang=pt#:~:text=(1996)%20determinaram%20uma%20redu%C3%A7%C3%A3o%20de,solo%20para%20atmosfera%20at%C3%A9%202020.;));
- miranda-etal-2002 (https://www.researchgate.net/publication/210341402_Changes_in_carbon_stocks_in_Eucalyptus_globulus_Labill_plantations_induced_by_different_water_and_nutrient_availability);
- fialho-etal-2018 (<https://onlinelibrary.wiley.com/doi/abs/10.1002/ldr.3161>);

CAR ID	09	Date: 31/08/2022
Description of CAR		
- gatto-et al-2010 (https://www.scielo.br/j/rbcs/a/rp8brzwcZP4TY6xkmbrrz6d/?lang=pt); - attatment 5 - Procedimento_implantação florestal_MS_71796_PO.12.02.001_47_05; - alvarenga-et al-2010.		
DOE assessment		Date: 20/10/2022
2. The project proponent updated the supports and attached available files.		
Finding closed successfully		

CAR ID	10	Date: 31/08/2022
Description of CAR		
There is no clear evidence that the sandy areas were an anthropized area prior to project activities and that there has been no affectation of native ecosystems as defined in Section 3.2.4 of the VCS Standard. It is not clear how the analysis identified the area eligible for Native restoration, as it was noted in the field that some polygons had been planted with eucalyptus trees. It is not clear what the monitoring plan will be for the restored areas, which are even less than 0.5 ha. The project proponent is asked to describe the monitoring areas.		
Project participant response		Date: 23/09/2022
We changed the term "sandy areas" to "areas with exposed soil". In the region, due to the high content of sand in the soils, when there is no vegetation cover, the exposed soil resembles "sandbanks" or "sandy areas". According to data from " https://atlasdaspastagens.ufg.br/assets/hotsite/documents/metodos/pt/Qualidade%20de%20Pastagem.pdf " highly degraded pastures are characterized by exposed soil. To facilitate understanding, we have changed the term "sandy areas" to "areas with exposed soil". Below, the map with the sand content in the project region.		
		
5) The evidence that there was no affectation of native ecosystems in the last 10 years is evidenced by the maps of use and land cover, attached in folder CAR 10 – Ponto 1. Below is		

CAR ID	10	Date: 31/08/2022
Description of CAR		
an example of a map of use and cover from 2006 and another from 2022 from a of the Project's farms.   - The Native restoration areas eligible for the project were: areas larger than 0.5 hectares that were classified as "pasture", "Pasture with sparse shrubs and trees" and "exposed soil", according to an area classification made in 2021 by a qualified company for this purpose. Because of this update, section 1.11 "Description of the Project Activity" has been updated with information about the selection of areas to native restoration. - Monitoring plan was updated in section 5.3 of Project Description version 3, including the new stratification of native restoration planting.		
Documentation provided by project participant		
- Land use and land cover in 2006 - Spreadsheet with information about restoration stratum: “CAR 10 – Ponto 2”: <i>DadosBase_220912</i> - Characterization of the areas to be restored folder “CAR 10- Ponto 3”: I. attachment 4 - Relatório final_ETAPA 2 II. Photos of “pasture” and “Pasture with sparse shrubs and trees” classification III. Land use and cover folder: Maps with current land use and land cover of farms. It is possible to identify spatially where each of the strata that will be restored with native is located.		
DOE assessment		Date: 04/10/2022
The project proponent provided documentary evidence that there has been no affectation of native ecosystems at least 10 years before the start date of the project. Also clarified the sand areas (now “areas with exposed soil”). The project proponent updated the PD+MR_ARR, clarifying how it did the analysis to identify the area eligible for Native restoration. The Project proponent updated the PD+MR_ARR, including explanation of the new stratification of native restoration planting.		
Finding closed successfully		

CAR ID	11	Date: 31/08/2022
Description of CAR		
AR-TOOL02: "Combined tool to identify the baseline scenario and demonstrate additionality in A/R CDM project activities" – version 1 1-In step 0 of additionality, section 3.5 of the PD+MR_ARR Horizonte Carbon Project v2.0, it was not possible to corroborate the evidence of the letter of consideration prior to the CDM board at the link: <https://cdm.unfccc.int/Projects/PriorCDM/notifications /index_html>. There is no evidence that the support is based on the documentation that was available to third parties at the beginning of the project activity or before it (numeral 7 of AR-TOOL02). 2-In the step 1a, there is no evidence of the elements of spatial planning information in land use scenarios justifications. 3-In the step 1b, there is not clear how the project complied with said applicable laws. 4-In the step 2b, there is no clear that the project provides transparent and documented evidence and offer conservative interpretations of this documented evidence, as to how it demonstrates the existence and significance of the identified barriers. 5-There is no evidence that barriers related to technologies and skilled labor are demonstrated, the information should include the nature of the company, the organization and its ownership, and previous experience with similar projects in other places, according to the guideline 1 of the annex 13 of CDM. -There is no clear that the proponent confirms the existence of the barrier by using evidence sources listed in the Combined tool to identify the baseline scenario and demonstrate additionality, by demonstrating, for each of the barrier, that in similar circumstances the barriers prevented the implementation of other projects, according to the guideline 3 of the annex 13 of CDM. -The backing supports of the investment barrier analysis are not evident, according to the guideline 6 of the annex 13 of CDM.		
Project participant response		Date: 22/09/2022
1. Link <https://cdm.unfccc.int/Projects/PriorCDM/notifications/index_html> was updated. Evidence that the documentation was available to third parties before the start of the project activity is the publication of the project on the CDM website in the section " prior consideration" to the CDM board.  2. Elements of spatial planning information in land use scenarios was updated in Project Description version 3. According to the Brazilian Forest Code, at least 20% of the property area must be preserved. Then, the implementation of alternative land use scenarios would take place on the other 80% of the areas of the farms.		

