VALIDATION-VERIFICATION REPORT

JURUÁ REDD+ PROJECT

Document Prepared by Earthood Services Limited

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Summary:

The Jurua REDD+ Project, registered under the VCS Project ID 3430[1] , is located in the region of Alto Jurua, between the municipalities of Cruzeiro do Sul and Porto Walter, in the Acre State in Brazil. It started on 31-July-2020 with a project area of 24,076 hectares. The purpose of the project is to reduce GHG emissions from activities regarding to conserve the forest and its natural resources, as well as to maintain carbon stocks, through activities that promote the reduction of deforestation in the region.

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 Reducing Emissions from Deforestation and Degradation (REDD) - Avoid Unplanned Deforestation (AUD) category.

Earthood Services Limited, 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 (VM0015 – Methodology for Unplanned Avoided Deforestation, version 1.1), and other applicable references; and also, to verify the implementation of project activities during the monitoring period from 31/July/2020 to 30/July/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 29 requests for clarifications (CL) and 25 requests for corrective action (CAR), which were addressed by the project proponent.

[1] https://registry.verra.org/app/projectDetail/VCS/3430

Summary:

The document review, interviews, and site visit allowed EARTHOOD 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 emission reductions.

The Jurua REDD+ Project, as described in the Project Description and Monitoring Report Document , meets all relevant requirements of the VCS standard and the methodology has been applied correctly. Implementation of the grouped project will result in direct forest conservation attributable to project activities and will result in an estimated average annual reduction of 16,181 tCO2e and a total of 413,927 tCO2e (not discounting buffer) in GHG emission reductions over 30 years. In addition, the project generates net GHG reductions of 14,362 tCO2e and 12,747 tradable credits (VCUs) applying a VCS credit buffer of 11% for the monitoring period from 31/July/2020 to 30/July/2022.

CONTENTS

1 INTRODUCTION

1.1 Objective

The purpose of the validation and verification process by Earthood Services Limited is to provide an independent assessment of the project against all criteria defined by the Verified Carbon Standard (VCS), to determine whether the project, including the project activity, design, implementation of the project, methodology applied and all documentation related to the development and implementation of the project, is compliant with the VCS Standard and whether is in accordance with all rules and requirements applicable to 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 reductions.
- 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.
- The project demonstrates that the implemented project activities contribute to sustainable development as defined by the United Nations Sustainable Development Goals (SDGs).

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 v4.5
- VCS Program Guide v4.4
- AFOLU Non-Permanence Risk Tool v4.0

- VM0015 – Methodology for Unplanned Avoided Deforestation, version 1.1.

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

1.3 Reasonableness of Assumptions and 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 assurance, in accordance with the provisions of the applicable requirements. Likewise, materiality is less than 5% for the project.

EARTHOOD 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 reductions.

1.4 Summary Description of the Project

Table 1 Summary of the project

Project name	Jurua REDD+ Project
Sectoral scope	14 - Afforestation, Forestation and Other Land Use
AFOLU Project category	Reducing Emissions from Deforestation and Degradation (REDD) - Avoid Unplanned Deforestation (AUD)
Project Proponent	Biofílica Ambipar Environmental Investment S/A and Amazônia Agroindústria EIRELI
Baseline and monitoring methodology	VM0015 – Methodology for Unplanned Avoided Deforestation, version 1.1
Location of the project activity	between the municipalities of Cruzeiro do Sul and Porto Walter, in the Acre State in Brazil
Area	24,076 hectares
Project crediting period	30 years From 31/July/2020 to 30/July/2050
Monitoring period	from 31/July/2020 to 30/July/2022
Validated reductions in the project lifetime	413,927 tCO2e
Verified reductions in the monitoring period	14,362 tCO2e

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 and verification report with conclusions. The validation and verification process are conducted in accordance with the criteria established by the VCS standard. The validation and verification process included the following:

- Contract with the project proponent for the scope and appointment of validation and verification team and technical review team.
- Completeness check of Project Description and Monitoring Report.
- Desk review of conformance to VCS rules, Project Description Document and Monitoring Report by the validation and verification team and planning of onsite audit (site inspection to confirm project boundaries, check project description, implementation, 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 and monitoring report, confirm stable forest area and interviews with stakeholders).
- Reporting and closure of findings (CARs/CLs/FARs) and preparation of draft validation and verification report.
- Independent technical review of the project documentation to confirm if the internal procedures established and implemented by EARTHOOD 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 audit team.
- Reporting and closure of technical review comments/findings and final approval for the decision made.
- Issuance of the draft of validation and verification report.
- 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 (see Appendix 3: SAMPLING). Based on the selection approach, the selected sample design was communicated to the project proponent prior to the on-site visit so that planning and logistics would be possible for the verification of the flora plots. The sampling plan was communicated through virtual means and audit plan. In addition, on-site inspections, and interviews with stakeholders, were scheduled[2]. 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.

The lead auditor has extensive expertise in forestry, social, ecological, and biodiversity issues in the region, speaks English and German as foreign languages, Spanish as a native language, and Portuguese, 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 50 carbon projects in Brazil, Colombia, and Peru. Currently living in Brazil.

Marcelo Sebben, team leader as of 11/09/2024 is qualified by Earthood in Validation and Verification of Clean Development Mechanism Requirements (CDM projects) and other voluntary schemes as VCS, CCB, GCC and GS. He has experience of working in carbon projects, including but not limited to CDM, VCS, GS and GCC projects of more than 13 years for various sectors and methodologies. He attained his graduation in Chemical Engineering and master's degree in Sustainable Energy Systems. He has been qualified as per the evaluation process of EARTHOOD for competency for CDM/VCS/GS. Thus, he has the relevant competence and work experience.

Ana Beatriz Tukada de Melo: native Brazilian, and therefore a native Portuguese speaker, understands the local culture and is familiar with local legislation. Technical and Local Expert, Forestry Engineer, MBA Social and Environmental Business Management, qualified as lead auditor under ISO 14001 standard. More than 9 years of professional experience in certified FSC and CERFLOR Sustainable Forest Management Plan of native forests and planted forests and with forest restoration in Brazil. Specialization in FSC Chain of Custody (2015) and Reduced Impact Exploitation (2016). She has relevant social, cultural, ecological, and biodiversity expertise in the diverse biomes of Brazil.

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

Table 2 Audit team

Name	Role
Bibiana Duarte	Lead Auditor/Sectorial Specialist/technical expert
Marcelo Sebben	Lead Auditor as of 11/09/2024
Ana Beatriz Tukada	TA Expert

Table 3 Technical reviewer

Name	Role
Shreya Garg	Reviewer
Shifali Guleria	Reviewer as of 11/09/2024
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 26 September to 07, October 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 reductions. The audit 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.

The revised documentation that was provided by the project is described in Appendix 1: DOCUMENTATION PROVIDED BY THE PROJECT.

2.3 Interviews

During the site inspections, a number of 11 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, academy, and local community members.

Table 4 Interviews[3]

Interviewed	Role	Topic
Eufram Amaral	Agronomist Engineer - Environmental Amazon	He mentions that he is a soil specialist, that his role in the carbon project is related to the estimation of the variation of the biomass above and below the soil. He mentions that the company Amazonia Ambiental is the one that hired him since 2020. He mentions that he was hired for the elaboration of the project itself, for which he emphasizes that in terms of determining the biomass he carried out the survey of the available information present in the forest inventory within the areas of the management plan that had been addressed by the environmental body, the information was filtered and an estimation strategy based on plant typologies was established, three sampling plots were made to validate the biodiversity of the area, a set of allometric equations was applied to quantify the biomass of the measurements and finally, the carried out an internal audit process validating the information obtained through LIDAR technology and other data; he points out that this process generally took a year and a half. In addition to the above, he highlights that with the work team and in conjunction with the team that developed the UPAs inventory (he mentions to *Leonidas Dantas de Assis*) they collected all the information for diversity and for biomass only with the trees, they validated the information taking into account the discrepancy in the data of diameter, height and species. In addition to the above, he mentions that they validated the information obtained in the 2017 LIDAR file with the data from Baccini (2017), who presents the information on the Amazon by forest type; In terms of biomass, it is worth noting that the author presents a value of 228 ton/ha, while the value they obtained was 276.1 ton/ha, so it is worth noting that the difference is 3.1%. Likewise, he mentions that as input data in the allometric equations, only the DBH was used and that in conjunction with the process of obtaining the information and application of the equations, the licensing process of both the

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

Interviewed	Role	Topic
		allometric equations and the equations was carried out. UPAs by the environmental body. On the other hand, he affirms that from his point of view the main driver of deforestation in the area are the small owners, since there is legal and illegal livestock activity in the area, in addition to this he considers that the government is permissible with this issue and there is little control, so there is a trend towards deforestation. In addition to this, he mentions that the practice of burning is also common in the area, it is done mainly for secondary vegetation, but primary vegetation is also affected. Additionally, he mentions that there are invaders in the area, however it is a less common problem compared to other states. Likewise, he mentions that there are also hunters in the area who hunt for self-consumption, but the change is being made so that they obtain profits from the wood, they are paid by giving them permission to remove the wood from the area. Finally, he mentions that the audit process is inspiring and healthy, and that they dream of establishing conservation corridors.
Veriton Costa	Processing technician and interlocutor with communities of Amazonia agroindustry	He mentions that in November he completed two years in the company, he also points out that he is the one who has contact with the community when they do field work, he goes every time there are problems in the area to talk with the communities. In addition to this, he mentions that the last time he went to the field was in August 2022, since a cattle vaccination process was required and, incidentally, a review was carried out to see if there was any news in the area. He also points out that the community he is referring to belongs to the Yamis branch and that he maintains contact mainly with the people who are at the entrance to the farm, highlighting an individual named Vanderlei. On the other hand, he mentions that they use the Land viewer platform to monitor, through which they can identify changes through satellite images, which are generated every five days. He mentions that from these images a classification is made and they determine if there are changes in the forest cover, identifying areas of deforestation and changes in the territory; This is done through the Land Viewer platform directly and through the ArcGIS software. He finally mentions that they have been registered on this platform for more than two years, paying a monthly fee. In addition to this, he states that he does not have any relatives in the community, that he came to work at the company through the recommendation of an acquaintance. In addition to this, he mentions that he was present at the time of the cadastre and that he lives in the city.
William Flores	Professor at the Federal University of Acre	He mentions that he was called from the beginning of the project by Eufran, he does not work directly there, but he mentions that he gave assistance and guidance for the application of allometric equations since 2021. In addition, he points out that the equation is part of his doctoral thesis, which was developed in financial association with the state government through the

Interviewed	Role	Topic
		Institute of Climate Changes. He affirms that this process of developing his thesis lasted 2 years. He mentions that the results he obtained in the thesis are appropriate to be adopted by the project present in the state of Acre and are adequate to make carbon estimates since they handle the specificities of the Amazon region, even so, he highlights that there may be variations in up to 20%. He points out that the thesis presents regional equations of a conservative nature. In addition to this, he points out that he understands that when it comes to identifying the biomass, the equations may be mathematically perfect, but the practical work always goes to a much more complex task. For the above, he highlights that the equation for working on local projects only works with the input DBH, to reduce uncertainty and for greater practicality. In addition to this, it is worth noting that they work with the DBH due to the complexity exerted by the various variables when carrying out field work, such as accessibility, complexity when obtaining data such as density, etc. Likewise, it stands out that the study was carried out focused on the biomass above the ground, since it highlights that the estimation of the underground biomass is much more complex and with greater uncertainty, however, it mentions that within the study the equations were carried out in the most precise way possible. On the other hand, he mentions that the study was carried out with trees and shrubs, so the minimum diameter (DBH) to apply the equations is 5 cm. In addition, he mentions that in the case of the plots that had the presence not only of trees, but also Gadua bamboo, he mentions that he recommends considering the bamboo biomass when it is dominant in the plot. Regarding the uncertainty of the equations, he mentions that with respect to the equation for the biomass below the ground, an uncertainty of 8% is handled, likewise, the equation for the biomass above the ground handles an uncertainty of 3%. On the other hand, he mentions that he considers that the main driver of deforestation in the region is the proximity of access roads and large cities and settlements. He points out that there is a trend for the irregular occupation of unoccupied areas, owned by the state, this to develop deforestation and livestock activities (invasions). Likewise, he highlights the little control of the state due to state policies and the destructuring of environmental bodies; He mentions that the law of environmental crimes is not applied, it is known that this process of illegal deforestation is happening but these crimes are not penalized. Additionally, he mentions that deforestation doubled in the last 4 years, mainly due to illegal practices. In addition to this, he points out that there is a lack of synergy between the environmental bodies. Likewise, he mentions that he believes that the communities do not tell the truth about deforestation because they are afraid for their physical well-being. He highlights that between 2019 and 2021, 30% of deforestation is linked to drug trafficking.

Interviewed	Role	Topic
		Regarding the fires, he mentions that most of the forest fires in the state are associated with extreme events, all of an anthropic nature, since he highlights that in the Amazon there is no risk of natural fire events. Regarding hunters, he mentions that hunting is a great pressure in the area, and is linked to the financial crisis, since in this case hunting is generated mainly for self-consumption, but it is also given for sale or for fun. These problems of growth in the demand for protein consumption, combined with the increase in population and the economic crisis exert pressure related to hunting. Finally, he points out that during his field work he did not have the opportunity to see jaguars or wildlife; that hunting for personal consumption is legal with certain limitations in Brazil and also highlights the environmental crime law of the country (Law 9605).
Antonio Cleverson; Marcos Pereira De Sousa; Gontran De Freitas Maceo Neto; Jose De Lima; Murilo Araujo De Matos Filho; Jenilson Rodriguez Maia	Agroforestry Technician; Local desk manager of the production secretariat; Agricultural Technician; Agricultural Technician; Agricultural Technician; Agricultural Engineer All of them from SEPA (Secretary of State for Production and Agrobusiness)	They mention that the function of this secretary is to promote agricultural and livestock production, in addition to providing technical assistance and rural extension in the state of Acre. They also mention that anyone living in the state can access these services, but that they are focused on small producers and family farming. On the other hand, they highlight that there are 6 officials in charge of carrying out visits, training and courses, and that the promotion area of the secretary has 10 technicians in total. Regarding the proponent of the project, they mention that he is well known in the region and that he is from a traditional family in the Valparaiso Seringal, that he already knows the technicians and that his property borders settlement projects. In addition to this, they mention that they have not carried out a project with him because the area of the property is small and that they are not related to the forestry part, that they only provide a little technical assistance on the subject but that they do not issue the legislation and are not inspectors. Likewise, they highlight that the property had a forest management plan for non-loggers. Regarding the carbon project, they mention that 4 months ago the people from the project approached the office and talked to them about the project, through a presentation they told them about all the stages of the project, they talked about the profits that the communities could have (such as an improvement in schools and health infrastructure and transportation in winter season), they also touched on the issue of creating a nursery with native vegetation and a warehouse to store the products. On the other hand, regarding deforestation, they mention that one of the main drivers has been government policy, since this was a highly accepted practice between the 1980s and 1992. Additionally, they mention that in the state there is a lack of technologies for agricultural use, for which reason fire is used in the case of small producers; This use is very common because it is usually more effective, however, they emphasize that it is illegal.

Interviewed	Role	Topic
		On the other hand, they mention that the density of livestock in the area is approximately 1 head of cattle per hectare and that the most common crops in the state are cassava, beans, rice and corn. In addition to this, they mention that there are no problems with invaders in the area, that there are settlers who are people who, because of sales, take over the territory and open fronts, a situation that is common in large areas. As for hunting, they clarify that it is legal for subsistence purposes, which is stipulated in the crime law (law 5197 of 1967). Likewise, they mention that in recent years there have been many buyers in the area, which is why deforestation has increased, in addition to mentioning that people prefer to pay the fine and suppress 100% of the area since it is more profitable for them. Regarding the project, they consider that it is very good for the region, that it is a good example for the area and that they consider that support is needed for this type of project; They stress that it is an excellent idea in terms of its social incentives and sustainable practices and that they hope that the money will actually be invested in the region. Finally, he mentions that they have a good relationship with the proponent's company, that he is seen as a businessman who helps people a lot and that they believe that only big businessmen can carry out these carbon projects.
Cesar Augusto Sosa Da Silva Ismael Maia	Manager of SEMAPI (*State Secretary for the Environment and Indigenous Policies*) Manager of IMAC (Institute of the Environment of Acre)	They mention that in the office (SEMAPI) they work with the legal reserves, the UGAs, carry out rural accompaniment and family farming issues, act as inspectors of forest issues, invaders, deforestation and in turn highlight the issue of education that was carried out from Feijó to Cruzeiro do Sul. On the other hand, they mention that at IMAC they are in charge of some inspection, monitoring and licensing issues, where their tasks are divided by nuclei and representations and cover the region of Jurua, Cruzeiro do Sul and four other municipalities. Single environmental licenses, prior licenses are issued, and regarding licenses related to forest products, they mention that the SINAFLOR system is in charge of licenses for timber and non-timber products, but it is not part of the responsibilities of this office. Regarding the carbon project, they mention that the company personnel came to the office and spoke to them about the project approximately 5 days ago, they presented the generalities of the project and mentioned that the project is designed as an alternative to reduce carbon atrophic environmental impact. In addition to this, they mentioned that the project is located in Seringal, on James' property, they also mentioned that they do not know James directly but have heard of him. Additionally, they mention that during the presentation of the project they were told about the preservation of the forest, the benefits to the people who live near the project. They emphasize that they consider the project to be interesting and

Interviewed	Role	Topic
		that it is a viable alternative in the region, in addition to not knowing if a license is needed for the project. On the other hand, they mention that they have also heard about the Rusas project, but that they do not know if it was other officials. Regarding deforestation, they mention that the main driver of deforestation is the cultural issue (use of fire), since burning and family farming are closely linked in the region, but they also point out that it is also usually done for survival reasons. In addition to this, they mention that the use of fire is illegal, except for what is stipulated in Decree 11.100, which establishes that the use of fire is legal only in the case of family and subsistence farming and to combat pests, but it can only be done with a license, they point out that 100% of the area cannot be burned and that technical support is given in burning events for small producers. On the other hand, they mention that the summer was very strong in the region but that thanks to the rain, fire events were prevented to a certain extent. In addition to this, they mention that the burning is carried out for subsistence, to establish crops of perennial crops in the case of small producers. They also state that native vegetation is often changed to establish pastures. Regarding the issue of invaders, they mention that there are almost no problems of this type in the region, they affirm that from INCRA they try to legalize the people who are already in the territory, they also say that despite the fact that there is almost no invasion of lands, these tend to happen on public forest properties, where invasive people seek to make use of the forest to later establish subsistence agriculture. Regarding hunting, it is only legal in case of subsistence and it is not possible to commercialize it. Finally, they mention that there are no complaints for the project so far.
Ancheta Shawandava	Advisor and political articulator of the people - worker outside the indigenous land	He mentions that the indigenous land of Igarape, where he comes from, is neighboring the project area, he also mentions that in 2008 the region had 86,700 hectares of intact forest. He points out that in this territory there are approximately 700 people distributed in 6 villages; that in terms of governance there is a general cacique, 6 local caciques and 6 leaders, and that they have a leadership council (composed of the local caciques, the general cacique, the 6 leaders, teachers, health agents, indigenous agroforestry agents, among other leaders). He mentions that the council meets every 3 to 6 months and that its development is generated through sustainable development to obtain income without destroying the forest. In addition to this, he mentions that in 1998 they created an association of Pobo Arara de Igarape and that in 2008 they created the Eshwandawa cooperative, where issues of extraction, storage, transportation, processing, and marketing of non-timber forest products are discussed, besides some projects developed by the community.

Interviewed	Role	Topic
		On the other hand, he mentions that for the year 2020 the leadership council accepted the life plan that he had designed, that this plan was accepted by vote through the council of the indigenous territory; for this reason, they are looking for a partner to be able to develop various projects that they have designed from the community, such as an ecotourism project. In addition to this, he also highlight the extraction of non-timber forest products, where it mentions that they have mapped species since 2020 and also highlights that they identified a palm tree that has been used for thousands of years, which within its utilities they identified as the use as olive oil. cooking, cosmetics, as healing, antioxidant, also mentions that its residue is used in handicrafts and that the leaves are used on the roofs of indigenous houses; within this topic he mentions that in order to execute it they would need to register a name for each product. In addition, it also highlights a project for control and protection of the territory, since there have been problems with illegal hunting in the area, for which it mentions that they need help with surveillance of the area. In addition to this, an indigenous agriculture project also stands out, where the ancient knowledge and culture embodied in architecture are found. Finally, he mentions projects related to the rescue and revitalization of indigenous culture, carbon credits, and food security through the planting of fruit trees and forests.
Aparecido Seragile Freitas	Agricultural Technician from INCRA (National Institute of Colonization and Agrarian Reform)	He mentions that INCRA carries out land regularization work. He also mentions that he knows about the existence of James's farm but does not know it and that he has heard of it, distinguishes it but has not had contact with him. In addition to this, he clarifies that he has heard that James is a businessman and that regarding James' land tenure, he mentions that he knows that he made a reference and a CCIR (Rural Property Registration Certificate) was released, which indicates that the area is ok. In addition to this, he mentions that he does not know anything about the INCRA donation, that this is a matter for the superintendency. On the other hand, he mentions that they spoke to him about a carbon project but did not go into details, that this issue is independent from INCRA, so they are not related to these issues. In addition, it mentions that the INCRA area is owned by some settlers, who were regularized and have a regularization contract for use, who can exploit the area if they have a license issued by the environmental body, they can burn but with authorizations. They emphasize that in these areas only collective projects can be carried out, but not individual ones (natural person). Additionally, they mention that there are problems of invaders that are typical of the city of Cruzeiro do Sul, which in recent years have also been migrating from other areas. He mentions that for the moment the invaders are not a problem but that probably in the future they are, that they are seeking to regularize the lands to be able to carry out livestock processes.

Interviewed	Role	Topic
		Regarding deforestation, he mentions that it is currently safer since monitoring is carried out by the state, that deforestation has decreased, however he points out that the main driver of deforestation is livestock activity, but that there has also been an increase in crops of coffee and cocoa. Additionally, he mentions that hunting is legal for survival, but only small animals can be hunted and that he has not heard of the presence of jaguars in the region. Finally, he mentions that he doesn't know if James's farm has any kind of debt with INCRA, that this information doesn't reach the area where he works.
James Castro Cameli	Entrepreneur and owner (CEO) of Amazonia Industry	He mentions that he has had this company for more than 20 years, whose objective is livestock, food production, construction and service provider and also focuses on the development of the region, implementing best practices to conserve Amazonian vegetation. In addition to this, he mentions that he was born and raised in the region, so he wants the vegetation to be preserved. He emphasizes that he bought the project area approximately 20 years ago, that it was a very large area where rubber extraction was carried out and that at that time INCRA had a stratified methodology, for which he donated a part of the property to this secretary so as not to have problems with land tenure. Additionally, he mentions that there were some people living in the area, who were rubber tappers at the time who now have children and have spread throughout the area. On the other hand, he mentions that the area of the property is about 24,000 hectares, of which 700 hectares are for cattle, are open areas (pastures). Regarding the management plan for timber production, he mentions that it started in 2006 and stopped in 2011, because at the time the value of the dollar was very low and there were many difficulties for transportation, so the process of producing and exporting wood was very expensive and not profitable. He mentions that he has stopped, but that he is not closed to the possibility of continuing with this practice. Regarding cat's claw, he mentions that they had heard and found out that this species has many properties for medicinal and nutritional use, so he identified that there were many specimens of this species in his area. He points out that even though the law allows 20% of the area to be logged, he mentions that he does not want to expand his cattle production and that he wants to keep his forested areas. He claims that legally he can still graze about 4,300 hectares with a permit, even mentioning that he has a permit to open 500 hectares. On the other hand, he mentions that the idea and motivation to carry out a REDD project was born because he had read a lot about carbon projects, REDD projects and their benefits, but he was encouraged because the price improved, so he

Interviewed	Role	Topic
		identified that he had all the conditions to develop a REDD project, so it looked for a partner to develop it, who was Biofílica. Regarding the agreement with Biofílica, he mentions that the company is based on the fact that Biofílica carries out the commercialization and marketing of carbon credits, in addition to the monitoring activities of the area and the owner carries out the monitoring, care and maintenance of the area; the issue of earnings is clear with respect to the provisions of the terms of confidentiality. In addition to this, he mentions that he also wants to carry out social activities and see improvements in the conditions of the population neighboring the property. On the other hand, he mentions that his relationship with the neighbors is good, that he has no invasion problems, he points out that the neighbors named the road, he mentions that he installed electricity and does maintenance on the road. In addition, he affirms that he has no conflicts with land tenure. He mentions that the neighbors use the farm road. Regarding hunting, he mentions that there are signs that indicate that hunting is not allowed but that since the area is so large it is difficult to carry out rigorous control. He mentions that the neighbors have hunted for their own consumption, that they do not take any product from their forest area and that they fish. On the other hand, regarding fire, he mentions that there are no fire events on the farm, that the use of fire damages the soil, that he controls so that there are no such events in the pasture area, in addition to not overloading the area with cattle so as not to have problems with soil degradation. He also mentions that there are no natural fire events in the region, that these are of antropic origin that occur in the area but not in the project area. He mentions that the neighboring areas make use of fire because they do not have the financial conditions to open the area in another way and they need to carry out agricultural activities for survival. Regarding the main driver of deforestation in the region, he mentions that he considers it to be poverty and lack of education, he mentions that the lack of birth control and economic problems lead to deforestation being a problem in the region. He highlights that the carbon project can contribute to reducing the impact of deforestation in the region. Additionally, he mentions that he has good relations with the indigenous territories, that he made an agreement with them, that he considers that the project can benefit them through the conservation of the forest due to the issue of biological corridors. Finally, as additional topics, he mentions that he wants the project to serve as an example for the region, he stresses that taking care of nature is not easy, but that it is achieved with good intentions and that he hopes that there will be a retribution through nature.

Interviewed	Role	Topic
Charles Brossi Karla De Lasio	Lawyer and co-founder of Fronteiras Co-founder of Fronteiras	They mention that the Fronteiras entity provides advice to indigenous and traditional communities with the aim of promoting environmental protection and the cultural and institutional strengthening of communities that are committed to preserving the forest. Additionally, they mention that this office has existed since 2019, however Fronteiras has existed since 2017. They mention that they work in the regions of Amazonas, Acre and Mato Grosso. On the other hand, they mention that the entity also advises institutions that are developing protocols for certification. In addition to this, they clarified that they do not carry out management plans, but instead develop life plans integrated with the initiatives of the communities. They also mention that their work is focused on indigenous peoples and predominantly traditional riverside communities, such as Resex (reserve extractivista). Likewise, they mention that they have not developed the social issue of REDD projects, they clarify that the approach they have had regarding this type of project has only been based on what the communities have told them; In this regard, they mention that opinions vary greatly. They mention that they are clear about the development of REDD projects, that the communities cannot implement them as project owners, but that there is little legal assurance. On the other hand, they mention that they also work with indigenous communities on the border, mainly with communities in Peru. They highlight that there is an initiative a few years ago, from approximately 2017, that seeks to preserve traditional indigenous medicines and that involves the communities of Brazil, Colombia, Peru, Ecuador, Mexico and Bolivia. Regarding carbon projects in the region, they mention that they know indirectly, through reports, mainly the Valparaiso project and a little bit of the Rusas project. They know them thanks to documentary reviews of the projects and mention that they identify a difference and a tension to the extent that the reality of the communities is not reflected. In addition to this, they mention that the results of the activities are not coherent and that they do not have continuity, that the private projects want to remove the community since some of these owners have not dealt with the issue of land ownership regulation. They mention that it is not normal to have invaders in the region, and they clarify that the illegal activity is carried out by the invaders, but on the other hand, there is the case of people who have been in the territory for a while and do not have the title to that property. territory, but they are not invaders; They mention that the invaders take over the territory in search of obtaining money through the wood and then convert the area into pasture. In addition to this, they mention that since 2013 there have been changes in the land tenure legislation, being more rigorous to partly avoid the problem of squatters through the SIGEF (Land Management System). Likewise, they highlight the legal domain of indigenous lands is in the form of usufruct of the indigenous

Interviewed	Role	Topic
		people, they also highlight that under the Brazilian constitution the indigenous peoples have autonomy over their territory, including natural resources, that is, they can make usufruct of their territory, however, the discussion and doubt are whether indigenous peoples can receive financial resources derived from payment for ecosystem services, since ownership and usufruct are two different issues. Regarding the use of fire, they mention that fires are not natural in the region, that indigenous peoples use fire as a technique to prepare the soil before cultivating, so they set controlled fires but not in areas of native vegetation; In addition to this, they mention that there are illegal burnings, by the invaders. In addition, they mention that hunting is allowed for indigenous peoples and traditional communities in their territory, but that Brazilian legislation has many limitations for hunting. Regarding additional comments, they highlight that selective logging with and without management plans is seen in the region, this is done so as not to register in the georeferencing systems of government control. Finally, they mention that they do not work in other areas of the country because they must have more contact with the community on a continuous basis and be more constant. They also highlight that they highly value close work with the communities.
Gustavo Martinez; Jose Dominguez; Jaime Masiel; Francisca Montero; William Costa De Araujo	Environmental Technician; Manager Environmental Analyst; President; Temporary Environmental Agent	They mentioned that they do not know about the project, that they never received information about it, that they have heard of carbon credit projects in the region and that they would also like to have information about the project.
Bena Ribera Da Silva Maldose Montero Da Silva Daildo Rodriguez Da Silva	Belonging to the Ramal do James community	They mention that they have lived there since 2002, 2016 and 2002 respectively, they mention that they work in agricultural activities, pink, with cassava, but with cattle and with cattle, between the three of them they have about 56 head of cattle (the last one being the one who owns 50 animals, who lives at the school). On the other hand, they mention that they hunt approximately every four or five months. In addition to this, they mention that they fish too. With respect to logging, they mention that they do not cut or take advantage of wood. They mention that they have an approximate area of 2000 by 400, where they have their crops, their cattle, and a bit of forest area. Daildo mentions that he has

Interviewed	Role	Topic
		an area of 1700 by 450, where he has his 50 head of cattle and also has a forest area. Likewise, Maldose also mentions that he has a forest area on his property. They mention that they do not make use of any forest product, neither timber nor non-timber. Regarding the use of fire, they mention that they burn with an annual frequency approximately, however they mention that it is not done in the forest area. On the other hand, regarding problems with invaders in the region, they mention that there are no such problems in the region, it is something rare. However, one of them claims to have had problems with invaders, he mentions that this problem has been going on for 20 years, that the invaders take advantage of the wood but that they do not use fire. Besides, he mentions that it is not common to see wildlife in the area, however they mention that they have seen monkeys, jaguars, armadillos, among other animals, but not tapirs. Regarding the project, he mentions that they have heard about James's property, that they pass by, that they have not worked there, but one of them mentions that he has had the opportunity to work on this property, but not on the management plan. In addition to this, they mention that they had a meeting to talk about the generalities of the project, they told them about the carbon credits, the project, the benefits. On the other hand, they mention that they have heard of James, they know about him, but they mention that the project did not make any proposal for a partnership with them.

2.4 Site Visits

As a part of the project verification, an on-site inspection was carried out through visits to the Jurua REDD+ Project location between the municipalities of Cruzeiro do Sul and Porto Walter, in the Acre State in Brazil during the days of 10 to 19, October, 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). It was confirmed through the Avenza maps®, on field[4]
- Observe the Implementation status of the project and forest activities.
- Perform a risk-based review of the project area to cover the project boundary.

[4] Tracks and photos were Recorded in a GIS system by the audit team, and this is available in EARTHOOD´s document management.

- Verifying possible substantial/material 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. The project's forest inventory data (Aboveground biomass averages) were considered and plots 3 and 98 to be assessed for all strata were determined considering a sampling error of less than 10%. Based on the selection approach, the selected sampling design is sufficient to verify of the monitored flora data (see Appendix 3: SAMPLING). The result of the sampling the materiality was greater than 5% more than allowed by the standard, this also applies to the substantial discrepancies identified on field, The statistical representativeness of the sampling plots distribution was not clear (see Appendix 2: FINDINGS, Finding 43).

  As a result, the proponent decided to use secondary data for carbon stock estimation, the validity of which was assessed by the verification team in accordance with the VCS Methodology Requirements v4.4, 3.4.8, the applied methodology VM0015 v1.1, IPCC 2006 and the IPCC Good Practice Guidance for LULUCF.
- 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 (validation & verification)

Date	Activity
10/10//2022	Flight to Cruzeiro do Sul
11/10/2022	Opening Meeting Assistants: James Cameli- Manager of Amazonia agroindustria company Aline Ribeiro-Biofilica Amanda Fiallos- Biofilica Sonaira Silva-GIS- independent contractor at ambiental Amazonia Emanuel Amaral- Technical manager at Ambiental Amazonia Martin Acosta Biologist- Forestry field coordinator Chirley Gonçalves da silva, biologist, Forestry field assistant Antonio jose barreto, botanical identifier Gilberto Siqueira- Asesor amazonia agroindustria, contractor and management supervisor. Subjects: Introduction of the lead auditor Presentation of the Audit team Audit objective, scope and criteria, roles, and responsibilities Schedule discussion/remarks, plots. Review of the Audit plan. General Conditions of Service, Impartiality / Confidentiality. Confirmation of schedules and dates, interviews with institutional and local actors, field check. Interview with project proponents

Date	Activity
	CLA/CAR, Technical review procedure Questions and answers session.
11/10/2022	Audit desk-Document revision Documental revision: Proof of rights Contracts and agreements with the participants (agreementcon Biofilica y Amazonia agroindustria, Ambiental amazonia) GIS-review- classification GIS review- -Baseline /reference area/leakage in R Deforestation trend Aboveground biomass calculation. Interview with Dr. Sonaira Silva-GIS
11/10/2022	Project activities: non-timber agroindustry visit.
12/10/2022	Flora re-measurement Plot 03 and 98 /possible fire events, Ramal Jamil Jereissati settles: Bena Riveiro da Silva, Valdecir Montero da Silva, Daildo Rodriguez
12/10/2022	Interview with professor Dr. Eufran Amaral Interview with Dr. William Flores de melo
13/09/2022	Project limits: Overflight Interview with: FUNAI- Jairo Igarapé Humaitá People Association (APSIH)- Arara do Igarapé Humaitá Indigenous Land (TI) representant.-Ancheta shawandava indigenous.(embajador y articulador político)

Date	Activity
	SEPA- Antonio cleverson, Marcos pereira de sousa, Gontran de freitas maceo neto, Jose de lima, Murilo araujo de matos filho, Jenilson rodriguez maia -SEMAP Cesar augusto sosa da silva IMAC-Ismael maial INCRA- Aparecido seragile freitas ICMBio-Riozinho da Liberdade Extraction Reserve (Resex)
14/09/2022	Veriton Costa-Tecnico de procesamiento and interlocutor con comunidades of Amazonia agroindustria James Castro Cameli- CEO Amazonia agroindustria Charles Brossi - Fronteiras Founder Project activity: Surveillance Audit desk-Document revision Documental revision: Risk tool- Intern and external risk Financial risk and opportunity cost - Raphael Ramiro Financial Especialist planning and analysis
14/09/2022	To Cruzeiro do Sul
15/10/2022	To São Paulo
19/10/2022	Audit desk-Document revision Documental revision: Risk tool- Natural risk Additionality Legal compliance Communication channel review Document management, capture, and compilation of Project information. -Spreadsheet review -Review of VCUs calculations in accordance with applied methodology and relevant tools.
19/10/2022	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.
04/11/2022	Findings report
31/07/2023	Writing of the draft report after the closure of all findings
22/09/2023	Internal Technical Review
02/10/2023	Project Submission of Final Validation Report

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

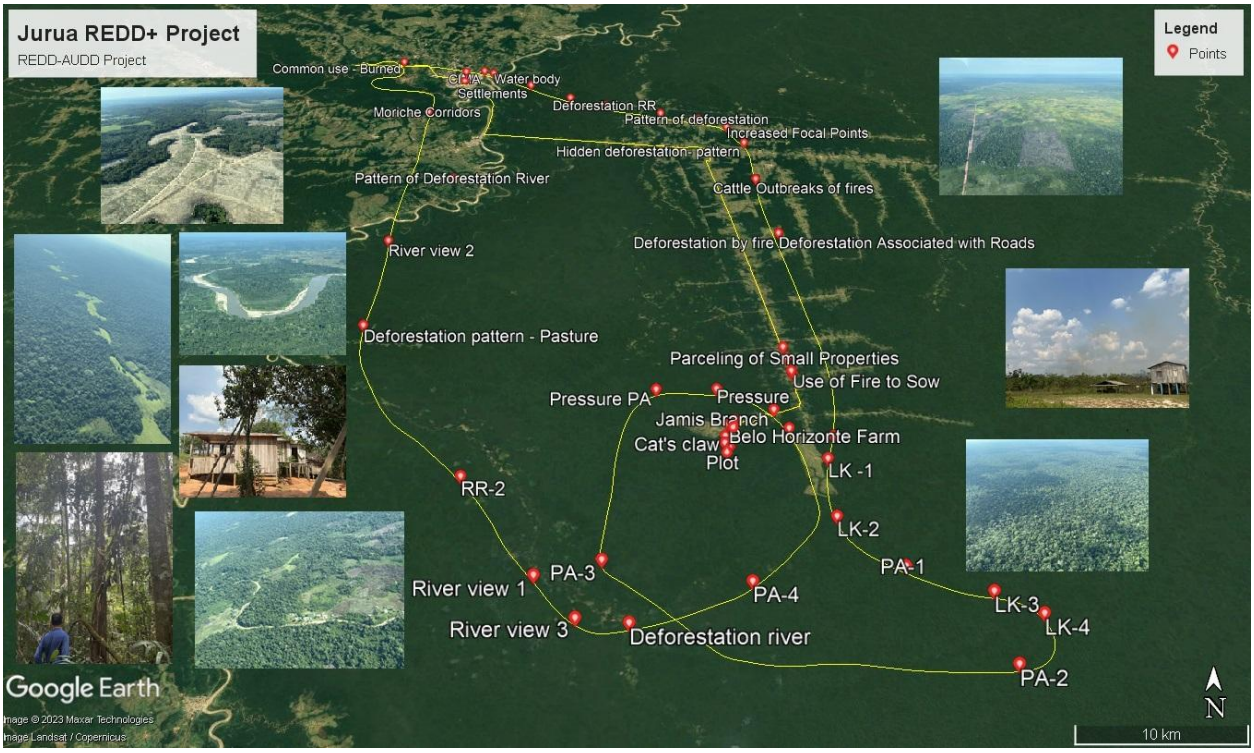


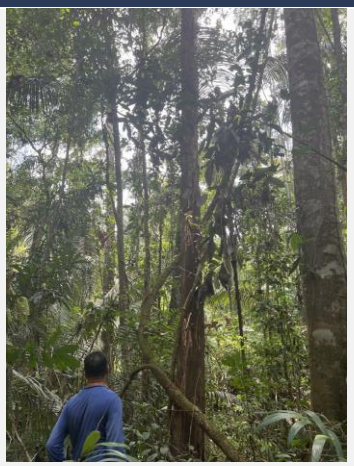
Figure 1 Site inspection[5].