CAR ID	11	Date: 31/08/2022
Description of CAR		
3. Adjustments provided under section 1.b of the Project Description, Version 3. Mandatory regulation for all scenarios is to protect Permanent Preservation Areas and Legal Reserve (20% of farm area), according to Brazilian Forest Code (Law 12.651/2012 and its alterations). Although the laws mentioned above are applicable, there are neither laws nor regulations that prohibit any of the identified alternative land use scenarios since the properties have undergone all necessary environmental compliance procedures, such as the declaration of Legal Reserve and Permanent Protection areas. Hence, all scenarios are in accordance with applicable laws and regulations and would not be prevented from implementation. 4. The basis that supports the establishment of barriers comes from: • Written documentation of independent expert judgments from agriculture, forestry and other land-use related Government / Non-Government bodies or individual experts, educational institutions (e.g. universities, technical schools, training centres), professional associations and others. • Relevant (sectoral) studies or surveys (e.g. market surveys, technology studies, etc) undertaken by universities, research institutions, associations, companies, bilateral/multilateral institutions, etc; • Relevant statistical data from national or international statistics. Now, all information on barrier's support (step 2a) is referenced on Project Description version 3. However, It is important to note that the methodology states: <i>"The barriers should not be specific for the project participants, but should apply to the proposed A/R CDM project activity as such, even if similar project developers would have developed the project activity."</i> 5. Adjustments were made in the Project Description version 3 to make it clear that the technological barriers and skilled labor that prevent scenario 02 (Afforestation of the land within the limits of the Project carried out without registration as an AFOLU VCS project activity) do not apply in the current internal context of Suzano S.A., but in the context of the activity: large-scale Eucalyptus plantation. For these adjustments, we followed the AR-TOOL02's guidance: "The barriers should not be specific for the project participants but should apply to the proposed A/R CDM project activity as such, even if similar project developers would have developed the project activity." The evidence used to demonstrate additionality was: • Written documentation of independent expert judgments from agriculture, forestry and other land-use related Government / Non-Government bodies or individual experts, educational institutions (e.g. universities, technical schools, training centres), professional associations and others. • Relevant (sectoral) studies or surveys (e.g. market surveys, technology studies, etc) undertaken by universities, research institutions, associations, companies, bilateral/multilateral institutions, etc; • Relevant statistical data from national or international statistics. 6. We have made adjustments to direct the information cited to the official sources (evidence) on Project Description version 3. However, It is important to note that the methodology states: <i>"The barriers should not be specific for the project participants, but should apply to the proposed A/R CDM project activity as such, even if similar project developers would have developed the project activity."</i> 7. Support brackets for the investment barrier were attached in VVB shared folder. • Suzano's internal social development planning for 2022		

CAR ID	11	Date: 31/08/2022
Description of CAR		
Planning of areas to be restored by Suzano extrated by internal Suzano's system. None present in the project are on the system with intent to restore. Both do not include the activities that will be implemented with the Horizonte Project.		
Documentation provided by project participant		
- Project Description version 3 - COMPLEXO SOJA - Caracterização e Desafios Tecnológicos - almeida-2019 - ortigoza-et al-2016 - renato-lopes - Diagnóstico_e_desafios_da_agricultura_brasileira - oliveira-et al-2019 - PPT 4_Apresentação do Planejamento dos Programas e Projetos 2022 (1) - Semana de Planejamento 2022 - Equipe Desenvolvimento Social MS (3) (2)		
DOE assessment		Date: 04/10/2022
1. The project proponent updated the link to corroborate the evidence of the letter of consideration prior to the CDM board. OK 2. The project proponent included elements of spatial planning information in land use scenarios to justify them. OK 3. The project proponent updated the PD+MR_ARR and clarified how the project complied with said applicable laws. OK 4. The project proponent updated the PD+MR_ARR including several secondary information to support the barriers. OK 5. The project proponent updated the PD+MR_ARR and clarified it followed the AR-TOOL02's guidance to support technological barriers and skilled labor that prevent scenario 02 do not apply in the current internal context of Suzano S.A. OK The project proponent updated the PD+MR_ARR including several secondary information to support all barriers identified. OK The project proponent attached documentary evidence to support of the investment barrier. OK		
Finding closed successfully		