Table 6 Check point

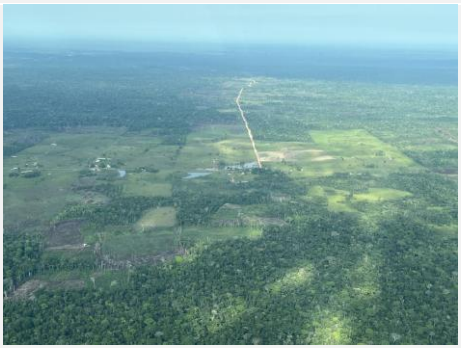
Site	Coordinate		Photo
	Latitude	Longitude	
Belo Horizonte Farm	8° 4'28.14"S	72°26'57.19"W	

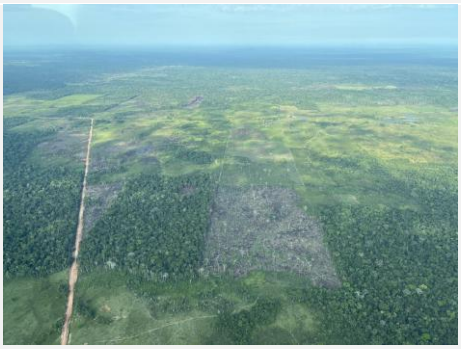
[5] Tracks and photos were recorded in a GIS system by the audit team, and they are available in the document management of EARTHOOD

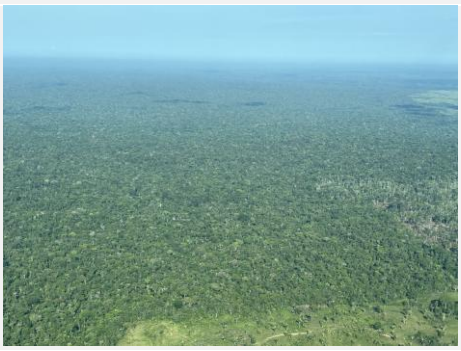
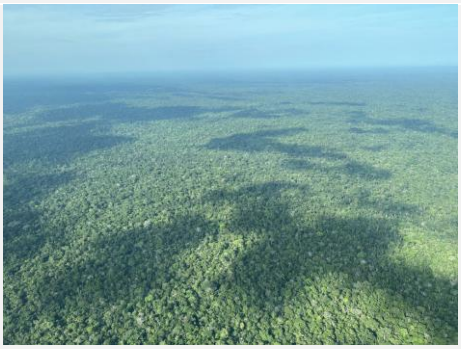
Site	Coordinate		Photo
	Latitude	Longitude	
Plot 03	8° 5'39.42"S	72°27'5.16"W	
Plot 98	8° 5'39.30"S	72°27'0.83"W	
Jamis Branch	8° 3'39.72"S	72°25'5.53"W	

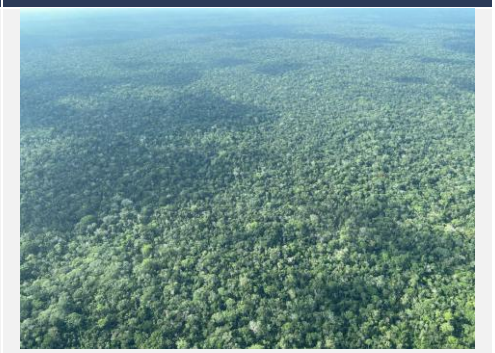
Site	Coordinate		Photo
	Latitude	Longitude	
Biomass above ground/lianas used as a non-wood forest product	8° 5'3.94"S	72°27'7.63"W	
Settlements	7°38'47.21"S	72°36'23.43"W	
Increased Focal Points/Reference region	7°43'7.52"S	72°25'38.88"W	
CIMA (Integrated environment center)	7°38'5.23"S	72°40'8.15"W	

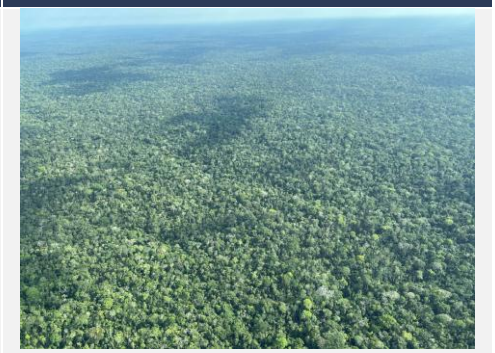
Site	Coordinate		Photo
	Latitude	Longitude	
Moriche Corridors	7°41'34.40"S	72°41'47.80"W	
Water body	7°37'28.90"S	72°38'37.05"W	
River view 1	8°11'27.89"S	72°34'15.11"W	
River view 2	7°52'49.72"S	72°42'14.67"W	

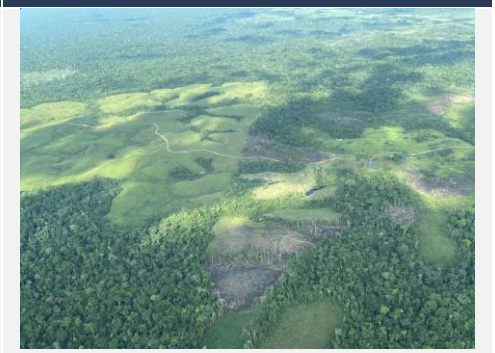
Site	Coordinate		Photo
	Latitude	Longitude	
River view 3	8°13'10.27"S	72°32'44.33"W	
Deforestation Associated with Roads	7°52'17.67"S	72°23'46.81"W	
Deforestation of Small Farmers	7°40'8.59"S	72°34'7.45"W	
Deforestation by fire in reference region	7°52'17.49"S	72°23'45.84"W	

Site	Coordinate		Photo
	Latitude	Longitude	
Hidden deforestation-pattern	7°44'37.11"S	72°24'49.78"W	
Deforestation river	8°13'21.65"S	72°30'54.38"W	
Deforestation RR	7°40'55.97"S	72°32'7.53"W	
Outbreaks of fires	7°47'54.04"S	72°24'29.55"W	

Site	Coordinate		Photo
	Latitude	Longitude	
Cattle as common practice	7°47'54.04"S	72°24'29.55"W	
IBAMA (Brazilian Institute of the Environment and Renewable Natural Resources)	7°37'17.49"S	72°40'12.55"W	
LK -1	8° 6'11.71"S	72°23'15.07"W	
LK-2	8° 8'55.99"S	72°23'16.69"W	

Site	Coordinate		Photo
	Latitude	Longitude	
LK-3	8°12'6.58"S	72°18'16.64"W	
LK-4	8°12'59.08"S	72°16'46.49"W	
LK-5	8° 4'39.72"S	72°24'34.92"W	
PA-1	8°11'5.77"S	72°21'8.70"W	

Site	Coordinate		Photo
	Latitude	Longitude	
PA-2	8°14'52.62"S	72°18'6.67"W	
PA-3	8°10'49.51"S	72°31'52.30"W	
PA-4	8°11'43.09"S	72°26'35.81"W	
Parceling of Small Properties	8° 0'43.10"S	72°24'15.45"W	

Site	Coordinate		Photo
	Latitude	Longitude	
Pasture	8° 5'3.23"S	72°22'53.10"W	
Pattern of Deforestation RR	7°41'45.36"S	72°29'9.07"W	
Pattern of Deforestation River	7°47'47.17"S	72°39'43.02"W	
Pattern of deforestation	7°42'19.56"S	72°27'7.10"W	

Site	Coordinate		Photo
	Latitude	Longitude	
Deforestation pattern - Pasture	7°58'42.04"S	72°42'24.70"W	
Land use/Livestock	8° 0'3.31"S	72°24'21.38"W	
Pressure	8° 2'31.36"S	72°27'19.25"W	
Pressure PA	8° 2'32.97"S	72°29'47.29"W	

Site	Coordinate		Photo
	Latitude	Longitude	
Recent Burning of Native Forest	7°47'54.04"S	72°24'29.55"W	
RR-1	7°37'12.47"S	72°39'9.84"W	
RR-2	8° 7'3.37"S	72°37'16.87"W	
Common use – Burned areas	7°36'9.70"S	72°43'56.04"W	

Site	Coordinate		Photo
	Latitude	Longitude	
Use of Fire to Sow	8° 1'39.01"S	72°24'7.81"W	

2.5 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 reductions 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.

The total findings detected were: 25 corrective action requests (CAR) and 29 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.

2.5.1 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 Jurua REDD+ Project is a Reducing Emissions from Deforestation and Degradation (REDD) - Avoid Unplanned Deforestation (AUD) project in accordance with the Project Description and Monitoring Report Document section 1.2. Its purpose is to reduce GHG emissions from activities regarding conserve the forest and its natural resources, as well as to maintain carbon stocks, through activities that promote the reduction of deforestation in the region, such as the improvement of patrimonial vigilance, the monitoring of land use change and land cover using satellite images and strengthening the management of non-timber forest products.

The following activities are implemented as part of the project activity:

Activity	Description	Implementation	Assessment of activities implementation achieved during the monitoring period
1. Initial coordination and planning			
1.1 Technical meetings with the owner and his representatives to plan and design the Project, as well as define the hiring of companies for all the following stages	Meetings between owner, technical team, developers, managers to plan the Project activities from conception to validation and first verification.	Started in 2020	The VVB understands that correct planning is fundamental for development of the project activity and for achieving the GHG emission reductions estimated.
1.2 Survey of potential partners and identification of strategic institutions	Identification of local, national, and international partners such as consultants, researchers, and institutions that could contribute to the Project development.	Started in 2020	The VVB understands that working with partners and strategic institutions will increase the viability of the project activity as well as the technical knowledge needed for its development.
1.3 Resource allocation for project construction and financing the initial stages	Project financing using its own resources, including the use of the property's infrastructure such as vehicles and a single-engine Cessna Skylane	Started in 2020	The VVB understands that source of finances is fundamental for implementing the initial activities of the project activity.

	182 airplane, used in the natural resource assessment actions.		
1.4 Signing the contract	Signing the contract between the bidders.	Started in 2022	The VVB understands that a bonding agreement between landowner and project proponents are fundamental for well understanding of duties, responsibilities and benefits of each party in achieving the project activity goals.
2. Project design and concept, with initial studies			
2.1 Construction of the feasibility study	Initial assessment of financial indicators such as Net Present Value, Internal Rate of Return, Benefit-Cost Indicator (B/C), and Project Pay-Back.	Started in 2020	The VVB understands that the feasibility studies foresees the main barriers for developing the project activity, determining the benefits of every party involved.
2.2 Cartographic base structuring and construction in the Project's geographic information system	Development of a geographic database adjusted to the official cartographic base of the State of Acre, allowing analyses at more detailed scales at the property level, through the partnership with Lavrado.	Started in 2020	The VVB understands that this activity is fundamental for estimating the achieved GHG emission reductions of the project activity and determining the main barriers that the project will face.
2.3 Socioeconomic Assessment and Evaluation of Natural Resources	Development of studies by Ambiental Amazônia, Lavrado e Impacto Plus, involving 10 specialized technicians, enabling the characterization of the Project Area and the surrounding areas regarding to socioeconomic aspects, vegetation, biodiversity and climate, hydrology, geology, geomorphology and soils.	Started in 2020	The VVB understands that socioeconomic assessment and evaluation of natural resources is fundamental for determining the main activities that will be carried out in order to avoid deforestation within the project area and surroundings.
2.4 Estimation of forest and soil carbon stocks	Development of studies in partnership with Lavrado regarding to estimate the forest carbon stock for the Project Area based on data from forest inventories already carried out in the area. As well as estimation of soil carbon stock (up to 100 cm) by collecting soil profile samples within the scope of the project construction.	Started in 2020	The VVB understands that this activity is fundamental for estimating the achieved GHG emission reductions of the project activity and determining the main barriers that the project will face.

2.5 Determination of baseline and potential for carbon credit generation	Initial assessment of baseline and crediting potential of the Project through partnership with Impacto Plus, Carbono Fácil and Lavrado.	Started in 2020	The VVB understands that this activity is fundamental for estimating the achieved GHG emission reductions of the project activity and determining the main barriers that the project will face.
2.6 Stakeholder consultation and engagement	Six meetings were held with stakeholders to present and discuss the project and to foster engagement in forest conservation	Started in 2020	The VVB understands that the stakeholder consultation contributes to GHG emission reductions as it informs the main stakeholders and possibly some drivers of deforestation that the project activity will occur and that activities will be implemented to secure the land against deforestation.
3. Management and development			
3.1 Improvement of property surveillance	Development of actions to improve property surveillance to mitigate and prevent unplanned deforestation in the Project Area, as well as the consequent reduction of greenhouse gas emissions, through physical presence in the field.	Started in 2022	The validation team confirms that the improvement of surveillance at the farm plays a crucial role in reducing the deforestation in the project area. No Armed patrols are involved as duly evidenced through interviews, on-site inspection, check of conduct-code and check on Surveillance plan. Therefore, it is fundamental to the project activity.
3.2 Deforestation monitoring using satellite images	Promote remote monitoring of deforestation, contributing to understanding the dynamics of deforestation and, consequently, improving field interventions.	Started in 2021	The validation team confirms that the deforestation monitoring using satellite images plays a crucial role in reducing the deforestation in the project area allied with the implementation and improvement of surveillance at the farm. Therefore, it is fundamental to the project activity.
3.3 Strengthening the management of non-timber forest products	Development of improvements and other opportunities to be worked on, based on actions and training within the mapped potential lines, as well as the implementation of partnerships for the development of selected actions.	Planned to start in 2022	The validation team confirms that the Strengthening the management of non-timber forest products contributes to generate alternative income to timber products, and consequently reducing the need of deforestation. Therefore, it is fundamental to the project activity.
3.4 Implementation, monitoring, and evaluation of activities carried out	Monitor the status and execution of each activity, as well as their results, through the strategies defined in the monitoring plan, allowing continuous evaluation of what will be	Planned to start in 2022	The validation team considers that the monitoring and evaluation of project activities strength their implementation efficiency. Therefore, it is fundamental to the project activity.

	carried out, enabling the incorporation of learning and improvements.		
3.5 Updating and complementing studies	Conducting technical studies required for the development of Project activities throughout its duration and subsequent verification, such as: review of baseline study, complementing natural and socioeconomic resource studies using secondary and/or primary data, among other actions as needed.	Started in 2022	The validation team considers that this activity contributes to the project's maintenance. Therefore, it is fundamental to the project activity.

The stakeholder engagement with the project activities is described in Table 2 of section 1.11 of Project Description and Monitoring Report Document .

Moreover, the PP has described in section 1.11, table 2A anstructured summary of project activities, impacts on deforestation and associated indicators and targets as follows:

Activity	Description	Expected Impact on Avoided Deforestation / GHG Emissions	Indicators	Goal	VVB Assessment
Satellite deforestation monitoring	Monthly analysis of satellite alerts (PRODES/MapBiomas) focused on high-risk areas.	Supports timely identification of deforestation events; enables response actions; contributes directly to GHG emission reductions.	Deforestation monitoring status	Full year monitoring of Project Area and Leakage Belt	The validation team agrees that the activity is correctly developed and that the indicators and goals foreseen are reliable and achievable. It could be evidenced that during the monitoring period 100% of project area and leakage belt has been monitored. Therefore, the goal has been achieved.
Stakeholder engagement	Informal dialogues with residents, especially those near the James Road (Ramal do James).	Raises local awareness; directly reduces pressure on project area.	Number of stakeholders engagement campaigns	At least one stakeholder engagement campaign per year	The validation team agrees that the activity is correctly developed and that the indicators and goals foreseen are reliable and achievable. It could be evidenced during the on-site inspection and by checking documents that during the monitoring period 6

					meetings have been carried out which resulted in direct deforestation control within project area and leakage belt. Therefore, the goal has been achieved.
On-site surveillance activities	Field presence by Amazônia Agroindústria staff to deter illegal activities and respond to alerts.	Contributes directly to preventing unplanned deforestation and GHG reductions.	Surveillance occurrence status	Full year Project Area surveillance	The validation team agrees that the activity is correctly developed but it has not been implemented during the current monitoring period. VVB could confirm that the activities were carried out in 2022 during the on-site inspection (see section 2.4 of this report where, on 14/09/2022, interview to Veriton Costa regarding surveillance has been carried out) . But were carried out after the end of the monitoring period.
Strengthening of non-timber forest product (NTFP) management	Technical planning and identification of sustainable extraction opportunities, especially for cat's claw.	Supports conservation by valuing standing forest and generating sustainable income.	NTFP management strengthening actions	At least 1 action per year	The validation team agrees that the activity is correctly planned and is important and that the indicators and goals foreseen are reliable and achievable. However, it has not been carried out during the current monitoring period.
Monitoring and evaluation of project activities	Development of monitoring tools and tracking of annual project performance indicators.	Supports continuous improvement of project performance; increases efficiency of GHG mitigation.	Annual M&E reports; updated monitoring strategy.	At least 1 report per year	The validation team agrees that the activity is correctly planned and that the indicators and goals foreseen are reliable and achievable. Nevertheless, it has not been occurred during the current monitoring plan.