CAR ID	12	Date: 31/08/2022
Description of CAR		
In the non-permanence-risk report, there is no evidence of the supports to demonstrate that the project is protected by legally binding commitment to continue management practices that protect the carbon stocks over the project crediting period, in compliance with the numeral 3.8.4 of the VCS Standard.		
Project participant response		Date: 22/09/2022
Although the project is not protected by legally binding commitments on the permanence of carbon reserves for at least 30 years, Suzano S.A has a consolidated market for almost 100 years (https://www.suzano.com.br/a-suzano/historia/) and sees the registration and publication of the project as a way to reinforce its intention and commitment to the development and implementation of the project. In addition, the growing demand for cellulose, reinforces the permanence of project activities.		
Documentation provided by project participant		

CAR ID	12	Date: 31/08/2022
3. 20220920 - Non-Permanence-Risk-Report - pós finds - track changes		
4. Reference: rocha-et al-2019		
DOE assessment		Date: 04/10/2022
The project proponent provided a link to demonstrate Suzano S.A has a consolidated market for almost 100 years; the link mentioned the story of the company and its consistency with the project activities.		
Finding closed successfully		

CAR ID	13	Date: 31/08/2022
Description of CAR		
In the section 4.1 and 6.2 of PD&MR, there is no clear the evidence of the legal Cutting of Isolated Native Trees.		
Project participant response		Date: 22/09/2022
Documentation of the legal Cutting of Isolated Native Trees has been attached in the shared folder.		
Documentation provided by project participant		
The documentation of “ENVIRONMENTAL AUTHORIZATION TO CUT ISOLATED NATIVE TREES IN CONVERTED AREAS FOR ALTERNATIVE LAND USE (or in Portuguese “AUTORIZAÇÃO AMBIENTAL PARA CORTE DE ÁRVORES NATIVAS ISOLADAS EM ÁREAS CONVERTIDAS PARA USO ALTERNATIVO DO SOLO” emitted by IMASUL.		
DOE assessment		Date: 04/10/2022
The project proponent provided documentary evidence of the legal Cutting of Isolated Native Trees.		
Finding closed successfully		

APPENDIX 3: SAMPLING PLAN

Stratum	Total timber volume m ³	Vol. Rel. %	Vol. Rel. sum %	Error%	Sample
Stratum 1	647.09	27.3	27.3	4%	3
Stratum 2	422.56	17.9	45.2	4%	2
Stratum 3	2.23	0.1	45.3		1
Stratum 4	364.69	15.4	60.7	6%	3
Stratum 5	874.96	37.0	97.7	2%	7
Stratum 6	54.43	2.3	100.0	7%	1
Total	2365.95				

Stratum 6		Sampling	
Plot	Vol. m³		
T1CI01-1	1.87		
T1CI01-2	1.83		
T1CI01-3	1.95		
T1CI01-4	2.18		
T1CI01-5	1.97		
T1CI01-6	2.53		
T1CI01-7	1.84		
T1CI01-8	2.06		
T1CI02-1	1.66		
T1CI02-2	2.81		
T1CI02-3	1.48		
T1CI02-4	1.63		
T1CI02-5	1.78		
T1CI02-6	2.00		
T1CI03-1	2.03		
T2BC10-1	1.22		
T2BC10-2	1.21		
T8AB20-1	2.73		
T8AB20-2	2.17		
T8AB20-3	1.83		
T8AB20-4	2.46		
T8AB26-2	2.02		
T8AB26-3	2.22		
T8AB26-4	2.43		
T8AB26-5	2.59		
T8AB26-6	1.98		

N	27
T-student ©	1.706
Samplig	1
sampling statistician	
Average (m3/strata	2.02
Standard deviation (m3)	0.40
Coefficient of variation (%)	20%
Standard error	0.08
Absolute sampling error	0.13
upper confidence limit (m3)	2.15
Confidence limit Lower (m3)	1.88
SAMPLING ERROR (%)	7%

Stratum 6		Sampling
T8AT36-1	1.95	

Stratum 4		Sampling	
Plot	Vol. m³		
T1A058-1	4.96		
T1A058-2	5.50		
T1BU01-1	4.03		
T1BU01-2	4.94		
T1BU01-3	5.07		
T1BU01-4	6.19		
T1BU01-5	4.60		
T1BU01-6	3.82		
T1BU02-1	6.28		
T1BU02-2	6.58		
T1BU02-3	5.73		
T1BU02-4	6.60		
T1BU02-5	5.57		
T1BU03-1	5.79		
T1BU03-2	7.69		
T1BU03-3	6.91		
T1BU04-1	5.88		
T1BU04-2	5.86		
T1BU04-3	6.59		
T1BU04-4	7.63		
T1BU04-5	6.09		
T1BU05-1	5.10		
T1BU06-1	6.37		
T1BU06-2	6.74		
T1BU07-1	7.38		
T1BU07-2	5.68		
T1BU07-3	7.61		
T1BU07-4	5.28		
T1BU07-5	5.06		
T1BU08-1	6.58		
T1BU08-2	7.97		
T1BU08-3	7.64		
T1BU08-4	5.85		
T1BU08-5	8.45		
T1BU09-1	4.72		
T1BU09-2	6.56		
T1BU09-3	5.56		

N	69
T-student ©	1.668
Samplig	3
Average (m3/strata	5.29
Standard deviation (m3)	1.67
Coefficient of variation (%)	32%
Standard error	0.20
Absolute sampling error	0.33
upper confidence limit (m3)	5.62
Confidence limit Lower (m3)	4.95
SAMPLING ERROR (%)	6%

Stratum 4		Sampling	
T1BU09-4	4.35		
T1BU09-5	7.77		
T1BU09-6	7.55		
T1BU09-7	8.65		
T3AW01-1	5.09		
T3AW01-2	5.26		
T3AW02-5	4.34		
T3AW05-1	5.74		
T3AW05-2	4.93		
T3AW06-1	2.91		
T3AW06-2	3.33		
T6A008-1	4.19		
T6A008-2	4.26		
T6A008-3	3.17		
T6A008-4	6.04		
T6A008-5	6.74		
T6A008-6	6.25		
T6A008-7	6.52		
T6A010-1	3.70		
T6A010-2	2.94		
T6A010-3	3.15		
T6A010-4	3.58		
T6A010-5	3.97		
T6A014-1	2.64		
T6A014-2	2.61		
T6A014-3	4.32		
T6A014-4	2.95		
T6A014-5	2.68		
T6A022-999	2.81		
T6A023-1	2.48		
T6A023-2	1.71		
T8AU07-999	3.21		
Sum	364.69		

Stratum 2		Sampling	
Plot	Vol. m ³	N	68
T2A922-1	6.02	T-student ©	1.668
T2A927-1	6.94	Samplig	2
T2A928-1	6.72	sampling statistician	
T2A930-1	6.65	Average (m3/strata	6.21
T2A937-1	5.38	Standard deviation (m3)	1.36

Stratum 2		Sampling	
T2A938-1	6.70	Coefficient of variation (%)	22%
T2A942-1	6.32	Standard error	0.16
T2AA01-1	6.12	Absolute sampling error	0.27
T2AA01-2	5.55	upper confidence limit (m3)	6.49
T2AA02-1	6.93	Confidence limit Lower (m3)	5.94
T2AA03-1	5.06	SAMPLING ERROR (%)	4%
T2AA04-1	5.89		
T2AA04-2	4.90		
T2AA05-1	5.42		
T2AA05-2	5.31		
T2AA06-1	5.41		
T2AA07-1	5.37		
T2AA08-1	5.81		
T2AA09-1	7.63		
T2AA10-1	5.21		
T2AA10-2	5.56		
T2AA11-1	4.70		
T2AA11-2	5.78		
T2AA12-1	6.09		
T2AA12-2	5.22		
T2AA13-1	5.92		
T2AA14-1	6.02		
T2AA14-2	6.23		
T2AL01-51	2.27		
T2AL02-1	5.50		
T2AL03-1	6.35		
T2AL03-2	7.84		
T2AL05-1	6.90		
T2AL05-2	6.39		
T2AL06-1	6.89		
T2AL07-1	7.55		
T2AL08-1	9.59		
T2AL09-34	4.11		
T2AL10-1	8.98		
T2AL11-1	7.05		
T2AL11-2	8.04		
T2AL12-1	6.80		
T2AL13-1	9.24		
T2AL14-1	7.07		
T2AL15-1	6.58		
T2AL16-1	7.35		
T2AL17-999	7.78		
T2AL18-1	6.53		

Stratum 2		Sampling	
T2AL19-1	6.65		
T2AL21-1	6.06		
T2AL22-1	7.88		
T2AL24-1	7.06		
T2AL26-1	6.63		
T2AL26-2	6.29		
T2AL27-1	9.25		
T2AL28-6	3.52		
T2AL29-1	7.05		
T2AL30-999	6.81		
T2AL31-999	6.38		
T6A102-5	4.17		
T6A103-1	5.75		
T6B901-10	5.04		
T6B902-1	7.507954		
T6B903-1	5.005706		
T6B903-2	5.189322		
T6B904-999	4.194861		
T6B905-1	3.43724		
T6B906-1	5.047711		