Besides, the project proponents state that:

- The project area meets the UNFCCC definition of forests and qualifies as forest for at least 10 years prior to the Project start date (section 1.3 of Joint PD&MR);
- The project applies a methodology within the VCS Program (section 3 of Joint PD&MR);
- The implementation of the project activities does not violate any applicable law (as is explained in section 1.14 of Joint PD&MR).
- The project is not covered by a REDD+ jurisdictional program (section 1.12 of Joint PD&MR.)
- The project is not implemented in wetlands and does not drain native ecosystems or degrade hydrological functions (as section 1.12 of Joint PD&MR);
- The risk of non-permanence was analyzed according to the VCS Program (applying the AFOLU Non-Permanence Risk Tool).

3.1.2 Project design, including eligibility criteria for grouped projects.

The Jurua REDD+ Project is not a grouped project and it is an AFOLU project comprising only one scope of activity consisting of emissions reductions from unplanned deforestation and forest degradation (REDD-AUD). Therefore, the project is not required to define eligibility criteria for new instances.

3.1.3 Project proponent and other entities involved in the project.

The project proponents are Biofílica Ambipar Environmental Investment S/A and Amazônia Agroindústria EIRELI, the entities involved are Vasta Insumos da Amazônia Ltda and GESTAO E RESULTADOS CONSULTORES ASSOCIADOS; their contact information is indicated in sections 1.5 and 1.6 of Project Description and Monitoring Report Document . Section 1.11 of Project Description and Monitoring Report Document duly describes the project governance structures, the obligations and commitments of the project proponents and the responsibilities of the other organizations involved during the conception and development of the project. Moreover, a section called Low-impact agricultural Management has been included which describes the planned activities within the leakage management area. IN addition, the grievance redress procedure has also been duly described. Therefore, it is concluded that the involvement of all stakeholders in the activities proposed by the project activity have been duly detailed in the section 1.11 of the PD.

Organization name	Biofílica Ambipar Environmental Investments S/A
Contact person	Plínio Ribeiro
Title	Executive Director
Address	Rua Vieira de Morais, 420 – Cj. 43/44 – Campo Belo Zip Code: 04617-000, São Paulo/SP – Brasil
Telephone	+55 11 3073-0430
Email	plinio@biofilica.com.br

Organization name	Amazônia Agroindústria EIRELI
Contact person	James Castro Cameli
Title	Managing Partner
Address	Estrada do Canela Fina, bairro Boca da Alemanha, nº 1226 Zip Code: 69.980-000, Cruzeiro do Sul - Acre
Telephone	+55 68 99926-1691
Email	jamescameli@yahoo.com.br

Other entities:

Organization name	Vasta Insumos da Amazônia Ltda
Role in the project	Commercialization of environmental services generated by the management of non-timber forest products such as cat's claw
Contact person	James Castro Cameli
Title	Managing Partner
Address	Rua Pedro Teles n°360 Bairro: Centro, Cruzeiro do Sul, Acre
Telephone	+55 68 99926-1691
Email	jamescameli@yahoo.com.br

Organization name	GESTAO E RESULTADOS CONSULTORES ASSOCIADOS
Role in the project	Local and Regional Development and Monitoring
Contact person	Gilberto do Carmo Lopes Siqueira
Title	Civil Engineer / Specialist in Planning and Regional Development
Address	Rua Copacabana n° 392, Bairro: Vilage Wilde Maciel, Rio Branco- AC, Brazil
Telephone	+55 68 98121-0505
Email	-

3.1.4 Ownership

In accordance with section 1.7 of Project Description and Monitoring Report Document the project is located in Gleba Seringal Valparaíso which is composed of 2 parts certified and registered in the real estate registry office. The Amazônia Agroindústria EIRELI is the legal owner of the Gleba Seringal Valparaíso project.

Table 7 – Project property

Name	Ownership registration	Area (ha) in Descriptive Memorial	Area (ha) in SIGEF geographic database
Seringal Valparaíso - Part 1	5,197	21,110.51	21,109.02
Seringal Valparaíso - Part 2	5,197	3,865.81	3,865.52
Seringal Valparaíso - Total	5,197	24,976,32	24,974.54

The project proponents provided documentary evidence (Appendix 1: DOCUMENTATION PROVIDED BY THE PROJECT/03-infos-projetos/'1.7 Ownership'/ and /00-auditoria/04-findings/CAR01/) to support the ownership of the property in which the project is located. The VVB confirmed that, the proof of title for the project area has been demonstrated by means of review of several legal documents as detailed in attached Excel sheet.

3.1.5 Project start date

The project proponents state in section 1.8 of Project Description and Monitoring Report Document that the project start date is July 31, 2020, which corresponds to preliminary meetings between the owner and the technical team to plan the Project's activities and, consequently, with the initial allocation of resources for the Project's construction. The project proponents included documentary evidence of the preliminary meetings developed (Appendix 1: DOCUMENTATION PROVIDED BY THE PROJECT/ 17052023/ 06-3nd-findings-assessment/ CAR05/Documento_2022-06-03_193950.pdf).

3.1.6 Project crediting period

In accordance with the section 1.9 of Project Description and Monitoring Report Document , the accreditation period of Jurua REDD+ Project will occur from July 31, 2020 to July 30, 2050, comprising a period of 30 years. The project is in compliance with VCS Standard v4.5, section 3.9.

3.1.7 Project scale and estimated GHG emission reductions or removals

The project proponents state in section 1.10 of Project Description and Monitoring Report Document that the Jurua REDD+ Project is categorized as a project and has an annual average of GHG reductions of 13,798 tCO2e/year. The project is in accordance with VCS Standard v4.5, section 3.10.

3.1.8 Project location

In accordance with section 1.12 of Project Description and Monitoring Report Document the Jurua REDD+ Project is located in the region of Alto Jurua, between the municipalities of Cruzeiro do Sul and Porto Walter, in the Acre State in Brazil. The project area is 24,076 hectares and it is located in a private property with an area of 24,974 hectares. The project proponents included the geographic coordinates of the property in table 2 of Project Description and Monitoring Report Document , and a KML file with the boundaries of the project area which does not have inconsistences with the one available on Verra's website. The project is in compliance with the VCS Standard v4.5, section 3.11.

An overlapping GIS review were conducted by the VVB team to confirm that the project area does not overlap private lands, other CAR plots, public lands, indigenous territories, quilombo lands, and conservation units. The results were described above:

- CAR database

VVB cross-check: The project proponent used official sources, and they are current, matching the date of October 27, 2024.

Source: https://consultapublica.car.gov.br/publico/estados/downloads

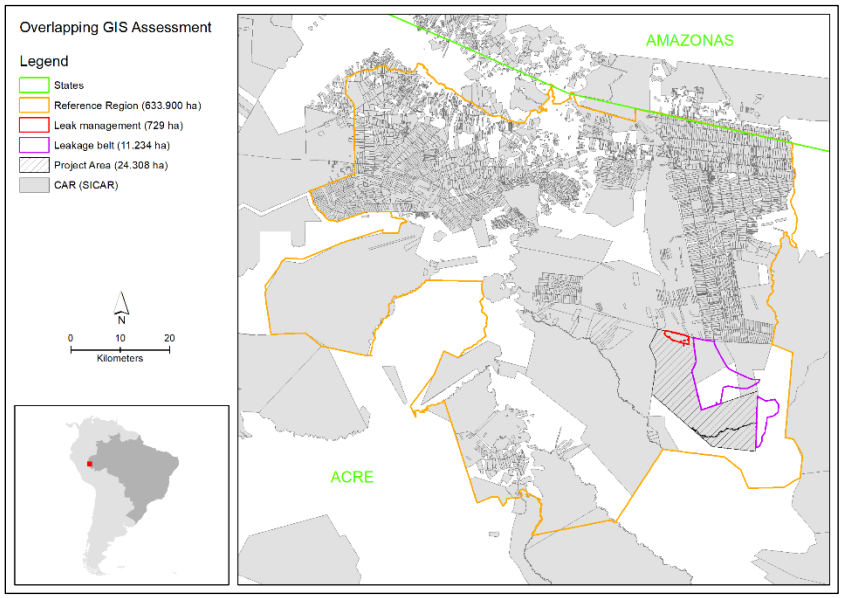


Figure 2. Overlapping GIS assessment: CAR database, Reference Region, and Project Area.

- Property data in CAR attributes

In the publicly available vector file, no significant overlaps were observed in its attribute with the reference property AC-1200203-1D7851AAAE39467A977D86030DF2AE0B and the Project Area.

- Settlements, Private areas, Indigenous Land, Quilombola Territories, and Conservation Units

The audit team redid the maps, by attributes and with public data, consulted on 27/10/2024. There were no overlaps with the attributes assessed and the results are presented below.

Settlements

Source: https://certificacao.incra.gov.br/csv_shp/export_shp.py

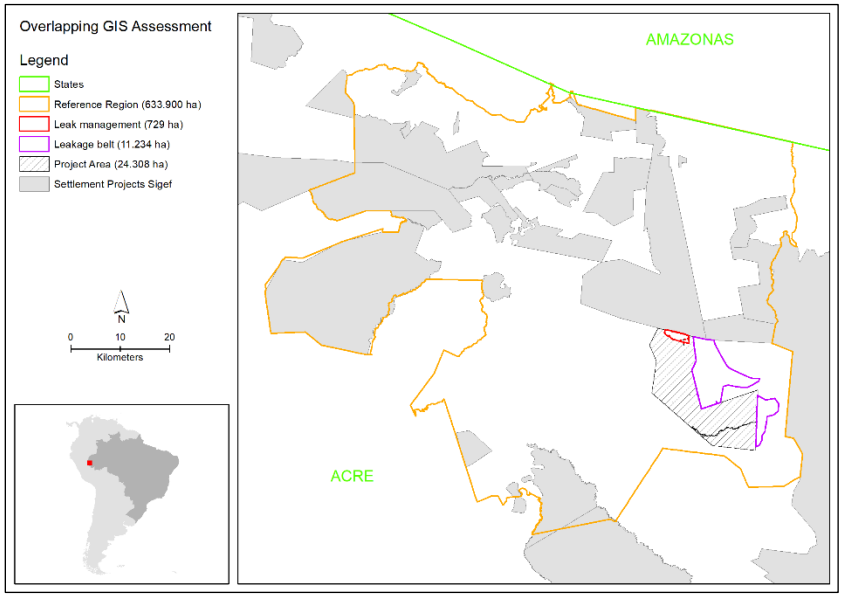


Figure 3. Overlapping GIS assessment: Settlements, Reference Region, and Project Area.

Private Areas

Source: https://sigef.incra.gov.br/

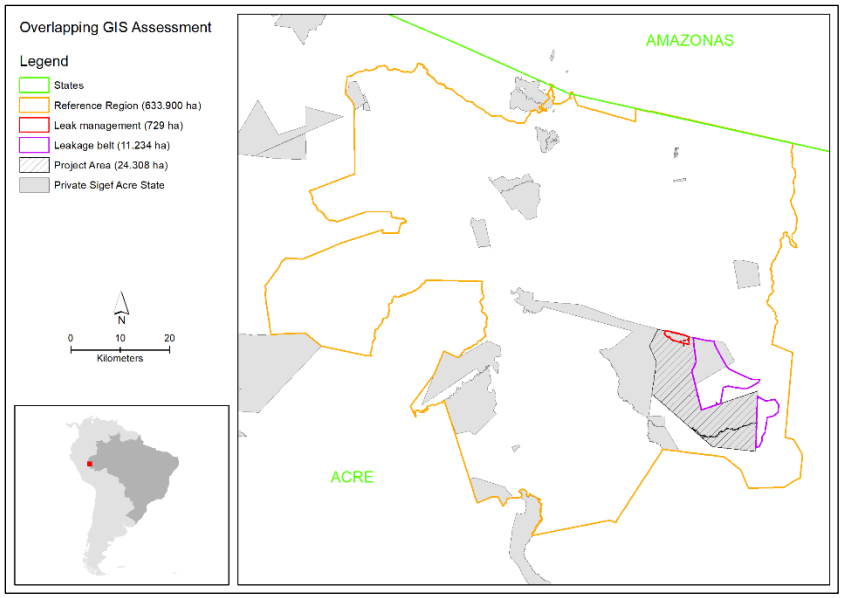


Figure 4. Overlapping GIS assessment: Private Areas, Reference Region, and Project Area.

Indigenous Lands

Source: https://www.gov.br/funai/pt-br/atuacao/terras-indigenas/geoprocessamento-e-mapas

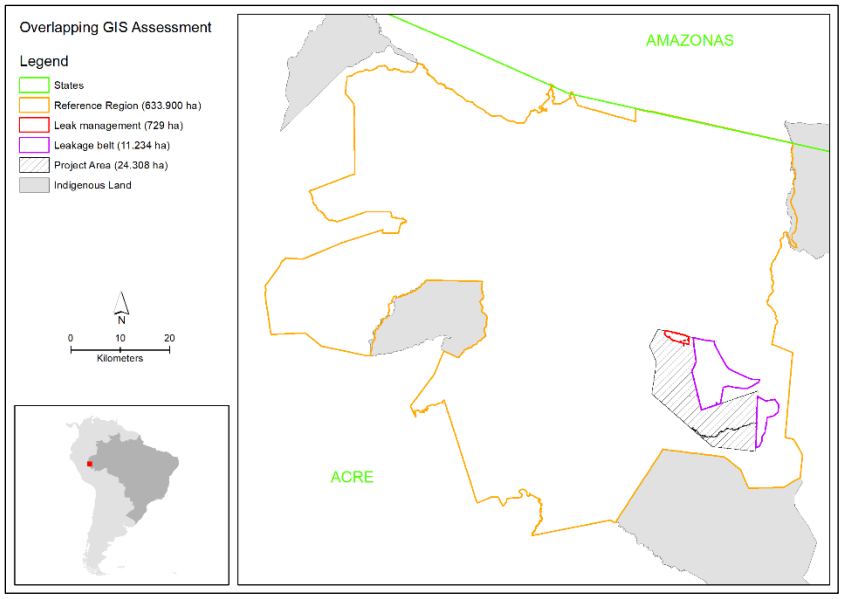


Figure 5. Overlapping GIS assessment: Indigenous Lands, Reference Region, and Project Area.

Quilombola Territories

Source: https://sigef.incra.gov.br/

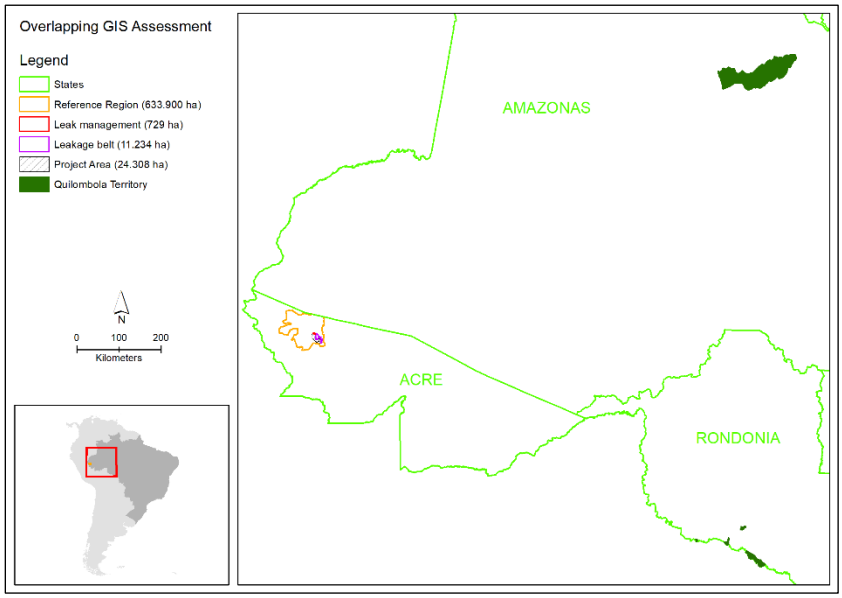


Figure 6. Overlapping GIS assessment: Quilombola Territories, Reference Region, and Project Area.

Conservation Units

The audit team redid the map with public data consulted on 27/10/2024, confirming that the client used official and current sources.

Special attention was given to the last source, as it contains information on Private Natural Heritage Reserves (RPPN), which are sensitive due to their dynamism, and all the information matches what was provided by the client:

Sources: https://metadados.snirh.gov.br/geonetwork/srv/api/records/9407d38f-84d2-48ea-97dd-ee152c493043

https://www.gov.br/icmbio/pt-br/assuntos/dados_geoespaciais/mapa-tematico-e-dados-geoestatisticos-das-unidades-de-conservacao-federais

https://terrabrasilis.dpi.inpe.br/downloads/

https://dados.mma.gov.br/dataset/unidadesdeconservacao

https://sistemas.icmbio.gov.br/simrppn/publico/

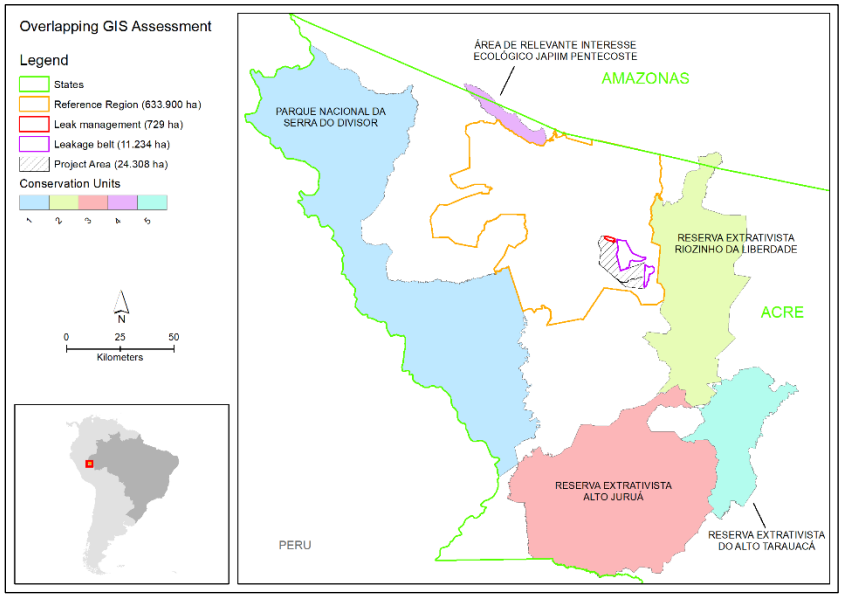


Figure 7. Overlapping GIS assessment: Conservation Units, Reference Region, and Project Area.