Stratum 1		Sampling	
Plot	Vol. m³		
T2A901-999	6.41		
T2A902-999	7.73		
T2A903-1	5.09		
T2A904-999	6.77		
T2A905-999	6.96		
T2A906-1	5.76		
T2A907-1	6.19		
T2A908-1	5.28		
T2A909-1	5.04		
T2A910-1	6.03		
T2A911-1	6.35		
T2A912-999	7.97		
T2A913-999	9.29		
T2A914-999	7.32		
T2A915-999	7.21		
T2A918-1	5.98		
T2A919-999	7.31		

N	103
T-student ©	1.660
Samplig	3
sampling statistician	
Average (m3/strata	6.28
Standard deviation (m3)	1.36
Coefficient of variation (%)	22%
Standard error	0.13
Absolute sampling error	0.22
upper confidence limit (m3)	6.51
Confidence limit Lower (m3)	6.06
SAMPLING ERROR (%)	4%

Stratum 1		Sampling	
T2A921-1	5.62		
T2A923-1	6.99		
T2A924-1	6.75		
T2A925-1	7.70		
T2A929-1	7.66		
T2A931-1	6.95		
T2A932-1	5.09		
T2A933-1	5.79		
T2A934-1	7.22		
T2A935-1	8.96		
T2A940-1	7.92		
T2A941-1	4.04		
T2A944-1	6.47		
T2A946-1	6.22		
T2A948-1	5.68		
T2A949-1	5.87		
T2A950-1	6.25		
T2A951-1	5.69		
T2A951-2	4.91		
T2A954-1	5.31		
T2A954-2	5.20		
T2A955-1	5.58		
T2A956-999	5.68		
T2A957-1	6.64		
T5AM06-1	7.72		
T5AM07-1	6.27		
T5AM08-1	7.99		
T5AM11-1	8.61		
T5AM12-1	6.16		
T5AM14-1	5.33		
T5AM17-1	7.24		
T5AM18-1	6.70		
T5AM20-1	6.59		
T5AM22-1	6.77		
T5AM23-1	6.37		
T5AM25-1	6.63		
T5AM25-2	5.58		
T5AM26-1	4.98		
T5AM27-1	6.00		
T5AM27-2	7.01		
T5AN01-1	4.90		

Stratum 1		Sampling	
T5AN03-1	6.88		
T5AN03-2	8.17		
T5AN04-999	6.86		
T5AN05-1	6.84		
T5AN06-1	5.95		
T5AN06-2	4.92		
T5AN07-1	5.44		
T5AN08-1	4.40		
T5AN09-1	6.49		
T5AN10-1	8.84		
T5AN11-1	7.97		
T5AN12-1	6.01		
T5AN13-1	5.72		
T5AN14-1	4.42		
T5AN15-1	6.92		
T5AN16-1	5.86		
T5AN17-1	4.67		
T5AN18-1	7.10		

Stratum 5			
Plot	Vol. m ³	Plot	Vol. m ³
T6A006-1	2.70	T8AB48-2	1.960003
T6A009-1	1.11	T8AB48-3	3.105995
T6A009-2	1.32	T8AB48-4	2.55607
T6A009-3	1.00	T8AB48-5	1.783432
T6A012-1	5.28	T8AB48-6	2.133964
T6A012-2	4.79	T8AB48-7	2.980136
T6A012-3	3.29	T8AB49-1	1.531204
T6A012-4	4.04	T8AB49-2	1.661489
T6A021-1	1.04	T8AB49-3	1.518167
T6A021-2	0.96	T8AB50-1	2.272592
T6A021-3	0.97	T8AB50-2	1.819893
T6A026-1	0.96	T8AB50-3	2.181279
T6A026-2	1.05	T8AB50-4	1.791659
T6A027-1	1.82	T8AB50-5	1.669442
T6A027-2	1.85	T8AB51-1	2.52453
T6A027-3	1.65	T8AB51-2	1.644414
T6A027-4	1.36	T8AB51-3	1.587351
T6A027-5	0.67	T8AB51-4	1.666655
T6A029-1	1.25	T8AB51-5	1.947002
T6A029-2	0.82	T8AB51-6	1.808672