3.1.9 Conditions prior to project initiation

The project proponents indicated in section 1.13 of Project Description and Monitoring Report Document the conditions prior to the project initiation, including relevant historical conditions, socioeconomic conditions, information of weather, hydrography, soils, geology, geomorphology and vegetation. The project proponents included secondary and mapping information to support the conditions reported. The project is in conformance with Project Description and Monitoring Report Document Template v4.2 – section 1.13.

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

In accordance with section 1.14 of the Project Description and Monitoring Report Document the project is in compliance with the following laws, statutes and other regulatory frameworks:

- Federal Legislation: Law no. 14.119, dated 1/13/2021; Law no. 12.727, dated 12/17/2012, Law no. 12.651, dated 05/25/2012; Law no. 12.187, dated 12/29/2009; Decree no. 11.075, dated 05/19/2022; Decree no. 58.054, dated 03/23/1966; Decree no. 2.661, dated 07/08/1998; Decree no. 5.975, dated 11/30/2006; Resolution CONAMA no. 16, dated 12/07/1989; Resolution CONAMA no. 378, dated 10/19/2006; Resolution CONAMA no. 379, dated 10/19/2006; Ordinance IBAMA no. 218, dated 05/04/1989; Ordinance IBAMA no. 438, dated 08/09/1989; Ordinance MMA no. 103, dated 04/05/2006; Ordinance MMA no. 253, dated 08/18/2006; Ordinance no. 1.896, dated 12/09/2013; Normative Instruction MMA no. 1, dated 09/05/1996; Normative Instruction MMA no. 07, dated 04/27/1999; Normative Instruction MMA no. 02, dated 05/10/2001; Normative Instruction MMA no. 06, dated 12/15/2006; Normative Instruction IBAMA no. 178, dated 06/23/2008; Regulatory Standard no. 31, dated 03/03/2005.
- State Legislation: State Law no. 2.308, dated October 22, 2010; State Law no. 1.426 dated 12/27/2001; State Law no. 3.883, dated December 17, 2021; State Law no. 1.548, dated January 29, 2004; State Law no. 2.836, dated December 30, 2013; State Law no. 3.595, dated December 20, 2019; Supplementary State Law no. 300, dated July 9, 2015; State Law no. 1.460, dated May 3, 2002; State Law no. 1.904, dated June 5, 2007; State Law no. 1.963, dated December 4, 2007; State Law no. 2.024, dated October 20, 2008; Decree no 503, dated April 6, 1999; Decree no. 8.452, dated August 14, 2003; Decree no. 3.414, dated September 12, 2008; Decree no. 3.415, dated September 12, 2008; Decree no. 5.507, dated July 15, 2010; Resolution/CEMACT no. 001, dated June 22, 2005.
- Municipal Legislation: Municipal Law no. 453, dated October 7, 2006; Municipal Law no. 457, dated December 7, 2006.
- International Agreements: FCCC/CP/2005/Misc.1; FCCC/CP/2007/6/add.1; FCCC/CP/2009/Add.1; FCCC/CP/2010/7/Add.1; FCCC/CP/2011/9/Add. 1; FCCC/CP/2012/8/Add.1; FCCC/CP/2013/Add.1; Decision9/CP.19; Decision10/CP.19; Decision12/CP.19; Decision13/CP.19; Decision14/CP.19; Decision15/CP.19; FCCC/CP/2015/Add.1; FCCC/CP/2015 Paris Agreement; FCCC/CP/2016 Decisions adopted by the Conference of the Parties (COP); FCCC/CP/2017, FCCC/CP/2018, FCCC/CP/2019 Decisions

adopted by the COP; CITES, dated 03/03/1973; Article 6 of the Paris Agreement (2021): Decision 1/CP.21; Glasgow Leaders' Declaration on Forests and Land Use (2021); Brazilian Nationally Determined Contribution (NDC).

The project proponents included adequate justifications to explain compliance with applicable laws, statutes, and other regulatory frameworks; the project is in compliance with VCS Project Description and Monitoring Report Document Template v4.2 – section 1.14.

3.1.11 Participation under other GHG programs

Projects registered (or seeking registration) under other GHG program(s)

The Jurua REDD+ Project has not received or sought to be registered in any other GHG program and has submitted the Project for validation and verification in VCS.

Rejection by other GHG programs

The Jurua REDD+ Project has not undergone validation and verification by any other GHG program and is therefore not rejected by any other GHG program.

The audit team searched for the project under the platforms of the following international standards, without finding matches: Gold Standard, Plan Vivo Standard, American Carbon Registry Standard and Climate Action Reserve Standard. The project is in compliance with VCS Standard v4.5, section 3.23.

3.1.12 Other forms of credit and supply chain (Scope 3) emissions:

Not applicable, in accordance with section 1.16.1 of Project Description and Monitoring Report Document , as Brazil is a Kyoto Protocol Non-Annex I Parties, having no obligation to reduce greenhouse gases emissions under the UN Framework Convention on Climate Change (UNFCCC). Furthermore, Jurua REDD+ Project has no current or historical connection with any credit generation initiative related to the Clean Development Mechanism (CDM), or other regulatory or voluntary schemes.

The VVB carried out the search on the CMD platform to confirm the aforementioned. Besides, the Jurua REDD+ Project has not been registered and does not wish registration in any other GHG program other than the VCS Program and it is not part of a supply chain. The project is in compliance with the VCS Standard v4,5, section 3.24.

3.1.13 Additional information relevant to the project, including:

Leakage management for AFOLU projects

According to section 1.18 of Project Description and Monitoring Report Document , the project proponent has proposed Low-Impact Agricultural Management and the implementation of Updates and Complementary Studies as key strategies to reduce the risk of activity displacement leakage. The Low-Impact Agricultural Management initiative involves targeted training programs for local stakeholders and

identified deforestation agents. These programs aim to equip participants with knowledge and practical skills to adopt sustainable agricultural practices, minimizing environmental impacts while optimizing production and improving household incomes. The Updates and Complementary Studies focus on enhancing the understanding of local stakeholders' and deforestation agents' needs, particularly their agricultural practices. These studies will help identify potential new areas of deforestation pressure and provide insights into the challenges stakeholders face in transitioning to sustainable practices.

By continuously refining its intervention approaches—such as adjusting low-impact agricultural management training based on local realities and shifts in agricultural activities - the project proponent aims to promote more sustainable and economically viable practices. This adaptive approach strengthens leakage prevention strategies and enhances community engagement, ensuring that conservation efforts remain aligned with local needs and contribute to long-term effectiveness of conservation efforts.

Commercially sensitive information

The project proponents indicated in section 1.18 of Project Description and Monitoring Report Document that information considered as sensitive was land documents and legal status, financial statements of the proponents, project's financial performance spreadsheet (budget) and other related documents, agreements and contracts signed between the related parties, inventories and other diagnostics. All commercially sensitive information was shared with the VVB.

Sustainable development contributions

In accordance with the section 1.17.1 of Project Description and Monitoring Report Document the project will contribute with the following SDGs:

- SDG4: The families that manifest interest in establishing a partnership to carry out the management of non-timber forest products in the Project Area will receive training to acquire the required knowledge and skills to adopt good practices for extraction of forest resources to be exploited in a sustainable way.
- SDG6: An important activity in this project is the management of non-timber forest products, which, as a scope of the project's activities, provides the strengthening of this practice by providing subsidies to be developed in a sustainable way, ensuring the sustainable use of forest resources and, as a result, the protection of the forest cover. The maintenance of forests is essential for the provision of water ecosystem services and, consequently, water availability for all.
- SDG12: The Project provides the responsible exploitation of forest resources, through the management of non-timber forest products in the Project Area, focusing on cat's claw (*Uncaria tomentosa*); comprising the implementation of partnerships with the surrounding interested parts to carry out the management, in order to enhance the activities of a sustainable forest-based economy in the Amazon, adding value to environmental assets from a conserved forest.
- SDG13: The activities developed by the project are focused on sustainable practices, which contribute to the reduction of unplanned deforestation and forest degradation, and as a result, reducing greenhouse gas emissions. The Project has the potential to reduce 413,927 tCO2e from

GHG emissions in 30 years, preventing the deforestation of native forest. The property surveillance activity will be carried out through the presence of workers in the area, in an integrated manner with remote monitoring activities of deforestation, allowing a refinement of prevention measures and combating illegal activities and maintenance of the forest.

- SDG15: The main purpose of project is the conservation of forest cover and restraining deforestation and forest degradation.

Besides, the project proponents stated in section 1.17.2 of Project Description and Monitoring Report Document that the SDGs contributions from the activities developed during the monitoring period are the following:

- **SDG6 (target 6.6):** the Project has protected the areas under management, thus contributing to the protection of the forest ecosystems that are part of the water-related ecosystems.
- **SDG12 (target 12.2):** through the cat's claw management activities carried out in the Project Area during the monitored period, in order to achieve an economic benefit through sustainable management without compromising the long-term availability and quality of the natural resource used.
- SDG13: ensuring the preservation of forest coverage preventing the emission of 14,362 tCO2e of GHG emissions during the monitored period, reducing the vulnerability of ecosystems and communities to climate change.
- **SDG15 (targets 15.1 and 15.2):** through the conservation of 389 hectares of forest during the monitoring period that would have been deforested in a scenario if the project was not carried out, and through the development of non-timber forest product management activities in the Project Area, respectively.

The project contributed to at least 3 SDGs, being in compliance with the VCS standard v4.5, section 3.17.

The project description provided by the project proponents is accurate, complete, and provides an understanding of the nature of the project and included as documentary evidence, as secondary and cartography information to support the details related to the project design, ownership, project activities, SDG contributions, project location and legal requirements. The VVB conclude that the Jurua REDD+ Project is likely to achieve estimated GHG emissions reductions, considering that actual results may vary since the estimates are based on assumptions that are subject to change. It was evaluated that the projections and assumptions are estimated in compliance with the principles of the VCS standard taken from ISO 14064-2.

3.2 Participation under Other GHG Programs

The project does not participate under other GHG program and has not been rejected by any other GHG program. The VVB searched for the project under the platforms of the other international standards, without finding matches. In conclusion, the project is eligible to participate under the VCS Program and does not participate in any other GHG program so there is no risk of double counting in this case.

3.3 Safeguards

3.3.1 No Net Harm

In accordance with the section 2.1 of Project Description and Monitoring Report Document , although the purpose of the Project's actions is to promote positive impacts, conservatively evaluated, the management of non-timber forest products is an activity that could cause some negative impact, associated with the explored species, such as *Uncaria tomentosa* population decline due to unproper cut, making regrowth impossible or overexploitation. The mitigation measures adopted are presented in the cat's claw management plan, which established an appropriate exploitation to be carried out within the property. According with this document, the exploration should be done manually, cutting the liana at a height of no less than 100cm from the ground, reducing the effort of the operator to make the cut and favoring the regrowth of the mother plant. Furthermore, there is a total volume of the harvest stipulated (282,53 tons in 2019, 2020 and 2021), avoiding overexploitation.

Besides, the Project activities do not cause any negative impact on local stakeholders since the project activities will focus on the Project Area and will not involve any local rural community. The project is in compliance with VCS Standard v4.5, item 3.19.1: "*Project proponents shall identify any potential negative impacts of project activities and design and implement measures to mitigate them*". The project proponent attached documentary evidence (Appendix 1: DOCUMENTATION PROVIDED BY THE PROJECT/ 00-auditoria/04-findings/CAR14/) of the meetings held with local stakeholders (including indigenous land Arara do Igarapé Humaitá), describing the information shared with them, including the benefits and positive impacts of the project.

3.3.2 Local Stakeholder Consultation

The project proponents indicated in section 2.2 of Project Description and Monitoring Report Document that six meetings were held with stakeholders in order to ensure that they informed and aware about the project and its goals, providing opportunities for them to discuss and participate in the Project validation process, and identifying potential themes to be worked on with the local rural communities. These meetings were held on November 25, 28 and 29, 2021, in Cruzeiro do Sul city, at the headquarters of the visited institutions, as listed below, and with the surrounding community, at Municipal School of Basic Education Maria José Bezerra Fontes; during these meetings the project activities and expected impacts were presented, allowing the alignment of expectations and obtaining recommendations and suggestions to the Project. The project proponents included photos of the meetings and an attendance list of the meeting developed on 29/November/2021.

The project proponents indicated that during the conversations, the potential for developing activities with the stakeholders was identified, to promote improvements in family farming through technical assistance, as well as strengthening sustainable practices, both by the opportunity for development and the interest expressed by the community. Thus, the project design incorporated a future closer relationship with these stakeholders in order to contribute to the improvement of socio-economic conditions and the practices applied, consequently promoting forest conservation.

Besides, it was also clarified that the communications of the project with the stakeholders will be done through three main means: virtual, written, oral and face-to-face. The main objective is to ensure that

there are different opportunities for exchange between stakeholders and proponents for discussion and participation throughout the project development.

The opening of these communication channels provides the engagement of the surrounding communities due to their knowledge about the Project design and implementation, including the monitoring results, the risks, costs, and benefits that the Project may bring, and the understanding of all relevant laws and regulations covering local workers' rights, as the Jurua REDD+ Project communication plan supports (Appendix 1: DOCUMENTATION PROVIDED BY THE PROJECT/03-infos-projetos/'2.2 Local Stakeholder Consultation'/).

Considering the above information, the project is in compliance with the following items of the VCS Standard v4.5:

- 3.18.2: "*The project proponent shall conduct a stakeholder consultation before implementation of project activities. Such consultations shall be done in a manner that is inclusive, culturally appropriate, and respectful of local knowledge, and shall include […].*"
- 3.18.3: "*The project proponent shall take due account of all input received during the stakeholder consultation and through ongoing communications. The input from stakeholders may require updates to project design which shall be reported as a project description deviation. Where the project proponent does not update the project design, the project proponent shall justify why updates are not appropriate. The project proponent shall demonstrate to the validation/verification body what action it has taken in respect of the stakeholder consultation as part of validation, and in respect of ongoing communications as part of each subsequent verification*."

The project proponents shall establish mechanisms for ongoing communication with local stakeholders to allow stakeholders to raise concerns about potential negative impacts during project implementation, in accordance with the VCS Standard v4.5, item 3.18.5. The implementation of the communication channel during the monitoring period was held by Ambiental Amazônia, the project proponents attached documentary evidence (Appendix 1: DOCUMENTATION PROVIDED BY THE PROJECT/ 17052023/ 06-3nd-findings-assessment/ CL15/ estrategia de comunicação e registros .pdf) to support that the contact information was shared as a communication channel with stakeholders.

3.3.3 Environmental Impact

In accordance with section 2.3 of Project Description and Monitoring Report Document that the impacts to the environment are related to restrain deforestation and, consequently, the reduction of emissions in the long term, along with forest preservation and by spreading sustainable practices, ensuring the valuation of the maintenance of the forest cover. The implementation of the project activities produces a direct and positive impact for biodiversity as the maintenance of vegetation cover and the conservation of biodiversity, acting directly against habitat loss and against the fragmentation of local vegetation cover. The project expects to avoid 7,697 hectares of deforestation within the project area in 30 years.

The project is in compliance with the Project Description and Monitoring Report Document template v4.2: "*Summarize any environmental impact assessments carried out with respect to the project, where applicable*."

3.3.4 Public Comments

The project proponents indicated in section 2.4 of Project Description and Monitoring Report Document that at the end of the public consultation period, it was identified that there were no negative comments. In this period, the Project received only one anonymous comment indicating interest in the Project. The project proponents attached documentary evidence to support it (Appendix 1: DOCUMENTATION PROVIDED BY THE PROJECT/00-auditoria/04-findings/CL17).

The project is in compliance with the VCS Standard v4.5, item 3.18.12: "*The project proponent shall take due account of any and all comments received during the consultation, which means they will need to either update the project design or demonstrate the insignificance or irrelevance of the comment. They shall demonstrate to the validation/verification body what action it has taken*".

3.3.5 AFOLU-Specific Safeguards

In accordance with the section 2.5 of Project Description and Monitoring Report Document , the stakeholders were identified used geographic data, bibliographic data and information obtained from municipal administrations and government departments from all municipalities in the reference region by Ambiental Amazônia. Literature data and information obtained from municipal administrations and government departments for all municipalities in the reference region were used to compose the study of local populations. It was considered a buffer of 20 km surrounding the project area, and there were identified the following stakeholders: the Santa Luzia Directed Settlement Project (PAD), Jamil Jereissati Sustainable Development Project (PDS), Recanto Forest Settlement Project (PAF), Tracuá Settlement Project (PA) and Pedro Firmino Settlement Project PA; 2 private properties; Riozinho da Liberdade Extraction Reserve (Resex); and Arara do Igarapé Humaitá Indigenous Land (TI).

On the other hand, about the respect for the resources of local stakeholders, the project proponents highlighted that the project is being developed according to the use and ownership rights of Amazônia Agroindústria EIRELI. Besides, they stated that there are no indigenous people or traditional communities in the Project Area, only around the Fazenda Seringal Valparaíso, and they do not depend directly on the area for their subsistence or for any other activity. The project proponents attached evidence (*the declaration signed on 29 November, 2022 by the representative of the indigenous land*) to support that the indigenous community does not directly depend on the project area for their livelihood or other activities.

Regarding risks to local stakeholders, the project proponents indicated in section 2.5 of Project Description and Monitoring Report Document that there are no stakeholders in the project area, only

around, as it is shown in figure 13 of Project Description and Monitoring Report Document , so there is no occurrence of likely natural and human-induced risk to local stakeholders and to their well-being expected during the project lifetime, including project design and consultation. Risks that may affect food security, land loss and climate changes are also not predictable for the stakeholders. The project is in compliance with VCS Standard v4.5, item 3.19.19: "*The project proponent shall recognize, respect, and support IPs', LCs', and customary rights holders' property rights and where feasible, take measures to help secure rights.*"

Besides, the project proponents highlighted that nor the project proponents or any other entity involved in the development or implementation of the project are involved in any form of discrimination or sexual harassment. The code of ethics and conduct that represents all the companies of the Ambipar Group was attached as a support (Appendix 1: DOCUMENTATION PROVIDED BY THE PROJECT/00-auditoria/04-findings/CL24). The project is in compliance with the VCS Standard v4.5, item 3.19.11: "*The project proponent shall ensure that no discrimination or sexual harassment occurs in the project design or implementation.*"

In addition, it was also stated that there are individuals with significant experience in AFOLU project design and implementation, carbon accounting and reporting under the VCS Program or other approved GHG programs. The project proponents included a brief description of the expertise and prior experience of each member in section 2.5 of Project Description and Monitoring Report Document , and the CV these members described were attached as a support (Appendix 1: DOCUMENTATION PROVIDED BY THE PROJECT/00-auditoria/04-findings/CAR25). The project is in accordance with VCS Standard v4.5, item 3.19.6: "*The management teams involved in the project shall have expertise in and prior experience implementing similar carbon or land management projects, and community engagement at the project scale and in the local context. Where relevant expertise and experience is lacking, the project proponent shall either demonstrate that they have partnered with other organizations with the relevant experience or have a recruitment strategy to fill the identified gaps.*"

Regarding communication and consultation requirements, the project proponents indicated in section 2.5 of Project Description and Monitoring Report Document : "*As presented in section 2.2, the Project will use three main means of communication (verbal, written, and face-to-face) with stakeholders in order to promote opportunities for discussion and participation throughout the Project development, as well as to ensure that its development and implementation, including the results of monitoring and the VCS Program validation and verification processes, are communicated to all stakeholders, including access to all documents and information concerning to the Project*".