Stratum 5			
Plot	Vol. m ³	Plot	Vol. m ³
T6A029-3	0.73	T8AB52-1	1.828762
T8AB01-1	1.17	T8AB52-2	2.289712
T8AB01-2	1.31	T8AB52-3	1.680294
T8AB02-1	1.86	T8AB52-4	2.19612
T8AB02-2	1.99	T8AB52-5	2.648672
T8AB02-3	1.72	T8AB52-6	2.260475
T8AB02-4	1.57	T8AB52-7	2.611565
T8AB02-5	1.57	T8AB52-8	2.155925
T8AB02-6	1.18	T8AB53-1	0.613343
T8AB02-7	1.51	T8AB53-2	0.883223
T8AB03-999	1.48	T8AB53-3	1.063378
T8AB04-1	1.08	T8AB53-4	2.331913
T8AB04-2	1.14	T8AB53-5	3.03311
T8AB05-1	2.55	T8AB54-1	2.744508
T8AB05-2	1.90	T8AB54-2	2.770079
T8AB05-3	1.59	T8AB54-3	1.709288
T8AB05-4	1.29	T8AB54-4	1.841682
T8AB05-5	1.55	T8AB54-5	1.835926
T8AB05-6	1.42	T8AB54-6	1.435722
T8AB05-7	1.87	T8AB55-1	1.90672
T8AB05-8	1.73	T8AB55-2	2.050332
T8AB06-1	1.29	T8AB55-3	2.323679
T8AB06-2	1.38	T8AB55-4	1.947095
T8AB06-3	1.24	T8AB55-5	2.022452
T8AB06-4	1.49	T8AB56-1	1.841262
T8AB06-5	2.70	T8AB56-2	2.157698
T8AB07-1	2.12	T8AB56-3	1.875596
T8AB07-2	1.61	T8AB56-4	2.094594
T8AB07-3	2.41	T8AB56-5	1.863804
T8AB07-4	1.79	T8AB56-6	2.183988
T8AB07-5	1.26	T8AB57-1	2.407603
T8AB08-1	2.32	T8AB57-2	1.87774
T8AB08-2	2.22	T8AB57-3	2.229452
T8AB08-3	1.96	T8AB58-1	2.270341
T8AB09-1	2.00	T8AB58-2	2.030463
T8AB09-2	2.77	T8AB58-3	2.328424
T8AB09-3	1.01	T8AB58-4	2.362836
T8AB09-4	1.34	T8AB58-5	2.206683
T8AB09-5	2.03	T8AB59-1	2.398324
T8AB09-6	1.29	T8AB59-2	2.107975
T8AB10-1	1.49	T8AB59-3	1.984048
T8AB10-2	2.82	T8AB60-1	1.614985

Stratum 5			
Plot	Vol. m ³	Plot	Vol. m ³
T8AB10-3	1.31	T8AB60-2	1.915519
T8AB10-4	2.53	T8AB60-3	2.144011
T8AB10-5	1.51	T8AB60-4	1.595645
T8AB10-6	1.04	T8AB60-5	2.050016
T8AB11-1	1.487145	T8AB60-6	1.988558
T8AB11-2	1.81865	T8AB60-7	1.752897
T8AB11-3	1.678886	T8AB61-1	1.807755
T8AB11-4	1.773149	T8AB61-2	1.992769
T8AB11-5	1.368159	T8AB61-3	2.235669
T8AB11-6	1.493825	T8AB61-4	1.908802
T8AB11-7	1.369367	T8AB61-5	2.024698
T8AB12-1	1.83489	T8AB62-1	1.783879
T8AB12-2	2.860223	T8AB62-2	1.349391
T8AB12-3	2.46503	T8AB62-3	1.397442
T8AB12-4	2.400852	T8AB62-4	1.723324
T8AB13-1	1.666877	T8AB62-5	2.100902
T8AB13-2	1.652156	T8AB63-1	1.860229
T8AB13-3	1.618995	T8AB63-2	1.920989
T8AB13-4	1.722135	T8AB63-3	1.564408
T8AB13-5	1.02888	T8AB63-4	1.367853
T8AB13-6	1.594764	T8AB64-1	1.564131
T8AB14-1	1.651377	T8AB64-2	1.296769
T8AB14-2	1.791731	T8AB64-3	1.397612
T8AB14-3	1.397475	T8AB65-1	2.320172
T8AB14-4	0.934986	T8AB65-2	2.037506
T8AB14-5	0.886304	T8AB65-3	1.999556
T8AB15-1	2.704032	T8AB65-4	2.206136
T8AB15-2	2.34423	T8AB65-5	2.117887
T8AB15-3	2.293247	T8AB66-1	1.979109
T8AB15-4	1.94536	T8AB66-2	1.384758
T8AB15-5	1.812305	T8AB66-3	1.664813
T8AB15-6	1.448665	T8AB66-4	1.951196
T8AB15-7	1.551618	T8AB66-5	1.831268
T8AB16-1	1.114096	T8AB66-6	2.082261
T8AB16-2	1.145574	T8AB67-1	2.289502
T8AB16-3	1.645246	T8AB67-2	2.981962
T8AB16-4	1.146478	T8AB67-3	2.25837
T8AB16-5	1.147364	T8AB67-4	2.219862
T8AB16-6	1.354328	T8AB67-5	1.801237
T8AB16-7	1.431747	T8AB68-1	1.840288
T8AB16-8	1.407093	T8AB68-2	1.73842
T8AB17-999	2.94349	T8AB68-3	2.675845