Finally, the project proponent established the Juruá REDD+ Project Communication, which contains, among other information, the feedback and grievance redress procedures (the procedure involves three stages – amicable resolve in a culturally appropriate manner, mediation by a third party, and arbitration or competent courts), the ombudsman channel for complaints, and the management of stakeholder manifestations – information flow/handling of complaints, incorporation of suggestions/criticisms and adaptations in the project and planning of communication actions. The project is in accordance with VCS standard v.4.5, item 3.18.4: "*The project proponent shall develop a grievance redress procedure to address disputes with stakeholders that may arise during project planning and implementation, including*

with Regard to benefit sharing and all other safeguard and stakeholder engagement requirements mentioned in Sections 3.18 and 3.19 respectively. The procedure shall include processes for receiving, hearing, responding and attempting to resolve grievances within a reasonable time period, taking into account culturally appropriate conflict resolution methods (…)".

It is concluded that the project does not have negative impacts on the local interested parties that are around the project, this after the assessment of the processes of identification of actors, communication and participation, assessment of impacts, the review of compliance with the regulations and codes of ethics, the assurance of property rights, site visits and interviews. The proponent designed the project so that no risks to the well-being of stakeholders occur during the implementation of the project.

3.4 Application of Methodology

3.4.1 Title and Reference

The Jurua REDD+ Project has applied the methodology for REDD projects entitled VM0015 – Methodology for Unplanned Avoided Deforestation, version 1.1. Besides, the project applied the AFOLU Non-Permanence Risk Tool v4.0 for assessing the risk.

Finally, the project applied the tool "VT0001 - Tool for the Demonstration and Assessment of Additionality in VCS Agriculture, Forestry and Other Land Use (AFOLU) Project Activities" to assess the additionality.

3.4.2 Applicability

Table 8 Applicability conditions of the VM0015 – Methodology for Unplanned Avoided Deforestation, version 1.1

Condition	Applicability	VVB assessment
Baseline activities may include planned and unplanned logging, fuelwood collection, charcoal production, farming and grazing activities, provided that the category is unplanned deforestation, according to the most recent version of VCS AFOLU Requirements.	Baseline activities include unplanned deforestation in accordance with the recent version of VCS AFOLU requirements as a result of agriculture and livestock activities.	The project is in compliance with the criteria since baseline activities include unplanned deforestation which are in accordance with VCS AFOLU Requirements.
Project activities may be included in a category or a combination of categories defined in the methodology's scope description.	The Project's activity is "*Protection without cutting trees, using firewood or producing charcoal*", in accordance with the description of methodology scope.	The project meets the condition since its activities are included in the scope of the methodology, within the category A.
The Project Area may include different types of forests, including but not limited to primary forests, degraded forests, secondary forests, planted	Different forest types are found in the Project Area, mainly old growth forests that meet the Brazilian Designated National Agency's definition of "forest,	The project is in compliance with the condition since it has different type of forest within its area.

Condition	Applicability	VVB assessment
forests, and agroforestry systems, complying with the definition of "*forest*".	which is also used by PRODES Project of INPE - National Institute for Space Research, as it is a Brazilian governmental body, and also accepted by the VCS VM0015 methodology - APPENDIX 1. Section 1.13 presents a description of existing forest typologies	
At the start of the Project, the Project Area shall include only areas qualified as "forest" for at least 10 years prior to the Project start date.	Only areas qualified as "forest" for at least 10 years prior to the Project start date have been included in the Project Area.	The project proponents attached evidence to support that the project area has been as "*forest*" for at least 10 years prior to the Project start date. The project proponents indicated that the forest areas considered within the project boundaries are only the ones that classified as “forest” for at least 10 years in the UCEGEO data bases. This information was requested from the Climate Change Institute through a letter that was attached along with its corresponding response (Appendix 1: DOCUMENTATION PROVIDED BY THE PROJECT/17052023/06-3nd-findings-assessment/CAR05/'TERMO DE CESSÃO DE DIREITO USO DADOS GEOESPACIAIS.pdf').
The Project Area may include floodplain areas (such as lowland forests, floodplain forests, mangroves), provided that they do not grow on peat. Peat should be defined as organic soils with at least 65% organic matter and a minimum thickness of 50 cm. If the Project Area comprises peat swamp forests (e.g. peat swamp forests), this methodology is not applicable	The forest types found in the Project Area do not include peatlands.	The project meets the condition as the project location and prior conditions description supports (sections 1.12 and 1.13 of Project Description and Monitoring Report Document v8).

Table 9 Applicability conditions of VT0001

Condition	Applicability	VVB assessment
AFOLU activities the same or similar to the proposed project activity on the land within the	AFOLU activities, the same or similar activities proposed in the Project, within its boundaries, certified or not as AFOLU VCS Project, are not in violation of any	The project meets the condition since it is in compliance with the applicability laws and regulatory frameworks, as is

Condition	Applicability	VVB assessment
proposed project boundary performed with or without being registered as the VCS AFOLU project shall not lead to violation of any applicable law even if the law is not enforced	applicable law, even if the law is not enforced	explained in section 3.1.10 of this report.
The use of this tool to determine additionality requires the baseline methodology to provide for a stepwise approach justifying the determination of the most plausible baseline scenario. Project proponent(s) proposing new baseline methodologies shall ensure consistency between the determination of a baseline scenario and the determination of additionality of a project activity	The VM0015 baseline methodology provides a step-by-step approach to justify the most probable scenario definition for the baseline	The project meets the condition since it applied VM0015 for determining the baseline scenario, providing justification for the most probable scenario (see 3.4.4 of this report).

The Jurua REDD+ Project meets all the applicability conditions of the methodology and tool applied.

3.4.3 Project Boundary

In accordance with the section 3.3 of Project Description and Monitoring Report Document , the carbon pools and GHG sources of the project are the following:

Table 10 Carbon stocks of the project

Carbon stocks	Included/excluded	Choice Rationale
Aboveground	Tree: included	The carbon stock change included in this compartment is always significant.
	Non-tree: included	Compartment included in the forest class used in the baseline scenario.
Underground	Included	Significant stock included representing 11.63% of the total carbon stock.
Dead Wood	Included	Significant stock included representing 10.65% of the total carbon stock.
Harvested wood products	Excluded	There is no harvest of wood products activities in the project area.
Litter	Excluded	Recommended only when significant, in which case it is residual in the forest compartment as a whole.
Soil organic carbon	Excluded	Recommended when forests are converted to agricultural land. Not to be measured in conversions to pasture and perennial crops under the VCS Program.

The project proponent applied the tool for testing significance of GHG emissions in A/R CDM project activities" (Version 01) for determining the significance of underground and dead wood pools. It was corroborated in the spreadsheet of the ex-ante emissions, sheet '*significance-assessment*'.

Table 11 GHG sources, carbon sinks and stocks in the baseline scenario

Source		Gas	Included?	Rationale
Baseline	Biomass Burning	CO_2	Excluded	Accounted as carbon stock changes.
		CH_4	Excluded	According to VM0015 methodology, non-CO2 emissions can be conservatively omitted since, as demonstrated by scientific research, in the Amazon region the occurrence of natural fires is rare, what occurs is the predominance of anthropogenic fires related to human occupation (SCHROEDER et al, 2009). The project does not include or encourage these activities but promotes actions that mitigate actions of these deforestation agents by strengthening asset surveillance and monitoring deforested areas, so it is conservative to exclude these emissions.
		N_2O	Excluded	Considered negligible according to the VCS Program.
	Cattle Emission	CO_2	Excluded	Insignificant source.
		CH_4	Excluded	The project does not include livestock activities, so it is conservative to exclude such emissions once they are present in the baseline scenario.
		N_2O	Excluded	The project does not include livestock activities, so it is conservative to exclude such emissions once they are present in the baseline scenario.

The project proponent defines the project area as 24,076 hectares, between the municipalities of Cruzeiro do Sul and Porto Walter, in the Acre State in Brazil. A Reference Region (RR) of 549,600 hectares, the leakage belt has an area of 10,231 hectares and the leakage management area covers 721 hectares. The adopted historical reference period is July 28, 2010 to September 17, 2020, the project has a crediting period of 30 years, from July 31, 2020 to July 30, 2050; and the first base period is from is 31/07/2020 to 30/07/2030.

According to Section 3.3 of the Project Description and Monitoring Report Document , the Reference Region was defined using hydrographic basis boundaries and location of the main drivers of deforestation (settlements and small farms next to the Project Area). Ecological-Economic Zoning (ZEE) was the source of all data used in the spatial analysis, including the variables applied in the deforestation risk and allocation model. The deforestation risk model incorporates a variable for land tenure status, identifying areas located on private properties, glebes, settlements, and other public lands. The project proponent

followed the guidelines of VM0015 v1.1 to establish the boundaries of RR and it is duly described in the PD.

The VVB assessed the information reported in the Project Description and Monitoring Report Document about carbon pools, GHG sources and boundaries of the project and analyzed it with respect to the requirements indicated in the methodology and the validity of the justifications and evidence provided by the proponent of the project. Carbon pools, GHG sources, temporal boundaries, location, and area have been confirmed by verifying the consistency between the project design document, files of project boundaries submitted by the project proponents (Appendix 1: DOCUMENTATION PROVIDED BY THE PROJECT/03-infos-projetos/'3.3 Project Boundary'/), and the field visit (see Site Visits).

Considering the justifications, assumptions, secondary information (such as articles and GIS information) and the design of the project, the audit team deems that project boundary is correctly defined and in compliance with the applicable methodology and VCS requirements.

3.4.4 Baseline Scenario

The VVB review the following analyzes and information provided by the project proponents for the determination of the baseline (section 3.4 of Project Description and Monitoring Report Document)

- The analysis of historical land-use and land-cover change: according to the GIS analysis, between 2010 and 2020, there was a deforestation approximately of 2,057 hectares per year. The project proponents included a clearly definition of the LU/LC classes both for the project area, as well as for the reference region and the leakage belt in accordance with the requirements of VM0015; the map accuracy assessment and all the tables include the LU/LC defined and it was provided documentary evidence to support the historical LU/LC analysis made (Appendix 1: DOCUMENTATION PROVIDED BY THE PROJECT/ 03-infos-projetos/ '3.4 Baseline Scenario'/). The project developers have used the Historical Average approach for determining the deforestation trend, in accordance with applied methodology. The VVB concludes that the deforestation rates measured in different historical sub-periods in the reference region are accurately achieved and are conservative. Therefore, The VVB confirms that the conservative and accurate approach has been used for determining the historical rate of deforestation in the reference area throughout the crediting period. The calculation is in accordance with requirements of applied methodology equation 3.
- The analysis of agents, drivers, and underlying causes of deforestation: being the main agents and drivers of deforestation identified the family producers in settlement projects, settlers and medium and large producers. The analysis of main drivers was based on Acre's Ecological-Economic Zoning (ZEE)[6]. This report describes the lands where higher deforestation rates occur. It is indicated that main deforestation locations are mainly in settlements (36%) and private lots (29%). Therefore, the inclusion of family producers in settlement projects and settlers can be confirmed. Moreover, an analysis of deforestation carried out by the project proponent and based

[6] Acre, Governo do Estado Zoneamento ecológico-econômico do Acre. Secretária de Estado do Meio Ambiente. Rio Branco: Semapi. Disponível em: https://sema.ac.gov.br/zee-acre/.

on peer reviewed articles (file Deforestation_in_the_Brazilian_Amazon_Comparing_th), and public information (file SAD-agosto-2020). Therefore, it is clear that the agents of deforestation have been correctly determined, based on reliable information and their deforestation contribution have been substantially evidenced. The analysis of presented evidence related to deforestation agents and drivers (information such as academic articles, GIS information, news and information from institutional pages, in addition the project proponent included actions to address the underlying causes identified. The information allows to conclude that the deforestation rate is increasing, and it is likely that this trend will continue in the future.

- Project of future deforestation in the project area and leakage belt. The project proponents provided documentary evidence to support the analysis made (Appendix 1: DOCUMENTATION PROVIDED BY THE PROJECT/03-infos-projetos/ '3.4 Baseline Scenario'/; Appendix 1: DOCUMENTATION PROVIDED BY THE PROJECT/ 03032023/ CAR32/ and Appendix 1: DOCUMENTATION PROVIDED BY THE PROJECT/17052023/06-3nd-findings-assessment/CAR34). The project proponent fully adhered to the VM0015 v1.1 guidelines for projecting future deforestation, including the selection of the most accurate deforestation risk map using the Figure of Merit (FOM) approach. Table 29 and figure 32 of PD/MR demonstrates that six risk maps were generated using different combinations of factor maps, with the final selection based on the highest FOM value (0.0579). This corresponds to the model that incorporated all six factor maps: accessibility to roads, rivers, deforested areas, municipal settlements, land tenure status, and soil type classifications. The VVB concludes that the projection is the result of spatial modeling processes in defined analysis times and in accordance with the methodological requirements. The validation team had access to the factor maps used to reach these FOMs and concluded that the information provided in the PD section 3.4 is reliable. The factor maps were provided to the validation team as evidence.

The baseline scenario chosen corresponds to deforestation caused by squatters, family farmers and cattle ranchers and loggers and timber harvesting (continued land use activities prior to the project). During the on-site visit, the audit team verified this project is being implemented in a region with historical deforestation. The most likely scenario in the absence of the project is the continuation of deforestation due to the conversion of forests to pastures caused by squatters, family farmers (used to their subsistence agriculture, small-scale agricultural crops, grazing and property boundary demarcation) and cattle ranchers and loggers and timber harvesting.

The audit team deems that assumptions, justifications and data used in the identification of the baseline scenario are appropriately justified and can be deemed reasonable.

3.4.5 Additionality

The VVB assessed the steps of the VT0001 tool:

- As per Sub-step 1a, the land use scenarios identified in section 3.5 of Project Description and Monitoring Report Document include those scenarios required by VT0001. The audit team can confirm, through the review of the analysis historic supported by secondary (such as articles) and geographic information, visit and interviews (see Interviews and Site Visits), that all identified land use scenarios are credible. The project proponents chose the following scenarios: i) Continued land use activities prior to the Project (baseline scenario); ii) Management of non-

timber forest products, with other complementary REDD+ activities without registration as an AFOLU VCS Project.

- In sub-step 1b the project proponents highlighted that practices under scenario I are not in compliance with applicable mandatory laws and Regulations, these practices occur systematically and widely in the project region. On the other hand, scenario II is in compliance with all applicable legal and regulatory requirements.
- The selected baseline scenario corresponds to the continuation of the land use activities prior to the Project (squatters, family farmers and cattle ranchers and loggers). The VCS methodology VM0015 does give a stepwise approach for the selection of the baseline scenario. This approach was validated and indicates that the baseline is scenario continuation of pre-project activity.
- The VVB confirm the credibility of investment and sensitivity analysis, through the review of the determination of the appropriate method of analysis, the investment comparison analysis application, calculation, comparison of financial indexes, and sensitivity analysis. The conclusion was that the VCS AFOLU Project without the financial benefits of the credits recorded in the VCS cannot be considered the most financially attractive scenario, even with reasonable variations in critical assumptions.
- Regarding the common practice analysis, the project proponent used the project's Reference Region and, according to section 3.5 of PD/MR states, "*The similarity analysis applied had the basic premises of land tenure category and situation, size of area, main economic activities, environmental context and action of deforestation drives*." The ZEE land base, hydrography and road network were used for the analysis, and Table 35 of PD/MR presented the results. Although the project proponent found identical land tenure situations to the project area, essential distinctions in scale and scope of activities, management of non-timber forest products, and territory focus make them not similar to the proposed project activities. These distinctions are duly described in Section 3.5 of PD/MR. The above was validated in the interviews and in the on-site inspections (see Interviews and Site Visits).

The project is additional by complying with the steps of the VT001 tool. This means that, by not corresponding to the baseline scenario, its additionality is guaranteed.

The procedures for identifying the additionality have been correctly followed according to the steps in the combined tool. Thus, the audit team considers that the additionality is correctly justified.

3.4.6 Quantification of GHG Emission Reductions

The audit team reviewed the quantification of GHG emission reductions made by the project proponents according to the VM0015 – Methodology for Unplanned Avoided Deforestation, version 1.1:

- The baseline emissions were estimated following steps of the methodology; it was considering data from two local studies: Salimon et al (2011) and Nogueira et al (2008). Despite the presence of various forest typology subclasses, both the Project Area and the Reference Region are composed entirely (100%) of the "Open Ombrophilous Forest" typology. The project proponent provided a robust statistical analysis demonstrating no significant differences in biomass and carbon stocks among the forest sub-typologies, justifying the decision not to apply stratification.

The VVB reviews that the biomass values for the land cover of the Project's reference region are precisely.

- The VVB has reviewed the calculation of long-term (20 years) average carbon stocks of post-deforestation classes: the identified classes are secondary vegetation and pasture. For the 1st, an average biomass between 6 and 30 years has been obtained from peer-reviewed article SALIMON & BROWN (2000) (SECONDARY FORESTS IN WESTERN AMAZONIA) where values of biomass have been taken:

Years of abandonment	Linear rate, $Mg*ha^{-1}\ yr^{-1}$	Instantaneous rate, $Mg*ha^{-1}\ yr^{-1}$
6	8.6	5.4
7	9.1	5.2
12	6.2	4.6
30	4.5	3.0

The calculation of average biomass was duly provided in the ER calculations table 16 and explained in the PD section 5.1. The values are considered accurate and in accordance with applied methodology (peer-review source).

Regarding the pasture, the value is also obtained from peer reviewed article (Salimon et al (2011) - "Estimating state-wide biomass carbon stocks for a REDD plan in Acre State, Brazil").

For determining the long-term average, weighted average biomass based on the area of each post-deforestation classes have been calculated. Moreover, a 20% uncertainty is applied to this calculation, therefore, in accordance with applied methodology. Moreover, it is confirmed that the estimations are location specific (State of Acre, Brazil) and that the estimations were carried out between 6 and 30 years, therefore with significant age range for the secondary vegetation. For the pasture, the estimated data is also obtained from Acre. No age range is applicable considering that low variation on biomass occurs. This assumption is considered reasonable by the validation team. The validation team considers this calculation is accurate as it is based on peer-review articles, conservative as it considers the 20% uncertainty and has been determined in accordance with applied methodology.

- The VVB review the carbon stock changes due to unavoidable unplanned deforestation within the project area. An effectiveness (EI) of the project of 89% is estimated and increases 1% every three years. This effectiveness index has been estimated as 1- (non-permanence risk rate) (which has been determined as 11%). The applied rational for determining this index is considered reliable, considering that the non-permanence risk is based on specific activities proposed by the project activity and their impact on the deforestation reduction. Non-CO_2 emissions from forest fires were not accounted for baseline scenario, if these emissions occur during the development of project activities, they will be monitored and reported to verify if there will be an increase in estimated emissions under the project scenario.

- Leakage: one source of leakage is considered: decrease in carbon stocks and increase in GHG emissions associated with activity displacement leakage. The leakage belt was determined following the mobility approach describes in VM0015. The project proponent has proposed Low-Impact Agricultural Management and the implementation of Updates and Complementary Studies as key strategies to reduce the risk of activity displacement leakage. The proposed activities aim to provide the stakeholders the necessary skills to implement sustainable practices on their own properties, thereby reducing pressure on new deforestation areas. In this way, these

measures serve as effective leakage prevention strategies, ensuring that deforestation agents abandon their deforestation practices rather than displacing them outside the project area. Considering the deforestation dynamics in the Reference Area, the characteristics of potential deforestation agents, and the leakage prevention measures implemented by the project, the Juruá REDD+ Project conservatively estimates that up to 29.79% of the deforestation that would have occurred within the Project Area could be displaced to the Leakage Belt.

The estimations of the net GHG emissions reductions attributed to the project were made following equation 19 of the methodology. The number of Verified Carbon Units was calculated following equation 20 of the methodology. The percentage of retention of the buffer is calculated according to AFOLU Non-Permanence Risk Tool. The overall non-permanence risk rating is 11%.

Table 12 Reduction of emissions Ex-ante

Project Year t	Baseline carbon stock changes	Project carbon stock changes	Leakage belt carbon stock changes	Ex-ante GHG emissions reduced
	tCO2-e	tCO2-e	tCO2e	tCO2e
Jul/20 - Jul/21	6,396	704	1,906	3,787
Jul/21 - Jul/22	8,284	911	2,468	4,905
Jul/22 - Jul/23	9,207	1,013	2,743	5,452
Jul/23 - Jul/24	6,981	768	2,080	4,134
Jul/24 - Jul/25	7,984	878	2,378	4,727
Jul/25 - Jul/26	3,209	321	956	1,932
Jul/26 - Jul/27	7,837	784	2,335	4,719
Jul/27 - Jul/28	3,057	306	911	1,841
Jul/28 - Jul/29	4,055	365	1,208	2,482
Jul/29 - Jul/30	5,461	491	1,627	3,343
Jul/30 - Jul/31	21,531	1,938	6,414	13,179
Jul/31 - Jul/32	18,212	1,457	5,425	11,330

Project Year t	Baseline carbon stock changes	Project carbon stock changes	Leakage belt carbon stock changes	Ex-ante GHG emissions reduced
	tCO2-e	tCO2-e	tCO2e	tCO2e
Jul/32 - Jul/33	16,499	1,320	4,915	10,264
Jul/33 - Jul/34	23,996	1,920	7,148	14,928
Jul/34 - Jul/35	23,539	1,648	7,012	14,879
Jul/35 - Jul/36	18,631	1,304	5,550	11,777
Jul/36 - Jul/37	12,601	882	3,754	7,965
Jul/37 - Jul/38	16,348	981	4,870	10,497
Jul/38 - Jul/39	24,309	1,459	7,242	15,609
Jul/39 - Jul/40	35,859	2,152	10,682	23,025
Jul/40 - Jul/41	28,303	1,415	8,431	18,456
Jul/41 - Jul/42	27,310	1,365	8,136	17,809
Jul/42 - Jul/43	56,766	2,838	16,911	37,017
Jul/43 - Jul/44	31,747	1,270	9,457	21,020
Jul/44 - Jul/45	36,872	1,475	10,984	24,413
Jul/45 - Jul/46	33,126	1,325	9,868	21,933
Jul/46 - Jul/47	49,217	1,477	14,662	33,079
Jul/47 - Jul/48	31,376	941	9,347	21,088
Jul/48 - Jul/49	30,806	924	9,177	20,705
Jul/49 - Jul/50	40,514	810	12,069	27,635

The VVB replicated the quantification using the data and parameter values provided in the project description (values of sections 4, 5 and 6 of Project Description and Monitoring Report Document and available also in the following files: '*VM0015_planilha de calculo_jurua-*' and '*vcs-monitreport-jurua-2021*'). All data and parameter values used in the project description are considered reasonable in the context of the project, data sources indicated by the project proponents (secondary information from two local studies) were considered appropriate. EARTHOOD was able to confirm that the quantification methods, including all data and parameters used in the equations, and all other data sources used, meet the methodological and standard requirements. Procedures for quantifying the GHG emission reductions were carried out in accordance with the applied methodology.

3.4.7 Methodology Deviations

In accordance with section 3.6 of Project Description and Monitoring Report Document , there are no methodological deviations.

The VVB ensured that the project developed the procedures following the guidelines of VM0015 methodology and the VVB concluded that there are no methodological deviations. The project is in compliance with VCS Standard v4.5, section 3.20.

3.4.8 Monitoring Plan

The monitoring plan include revision of the baseline, monitoring of actual carbon stock changes and GHG emissions within the project area, monitoring of land-use and land-cover change within the project area, monitoring of carbon stock changes and non-CO2 emissions from fires, monitoring of impacts of natural disturbances and other catastrophic events, and monitoring of Leakage.

The monitoring plan is described in detail in Section 6.3 of Project Description and Monitoring Report Document where the parameters available at the time of validation, the parameters to be monitored, the frequency of records, and the QA/QC procedures are considered appropriate and suitable.

Table 13 Data and parameters available at validation (section 6.1 of joint PD/MR)

Parameter	Unit	Description	Value	Source
Expansion factor to aboveground tree biomass	dimensionless	Expansion factor to aboveground tree biomass to include the aboveground biomass of trees <10cm (0.04), obtained from the literature, discounted by 30% for conservativeness.	0.028	Nogueira et a., 2008
Carbon Fraction in biomass - CF		Used to convert biomass values to carbon	0.44	2006 IPCC Guidelines for National Greenhouse Gas Inventories. Volume 4: Agriculture, Forestry and Other Land Use. Chapter 4: Forest Land

Parameter	Unit	Description	Value	Source
Expansion factor for inclusion of non-tree aboveground biomass		Expansion factor to include non-tree aboveground biomass (0.119) obtained from the literature, discounted by 30% for conservativeness	0.0833	Nogueira et a., 2008
Root-to-shoot		Root-to-shoot expansion factor to include belowground tree biomass	0.22	Conservative value extracted from Table 4.4 of the IPCC 2006 Guidelines for National Greenhouse Gas Inventories Volume 4 AFOLU
Conversion factor		Conversion factor between carbon mass to CO2 mass, where 44 tCO2 corresponds to 12 tC	44/12	From scientific literature 2006 IPCC Guidelines for National Greenhouse Gas Inventories Volume 4 AFOLU
Ctot	tCO2e/ha	Average carbon stock per hectare in all carbon pools in the forest class used in the baseline scenario	493.8	Calculated by secondary data (Salimon and Nogueira studies) and conservative expansion factors

Table 14 Data and parameters monitored (section 6.2 of joint PD/MR)

Parameter	Unit	Description	Frequency and monitoring equipment	Source
ABSLPAt	ha	Annual area of baseline deforestation in the Project Area in year t	Annual, Digital processing program remote sensing images and geographic information system	Qualified and scientifically recognized sources such as PRODES, and MapBiomas alert. . The GIS analysis has been carried out in parallel by the validation team regarding the deforestation area in the baseline scenario in the reference region. The values corresponds to the average values achieved in the period 2011-2020. Values applied are from Prodes and therefore, they are considered accurate and conservative.
ΔCUDdPAt	tCO2e	Total change in actual carbon stock due to unavoidable unplanned deforestation in year t in the Project Area	Annual, emission spreadsheets	Calculated using the detected areas of forest loss in the Project Area and average carbon stock
AUFPAicl,t	ha	Areas affected by forest fires in the icl class in which carbon stock recovery occurs in year t	Whenever forest fires occur, Digital processing program remote sensing images and geographic information system	Proper sources for forest fire detection and the scars caused to identify and classify affected areas
ΔCUFdPAt	tCO2e	Total reduction in carbon stock due to unplanned (and planned - where applicable) forest fires in year t in the Project Area	Whenever a forest fire occurs, emission spreadsheets	Calculated using the affected areas in the Project Area and the average carbon stock
ACPAicl,t	ha	Analysis Area within the Project Area affected by catastrophic events in class icl in year t	Whenever a catastrophic event occurs, remote sensing images and geographic information system	High resolution satellite imagery
ΔCUCdPAt	tCO2e	Total reduction in carbon stock due to catastrophic events in year t in the Project Area	Whenever a catastrophic event occurs, emission spreadsheets	Calculated using the affected areas in the Project Area and the average carbon stock

Parameter	Unit	Description	Frequency and monitoring equipment	Source
ΔCLPMLKt	tCO2e	Decrease of carbon stock due to leakage prevention measures in year t	Annual, emission spreadsheets	Follow-up report of the project activities that were implemented and other records related to the leakage prevention activities
EgLKt	tCO2e	Emissions from grazing livestock in the leakage management areas in year t	Annual, emission spreadsheets	Existing records on the practice of grazing
ABSLLKt	ha	Annual area of baseline deforestation within the leakage belt in year t	Annual, remote sensing images from digital processing and geographic information system program.	Qualified and scientifically recognized sources such as PRODES, and MapBiomas Alert. The GIS analysis has been carried out in parallel by the validation team regarding the deforestation area in the baseline scenario in the reference region. The values corresponds to the average values achieved in the period 2011-2020. Values applied are from Prodes and therefore, they are considered accurate and conservative.
ΔCADLKt	tCO2e	Total reduction in carbon stocks due to displaced deforestation in year t	Annual, emission spreadsheets	Calculated using the detected areas of forest loss in the Leakage Belt, the average carbon stock, and the estimated loss in carbon stock at baseline for the Leak Belt
RFt	%	Risk factor used to calculate VCS buffer credits	Annual, AFOLU Non-Permanence Risk Tool	VCS Non-Permanence Risk Report
No. of reports	Number/ year	The data will be used to monitor project activities. In this way, the reports from "satellite monitoring of deforestation" and "implementation, monitoring and evaluation of activities developed by the project" will be followed up and counted.	Annual	- Deforestation monitoring report; - Follow-up report of the project activities that have been implemented; - Report planning the activities to be developed in the following years.
No. of trainings and/or interventions	Number/ year	The data will be used to monitor Project activities. Therefore, training and interventions carried out from activities for "property surveillance improvement" and "strengthening the management of non-timber forest products" will be monitored and counted.	Annual	Reports (e.g. follow-up report on project activities that have been implemented), participant attendance lists, contracts, and other documents.
No. of procedures/protocols	Number/ year	The data will be used to monitor project activities. Therefore, the procedures and protocols produced from activities for "property surveillance improvement", "implementation, monitoring and assessment of activities developed by the Project" and "strengthening the management of non-timber forest products" will be monitored and counted.	Annual	Documents with procedures and protocols described referring to themes related to the Project

Moreover, the monitoring plan structure and procedures have been duly described in section 6.3 of the PD. The following aspects have been detailed in the PD:

- Monitoring of changes in project and leakage area and ex-post net anthropogenic GHG emissions baseline projections, which involves the following:
    - Technical description of monitoring tasks

- Data to be collected
- Description of data collection procedures
- Quality control and quality assurance procedures
- Data archiving
- Organization and responsibilities of parties involved in all monitoring activities (further detailed in section 1.11 of the PD)
- Procedures for handling non-conformities with the validated monitoring plan
- Oversight and Accountability Policies (duly detailed in section 2.5 of the PD)
- sampling procedures

The VVB compared all parameters listed in the monitoring plan to the requirements of the methodology and determined that all parameters met the requirements of the methodology. The VVB validated the compliance of the monitoring plan with the requirements of the applied methodology and VCS Standard.

3.5 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 Non-Permanence Risk Report (v8) and the Excel of risk tool. The audit team assessed the rationale, appropriateness, documentation, and justifications of risk ratings implemented by project proponent:

Risk	Assessment of rationale, assumptions, and justification	Assessment of quality of documentation and data provided	Conclusion
Internal risks **Risk rating= 11**			
Project management Risk rating= -2	The audit team evaluated the justification for the risk rating and the mitigation about the significance experience of the team members.	The documentation provided was the CV of the team members and a brief description of their prior experience and expertise.	Risk rating is appropriate.
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 showing cash flow breakeven point that allowed for assessment by the audit team which conclude it has a good quality.	Risk rating is appropriate.
Opportunity cost Risk rating= -2	The audit team evaluated the justification for rating since the project is protected by legally binding commitment to continue management practices over the project longevity (30 years).	The documentation provided is the description and supports on forest regulations, specifically Law nº 12.651 of 2012/05/25.	Risk rating is appropriate.

Risk	Assessment of rationale, assumptions, and justification	Assessment of quality of documentation and data provided	Conclusion
Project longevity Risk rating= 15	The audit team evaluated the justification for rating the risk, that is related with the legally binding commitment that has the project to continue management practices over the project longevity (30 years).	The documentation provided is the description and supports on forest regulations, specifically Law nº 12.651 of 2012/05/25.	Risk rating is appropriate.
External risks Risk rating= 0			
Land Tenure and Resource Access/Impacts Risk rating= 0	The audit team evaluated the justification for rating the risk and the mitigation.	The documentation provided is the ownership of the property where the project is located and the description and explanation of forest regulations, specifically Law nº 12.651 of 2012/05/25.	Risk rating is appropriate.
Community Engagement Risk rating= 0	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 the evidence of the meetings that were held with stakeholders.	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.	Risk rating is appropriate.
Natural risks Risk rating= 0			
Fire Risk rating= 0	The audit team evaluated the justification for rating the fire risk.	The documentation provided is the description of significance of the risk supported by secondary information (four sources: SANFOR et al.,1985; ARAÚJO, 2015; SCHROEDER et al., 2009; SOUZA et al., 2019).	Risk rating is appropriate.
Pest and Disease outbreaks Risk rating= 0	The audit team evaluated the justification for rating the pest and disease outbreaks risk.	The documentation provided is the description of significance of the risk supported by secondary information (three sources: Haverroth, 2016; NAIR, 2001; FAO, 2001).	Risk rating is appropriate.
Extreme Weather Risk rating= 0	The audit team evaluated the justification for rating the extreme weather risk.	The documentation provided is the description of significance of the risk supported by secondary information (four sources: Lewis et al. 2011; Marengo, 2016; Aragão et al, 2018; CEPED, 2012).	Risk rating is appropriate.
Geological Risk Risk rating= 0	The audit team evaluated the justification for rating the geological risk.	The documentation provided is the description of significance of the risk supported by secondary information (three sources: Assumpção, 2011; Allen, 2011; Santos et al., 2019).	Risk rating is appropriate.
Forest Blowdowns Risk rating= 0	The audit team evaluated the justification for rating the geological risk.	The documentation provided is the description of significance of the risk supported by secondary information (six	Risk rating is appropriate.

Risk	Assessment of rationale, assumptions, and justification	Assessment of quality of documentation and data provided	Conclusion
		sources: Espírito-Santo, 2010; Higuchi et al., 2011; Malhi et al., 2008; Phillips et al., 2009; Phillips et al., 2004; MARRA, 2010).	
Overall Non-Permanence Risk Rating **Overall Risk Rating = 11**			

The VVB carried out an assessment of all rationale, assumptions, justifications, documentation, and data used to support the risk rating.

4 VERIFICATION FINDINGS

4.1 Accuracy of GHG Emission Reduction and Removal Calculations

Earthood Services Limited was able to confirm that the equations, sources, assumptions, parameters, and statistical procedures met the methodological and standard requirements. The procedures for quantifying baseline emissions, the project emissions, leakage, and emission reductions were performed in accordance with the applied methodology. The VVB confirms that all calculations carried out are conservative and accurate. The calculations are duly provided in the files "VM0015_planilha de calculo_jurua" and vcs-monitreport-jurua-2021.

4.2 Quality of Evidence to Determine GHG Emission Reductions and Removals

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

- Recalculation and assurance of areas from project shapefiles.
- Recalculation and assurance of the of GHG emission reductions considering parameters, area, equations, etc.
- Comparison of what has been recalculated with what the project proponent presented in its spreadsheet and monitoring report.

The GHG emission reductions 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.

5 VALIDATION AND VERIFICATION OPINION

The project complies with the validation and verification criteria for projects set out in VCS Version 4. The project has been implemented in accordance with the validated project description.

The audit team concludes, with reasonable assurance, that the project is likely to achieve the GHG emission reductions of 413,927 tCO2eover its 30 years, taking into account that this results and values may vary since the estimates are based on assumptions and are subject to change. The VVB also concludes that the quantification of the net GHG reductions, during the verification period, is free of material misstatement and complies with the verification criteria; the project generates for the monitoring period a total net GHG reductions of 14,362 tCO2e and 12,747 tradable credits (VCUs) applying a buffer of 11% due the Non-Permanence-Risk calculation.

The audit body also highlights that the process of validation and verification of the Jurua REDD+ Project was developed in accordance with ISO 14064-3:2019.

Monitoring period: from 31/July/2020 to 30/July/2022.