Stratum 5			
Plot	Vol. m ³	Plot	Vol. m ³
T8AB18-1	1.374117	T8AB68-4	3.611426
T8AB18-2	1.567636	T8AB68-5	1.989299
T8AB18-3	1.661368	T8AB69-1	1.779895
T8AB19-1	1.788175	T8AB69-2	2.436742
T8AB19-2	2.124637	T8AB69-3	2.379223
T8AB19-3	2.321734	T8AB69-4	1.931972
T8AB19-4	2.47957	T8AB69-5	2.182466
T8AB22-1	2.181258	T8AB69-6	2.223176
T8AB22-2	1.646381	T8AB69-7	2.33223
T8AB22-3	2.187803	T8AB70-1	2.010916
T8AB22-4	2.277832	T8AB70-2	2.027811
T8AB23-1	1.7129	T8AB70-3	1.562779
T8AB23-2	1.991166	T8AB70-4	1.931635
T8AB23-3	1.332838	T8AB70-5	1.762696
T8AB23-4	1.816098	T8AB70-6	1.718089
T8AB23-5	1.673333	T8AB71-999	4.475719
T8AB23-6	2.191269	T8AB72-1	1.437206
T8AB23-7	1.986867	T8AB72-2	1.304216
T8AB24-1	1.426158	T8AB72-3	1.770034
T8AB24-2	1.474931	T8AB72-4	1.307864
T8AB24-3	1.052887	T8AB72-5	1.542625
T8AB24-4	1.404417	T8AB72-6	1.633108
T8AB25-1	1.987039	T8AB73-1	2.755529
T8AB25-2	1.739352	T8AB73-2	2.797376
T8AB25-3	2.545075	T8AB73-3	2.138985
T8AB27-1	1.291491	T8AB73-4	2.069727
T8AB27-2	0.868961	T8AB73-5	2.033687
T8AB27-3	1.621351	T8AB74-1	1.25172
T8AB27-4	1.371955	T8AB74-2	1.185499
T8AB27-5	2.524436	T8AB74-3	1.200721
T8AB28-1	1.534474	T8AB74-4	1.350237
T8AB28-2	1.322721	T8AB74-5	1.391971
T8AB28-3	1.232545	T8AB74-6	1.573544
T8AB28-4	0.776363	T8AB74-7	1.845046
T8AB28-5	1.112217	T8AB74-8	1.432963
T8AB28-6	1.182998	T8AB74-9	1.484223
T8AB29-1	1.116331	T8AB75-1	1.26617
T8AB29-2	1.281248	T8AB75-2	1.159734
T8AB29-3	1.273188	T8AB75-3	1.604186
T8AB29-4	1.617448	T8AB75-4	1.710205
T8AB29-5	1.775242	T8AB76-1	2.402774
T8AB29-6	1.946337	T8AB76-2	0.878877

Stratum 5			
Plot	Vol. m ³	Plot	Vol. m ³
T8AB29-7	1.530415	T8AB76-3	1.502826
T8AB30-1	1.628307	T8AB76-4	1.756503
T8AB30-2	1.482987	T8AB77-1	1.76368
T8AB30-3	1.819095	T8AB77-2	1.601428
T8AB30-4	1.384477	T8AB77-3	2.248928
T8AB30-5	1.509035	T8AB77-4	1.759037
T8AB30-6	1.217963	T8AB77-5	1.590645
T8AB30-7	1.512211	T8AB78-1	2.120037
T8AB30-8	1.733489	T8AB78-2	1.904518
T8AB31-1	1.344173	T8AB78-3	2.660979
T8AB31-2	1.821995	T8AB78-4	2.674614
T8AB31-3	1.520219	T8AB78-5	2.293147
T8AB32-1	1.398873	T8AB78-6	2.838219
T8AB32-2	1.499918	T8AB79-1	1.737569
T8AB32-3	1.224424	T8AB79-2	1.80606
T8AB32-4	0.943436	T8AB79-3	1.559687
T8AB32-5	1.023543	T8AB79-4	1.522914
T8AB32-6	0.8496	T8AB79-5	2.051273
T8AB33-1	1.965063	T8AB79-6	1.638384
T8AB33-2	2.490485	T8AB79-7	2.174245
T8AB33-3	2.781312	T8AB79-8	2.016319
T8AB33-4	1.404017	T8AB80-1	1.577384
T8AB33-5	1.932162	T8AB80-2	1.439186
T8AB33-6	2.265473	T8AB80-3	1.405409
T8AB34-1	1.398057	T8AB80-4	1.357371
T8AB34-2	2.2069	T8AB81-1	2.894214
T8AB35-1	1.352355	T8AB81-2	2.284869
T8AB35-2	1.463265	T8AB81-3	2.314705
T8AB35-3	1.262823	T8AB81-4	2.11333
T8AB35-4	1.135558	T8AB81-5	2.765038
T8AB35-5	1.78706	T8AB81-6	2.218338
T8AB35-6	1.464519	T8AB81-7	2.389724
T8AB35-7	1.326019	T8AB81-8	3.061704
T8AB35-8	1.551581	T8AB82-1	1.729494
T8AB36-1	1.703356	T8AB82-2	1.592877
T8AB36-2	1.522449	T8AB82-3	1.587742
T8AB36-3	1.358908	T8AB82-4	1.975709
T8AB36-4	1.622862	T8AB82-5	1.49122
T8AB36-5	1.878248	T8AB83-1	1.681447
T8AB36-6	2.839188	T8AB83-2	1.260802
T8AB37-1	1.63045	T8AB83-3	1.389567
T8AB37-2	1.463407	T8AB83-4	1.534475

Stratum 5			
Plot	Vol. m ³	Plot	Vol. m ³
T8AB37-3	0.930231	T8AB83-5	1.680805
T8AB37-4	0.910072	T8AB84-1	1.834715
T8AB37-5	1.49882	T8AB84-2	1.805925
T8AB38-1	1.595881	T8AB84-3	1.981432
T8AB38-2	0.840032	T8AB84-4	1.789052
T8AB39-1	1.821558	T8AB84-5	2.06297
T8AB39-2	1.594785	T8AB84-6	2.074794
T8AB39-3	1.54986	T8AB84-7	2.080536
T8AB39-4	1.719927	T8AB85-1	1.621613
T8AB39-5	1.97758	T8AB85-2	1.721488
T8AB39-6	2.907741	T8AB85-3	2.004056
T8AB40-1	1.556396	T8AB85-4	2.084659
T8AB40-2	1.850376	T8AB85-5	2.194887
T8AB40-3	1.702564	T8AB85-6	1.867586
T8AB40-4	1.711491	T8AB85-7	2.054596
T8AB40-5	1.075624	T8AB85-8	1.37477
T8AB41-999	3.160553	T8AB86-1	1.837212
T8AB42-1	1.741036	T8AB86-2	2.347747
T8AB42-2	1.789567	T8AB86-3	1.933901
T8AB42-3	1.638346	T8AB86-4	1.699335
T8AB42-4	2.115793	T8AB86-5	2.368931
T8AB43-1	1.705297	T8AB86-6	2.054289
T8AB43-2	1.902137	T8AB87-1	2.448636
T8AB43-3	2.294372	T8AB87-2	2.276469
T8AB43-4	1.883147	T8AB87-3	2.732786
T8AB43-5	2.22037	T8AB87-4	2.511444
T8AB43-6	2.185112	T8AB87-5	2.429563
T8AB43-7	1.997944	T8AB88-1	2.261213
T8AB43-8	2.78182	T8AB88-2	2.296815
T8AB44-1	2.061506	T8AB88-3	1.610511
T8AB44-2	2.014906	T8AB88-4	2.151256
T8AB44-3	1.934898	T8AB88-5	1.949088
T8AB44-4	2.294926	T8AB88-6	2.005595
T8AB44-5	2.079266	T8AB88-7	1.948204
T8AB44-6	1.611924	T8AB89-1	1.638124
T8AB44-7	1.636724	T8AB89-2	1.679908
T8AB45-1	1.323359	T8AB89-3	1.86303
T8AB45-2	0.76435	T8AB89-4	1.879199
T8AB45-3	0.856535	T8AB89-5	1.96212
T8AB46-1	1.822065	T8AB89-6	1.663946
T8AB46-2	1.986301	T8AB89-7	1.924802
T8AB46-3	1.730832	T8AB90-1	2.028411

Stratum 5			
Plot	Vol. m ³	Plot	Vol. m ³
T8AB46-4	1.984601	T8AB90-2	1.72539
T8AB46-5	2.065123	T8AB90-3	1.412949
T8AB46-6	1.804996	T8AB90-4	1.701486
T8AB47-1	0.914106	T8AB90-5	1.241327
T8AB47-2	1.209848	T8AB90-6	1.761584
T8AB47-3	1.155031	T8AB90-7	1.801527
T8AB47-4	1.244841	T8AB91-1	1.784983
T8AB47-5	1.883233	T8AB91-2	2.146179
T8AB47-6	0.840309	T8AB91-3	2.350349
T8AB48-1	2.060752	T8AB92-1	2.884735
Sampling			
Población (número total de parcelas)		480	
T-student ©		1.648	
Muestra		7	
Estadígrafo de muestreo			
Media (m3/estrato)		1.82	
Desviación estándar (m3)		0.56	
Coeficiente de variación (%)		31%	
Error estándar		0.03	
Error de muestreo absoluto		0.04	
Límite de confianza superior (m3)		1.86	
Límite de confianza Inferior (m3)		1.78	
ERROR DE MUESTREO (%)		2%	