The validated GHG reductions are presented in the following tables (prior buffer discount):

Year	Estimated GHG emission reductions or removals (tCO2e)
Jul/20 - Jul/21	3,787,
Jul/21 - Jul/22	4,905
Jul/22 - Jul/23	5,452
Jul/23 - Jul/24	4,134
Jul/24 - Jul/25	4,727
Jul/25 - Jul/26	1,932
Jul/26 - Jul/27	4,719
Jul/27 - Jul/28	1,841
Jul/28 - Jul/29	2,482
Jul/29 - Jul/30	3,343
Jul/30 - Jul/31	13,179
Jul/31 - Jul/32	11,330
Jul/32 - Jul/33	10,264
Jul/33 - Jul/34	14,928
Jul/34 - Jul/35	14,879

Year	Estimated GHG emission reductions or removals (tCO2e)
Jul/35 - Jul/36	11,777
Jul/36 - Jul/37	7,965
Jul/37 - Jul/38	10,497
Jul/38 - Jul/39	15,609
Jul/39 - Jul/40	23,025
Jul/40 - Jul/41	18,456
Jul/41 - Jul/42	17,809
Jul/42 - Jul/43	37,017
Jul/43 - Jul/44	21,020
Jul/44 - Jul/45	24,413
Jul/45 - Jul/46	21,933
Jul/46 - Jul/47	33,079
Jul/47 - Jul/48	21,088
Jul/48 - Jul/49	20,705
Jul/49 - Jul/50	27,635
Estimated total ERs	413,927
Total number of years of credit	30
Average annual ERs	13,798

The verified net GHG reductions are presented in the following table:

Project Year t	Changes in baseline carbon stock	Ex-post project carbon stock changes	Ex-post leakage belt carbon stock changes	Ex-post GHG emissions reduced	Ex-post marketable VCUs	Reserve credits (ex-post)
	annual	annual	annual	annual	annual	annual
	tCO2-e	tCO2e	tCO2e	tCO2e	tCO2e	tCO2e
31-July-2020 – 30-July-2021	6,396	0	313	6,083	5,380	704

Project Year t	Changes in baseline carbon stock	Ex-post project carbon stock changes	Ex-post leakage belt carbon stock changes	Ex-post GHG emissions reduced	Ex-post marketable VCUs	Reserve credits (ex-post)
	annual	annual	annual	annual	annual	annual
	tCO2-e	tCO2e	tCO2e	tCO2e	tCO2e	tCO2e
31-July-2021 – 30-July-2022	8,284	0	5	8,279	7,367	911
Total	**14,680**	**0**	**318**	**14,362**	**12,747**	**1,615**

Finally, the following table presents the estimated ex-ante GHG emission reductions and the achieved emission reductions for this monitoring period, besides it has the percentage difference and its correspond justification for the difference.

Ex-ante emissions reductions	Achieved emissions reductions	Percent difference	Justification for the difference
8,692	14,362	-65%	During the monitored period, a much smaller area of unplanned deforestation was identified than expected in the baseline. In addition, small leakage was detected in this monitored period. Concluding, during the monitored period, a negative percentage difference was identified for the project, where more emissions were avoided in the monitored period than expected in the baseline.

Approved by

Dr. Kaviraj Singh

CEO

Earthood Services Limited

Date: 03-07-2025

Place: Gurugram, Haryana

APPENDIX 1: DOCUMENTATION PROVIDED BY THE PROJECT

Folder				File
***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)*				
01-vcs-documents				vcs-listing-representation.pdf
				verra-communication-agreement.pdf
02-joint-PD-MR				VCS-Joint-Project-Description-Monitoring-Report-Template-v4.1_eng-V6.pdf
03-infos-projetos/	vcs-monitreport-jurua-2021-v8.xlsx VM0015_planilha de calculo_jurua-v8.xlsx			
	1.5 Project Proponent'/	contrato-amazonia-agroindustria-biofilica/		2022.03.23-contrato-amazonia-agroindustria-final-v2-Clicksign.pdf
	1.6 Other Entities Involved in the Project	ambiental-amazonia/		aditivo-contrato-ambiental-amazonia.pdf
				contrato-ambiental-amazonia.pdf
				orcamento-ambiental-amazonia.docx
			notas/	NF 78.pdf
				NF 81.pdf
				NF 82.pdf
				NF 85.pdf
				NF 91.pdf
				NF 94.pdf
		gestao-resultados-consultores/		2020-contrato-consultoria.pdf
				2021-contrato-consultoria.pdf
	1.7 Ownership/	cadeia-dominial/		cadeia-dominial-n°-5197-seringal-valparaíso.pdf
		car/		car-valparaiso-faz-belo-horinzonte.pdf
		ccir/		ccir-valparaiso-2021.pdf
		certidao-inteiro-teor-matricula/		14092022-certidao-inteiro-teor.pdf
		certidao-judicial/		2022-certidao-judicial.pdf
		doacao-incra/		Descrição do histórico sobre o processo de doação de parte da área do James para o INCRA.docx
				doc-funai-valparaiso.pdf
				doc-incra-valparaiso.pdf
				parte-certidao-inteiro-teor.pdf
		ibama/		certd-negat-debit-ibama-CNPJ.pdf
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				memorial-seringal-valparaiso-parte-II.pdf

Folder				File
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				Projeto Carbono Valparaiso - PG2.jpg
				Thumbs.db
			20220419-workshop-parceiros/	20220419-lista-presenca.jpeg
				Thumbs.db
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			apresentacao/	2022-ws-kickoff-ambiental-amazonia.pdf
				2022-ws-kickoff-redd-jurua.pdf
				2022-ws-kickoff-redd-jurua.pptx
	1.11 Description of the Project Activity/	comunicacao/		analise-relevancia.docx
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				formulario-registro.xlsx
				partes interessadas.xlsx
				plano-comunicacao-jurua.docx
		protocolo-imc/		202109-requerimento-IMC-protocolado.pdf
				202207-oficio-requerimento-IMC-protocolado.pdf
		reunioes/	2020-reunioes-iniciais/	Projeto Carbono Valparaiso - PG2.jpg
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				documento-20220603-193950.pdf
				projeto-carbono-valparaiso-PG1.jpg
			20220419-workshop-parceiros/	20220419-lista-presenca.jpeg
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	1.13 Conditions Prior to Project Initiation/		hidrografia/	Hidrografia.shapefile
			solos/	Solos.shapefile
	1.17.2 Sustainable Development Contributions Activity Monitoring/		emissoes-gee/	VM0015_planilha de calculo_jurua-v3.xlsx
				vcs-monitreport-jurua-2021-v3.xlsx
			ods/	180801_ods_metas_nac_dos_obj_de_desenv_sustentavel_propos_de_adequa.pdf

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					Licenças de Exploração de Unha de Gato.pdf
					plano-exploracao-especie-nao-madeireira-2019.pdf
	1.18 Additional Information Relevant to the Project/		demonstracoes-financ-amaz-agroindust/		balanco-patrimonial-analítico-2015.pdf
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					balanco-patrimonial-analítico-2017.pdf
					balanco-patrimonial-analítico-2018.pdf
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					balanco-patrimonial-analítico-2021.pdf
	2.1 No Net Harm/		operacao-unha-de-gato/		2012-licenca-operação.pdf
					licenca-manejo-unha-de-gato.pdf
					plano-exploracao-especie-nao-madeireira-2019.pdf
	2.2 Local Stakeholder Consultation/		comunicacao-biofilica/		220831-operacoes-emkt-cpjurua.pdf
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					mailing-consulta-email.xlsx
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	3.3 Project Boundary/		limites-do-projeto/		ap.shapefile
					cv_v4.gpkg
					mv_v1.gpkg
					rr_v3.gpkg
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						Sedes_Municipais.shapefile
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						rr_v3.gpkg
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						rr_v3.gpkg
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						Desmate_2020.TIFF
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						Distancia_desmatamento2020.TIFF
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						Distancia_rios_principais.TIFF

Folder						File
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						Distancia_estradas_2000.TIFF
						Distancia_estradas_2010.TIFF
						Distancia_sedes.TIFF
						solos.TIFF
						fundiario.TIFF
					tabelas/	Desmatamento_UCEGEO_RR_Jurua.xlsx
						projecoes do modelo Linear - UCEGEO.xlsx
			02 - resultados/			me leia.rtf
				01 - projecoes/	resultados do modelo v3/	cenario_desmate_1v_2021.TIFF
						cenario_desmate_1v_2022.TIFF
						cenario_desmate_1v_2023.TIFF
						cenario_desmate_1v_2024.TIFF
						cenario_desmate_1v_2025.TIFF
						cenario_desmate_1v_2026.TIFF
						cenario_desmate_1v_2027.TIFF
						cenario_desmate_1v_2028.TIFF
						cenario_desmate_1v_2029.TIFF
						cenario_desmate_1v_2030.TIFF
						cenario_desmate_1v_2031.TIFF
						cenario_desmate_1v_2032.TIFF
						cenario_desmate_1v_2033.TIFF
						cenario_desmate_1v_2034.TIFF
						cenario_desmate_1v_2035.TIFF
						cenario_desmate_1v_2036.TIFF
						cenario_desmate_1v_2037.TIFF
						cenario_desmate_1v_2038.TIFF
						cenario_desmate_1v_2039.TIFF
						cenario_desmate_1v_2040.TIFF
						cenario_desmate_1v_2041.TIFF
						cenario_desmate_1v_2042.TIFF
						cenario_desmate_1v_2043.TIFF
						cenario_desmate_1v_2044.TIFF
						cenario_desmate_1v_2045.TIFF
						cenario_desmate_1v_2046.TIFF
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						cenario_desmate_1v_2048.TIFF
						cenario_desmate_1v_2049.TIFF

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	cenario_desmate_2v_2022.TIFF
	cenario_desmate_2v_2023.TIFF
	cenario_desmate_2v_2024.TIFF
	cenario_desmate_2v_2025.TIFF
	cenario_desmate_2v_2026.TIFF
	cenario_desmate_2v_2027.TIFF
	cenario_desmate_2v_2028.TIFF
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	cenario_desmate_2v_2044.TIFF
	cenario_desmate_2v_2045.TIFF
	cenario_desmate_2v_2046.TIFF
	cenario_desmate_2v_2047.TIFF
	cenario_desmate_2v_2048.TIFF
	cenario_desmate_2v_2049.TIFF
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	cenario_desmate_3v_2022.TIFF
	cenario_desmate_3v_2023.TIFF
	cenario_desmate_3v_2024.TIFF
	cenario_desmate_3v_2025.TIFF
	cenario_desmate_3v_2026.TIFF

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***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)*	
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	cenario_desmate_3v_2029.TIFF
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	cenario_desmate_3v_2032.TIFF
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	cenario_desmate_3v_2036.TIFF
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	cenario_desmate_3v_2038.TIFF
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	cenario_desmate_3v_2049.TIFF
	cenario_desmate_3v_2050.TIFF
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03 - relatorio/	me leia.rtf
04- scripts/	me leia.rtf
04- scripts/ 01 - R/	Estatisticas de projecoes de desmatamento_v3 - repeticao.Rmd
04- scripts/ 01 - R/	time_series_v2_linearUCGEO.Rmd
3.5 Additionality/ adicionalidade-financeira/	Adicionalidade Juruá_v18.xlsx
3.5 Additionality/ orcamento-projeto/ assessorias/	2020-contrato-consultoria.pdf
3.5 Additionality/ orcamento-projeto/ assessorias/	2021-contrato-consultoria.pdf
3.5 Additionality/ orcamento-projeto/ assessorias/	aditivo-contrato-ambiental-amazonia.pdf
3.5 Additionality/ orcamento-projeto/ assessorias/	contrato-ambiental-amazonia.pdf
3.5 Additionality/ orcamento-projeto/ assessorias/	orcamento-ambiental-amazonia.docx
3.5 Additionality/ orcamento-projeto/ assessorias/ ambienta l- notas/	NF 78.pdf

Folder	File
***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)*	
	NF 81.pdf
	NF 82.pdf
	NF 85.pdf
	NF 91.pdf
	NF 94.pdf
biofilica/	VCS.VAL.22.155_Service Contract_Jurua-rev 1.pdf
	traducao-contrato-NF_94017.pdf
monitoramento-desmatamento/	2020-12-11 Comprovante de pagamento MM60 NF 22120.pdf
	2020-12-14 Comprovante aquisição Arcgis NF 1909.pdf
	2020-aquisicao-software-geoprocessamento.pdf
	NF 22120 Santiago e Cintra 2020-12-14 NF R$ 13.775 Spectra MM60 GPS.pdf
	NFs-e 1909 AMAZ-01B20_Lic (BP03).pdf
manutencao-anual-software/	2021-12-20 Comprovante renovação Arcgis NF 3645.pdf
	2022-01-17 Comprovante renovação Arcgis NF 3645.pdf
	2022-02-14 Comprovante renovação Arcgis NF 3645.pdf
	NFs-e 3645 AMAZ-0121_Ser.pdf
4.1 Baseline Emissions/	VM0015_planilha de calculo_jurua-v8.xlsx
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	EstatisticaDescritiva_BiomassaTotal_parcelas_VF_01062022.doc
	EstatisticaDescritiva_BiomassaacimadoSolo_VF_01062022.doc
	IF_IFLOR_VALPARAISO_2022_0106.xlsx
	IF_Inventario_Regeneracao_parcelas_2012_RF_2022_0106.xlsx
	IF_VALPARAISO_CARDERNETA DE CAMPO UPA9_2010_RF_2022_0106.xlsx
	IF_VALPARAISO_Caderneta de Campo_UPA2_2012_RF_2022_0106.xlsx
	IF_VALPARAISO_Caderneta de Campo_UPA3_2011_RF_2022_0106.xlsx
	Tabela_Sintese_parcelas_VF_01062022.xlsx
risk-report/	Jurua-VCS-Non-Permanence-Risk-Report-Template-v4.0.docx
	Jurua-VCS-Non-Permanence-Risk-Report-Template-v4.0.pdf
	Jurua-VCS-Risk-Report-Calculation-Tool-v4.0.xls
00-references/	ARAUJO, H.J.B_2015.pdf
	Aragão, L. E. O. C_2018.pdf
	Araujo_2013.pdf

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				EspiritoSanto_2010.pdf
				FAO_2001.pdf
				HAVERROTH, M_2016.pdf
				HIGUCHI, N_2011.pdf
				KAUFMANN, D_2010.pdf
				Lewis_2011.pdf
				MARENGO, J. A_2015.pdf
				MARRA, D. M_2010.pdf
				Malhi Y_2008.pdf
				Nair_2001.pdf
				PHILLIPS, O.L_2004.pdf
				Phillips et al._2009.pdf
				SANFORD, R.L_2013.pdf
				SOUZA, G. de C_2019.pdf
				Schroeder_2009.pdf
				Tominaga_2009.pdf
	6. Achieved GHG Emission Reductions and removals/	vcs-monitreport-jurua-2021-v8.xlsx		
		validacao_verificacao_2021_2022/	dados_geo/	ap&cv.shapefile
				prodes_sad_2021_2022_ap&cv.shapefile
				pts_aleatorios_acuracia.shapefile
				rr.shapefile
				sad_rr.shapefile
			mapa/	acuracia_jutaituba_pt.png
				mapa_acuracia_jurua.qgz
			mosaico_planet/	mosaico_planet_2022_08.TIFF
			tabela_acuracia/	jurua_acuracia_500pts.xlsx
	others/			letter-verra-v2-en.pdf
	references/			ACRE_2010.pdf
				ACRE_2011_2012.pdf
				ACRE_2012.pdf
				ACRE_2018.pdf
				ACRE_2021.pdf
				ALENCAR, A._2004.pdf
				ALMEIDA, M. W. B._2004.pdf
				ANDRADE, M. B.; FERRANTE, L.; FEARNSIDE, P. M_2021.pdf
				ARAÚJO, E. A_2018.pdf

Folder		File
***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)*		
		ARTAXO et al, 2014.pdf
		BAHIA, R. B. C_2015.pdf
		BARDALES, N.G_2021.pdf
		BARRETO, P._2011.pdf
		BRASIL_1977.pdf
		BRASIL_2012.pdf
		BROWN, S_2007.pdf
		CABIESE_1997.pdf
		CARLOTTO, M. J_1999.pdf
		CASTELO BRANCO, José M. B. C. 1959_NARRATIVA_E_TERRITORIALIDADE_NO_ALTO_JUR.pdf
		CAVALCANTE, L.M. _2010.pdf
		CONGALTON, R. G.; KASS GREEN_1999.pdf
		COSTA. F. De S. C._2012.pdf
		CÂMARA, G_2006.pdf
		DAVIDSON, E. A._2012.pdf
		FEARNSIDE, P. M.; GRAÇA, P. M. L. DE A_2006.pdf
		FEARNSIDE, P. M_2009.pdf
		FEARNSIDE, P.M._2001.pdf
		FISCH, G.; MARENGO, J. A.; NOBRE, C_1998.pdf
		HYNDMAN RJ, KHANDAKAR Y_2008.pdf
		HYNDMAN R_2022.pdf
		IBGE_2012.pdf
		JONG, W._1999.pdf
		KUHN, I.N. E LAMPERT, A.L_2012.pdf
		LAURANCE; VASCONCELOS, 2009.pdf
		LUNZ et al, 2014.pdf
		MARTINI_2019.pdf
		MELO_2017.pdf
		MIRANDA_2001.pdf
		Machado, Frederico Soares_2008.pdf
		NOGUEIRA, E.M_2008.pdf
		NOGUEIRA_2008.pdf
		Ometto, J.P., Dutra Aguiar, A.P., Martinelli, L.A._2011.pdf
		PAVAN_2012.pdf
		PERZ, S._2008.pdf
		PORTER-BOLLAND L_2012.pdf

Folder				File
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00-auditoria/			PUTZ FE_2008.pdf	
			REZENDE_2010.pdf	
			SALIMON, C.I_2011.pdf	
			SANDOVAL, M. et al_2002.pdf	
			SANGERMANO F_2010.pdf	
			SANTOS, H.G_2018.pdf	
			SCHROEDER, W_2009.pdf	
			SHACKLETON et al_2011.pdf	
			SILVA, J. N. M_1996.pdf	
			SILVA, J.M.C_2005.pdf	
			SOUSA, M. M_2016.pdf	
			SOUZA, A. L. de; CIMERMAN, S._2010.pdf	
			VALDIONES, A.P_2021.pdf	
			VERÍSSIMO, A_2014.pdf	
			WANDERLLI, E.V_2015.pdf	
			WILLIAMS, J. E._2001.pdf	
			YANAI, A. M_2012.pdf	
			00-ODS/	180801_ods_metas_nac_dos_obj_de_desenv_susten_propos_de_adequa.pdf
				global-indicator-framework-after-2022-refinement.xlsx
	01-vcs-documents/			vcs-listing-representation.pdf
				verra-communication-agreement.pdf
	02-joint-PD-MR/		Jurua-VCS-Non-Permanence-Risk-Report-Template-v4.0.docx	
			Jurua-VCS-Non-Permanence-Risk-Report-Template-v4.0_v2.pdf	
			VCS-Joint-Project-Description-Monitoring-Report-Template-v4.1_eng.docx	
			VCS-Joint-Project-Description-Monitoring-Report-Template-v4.1_eng_v2.pdf	
			v1-june2022/	VCS-Joint-Project-Description-Monitoring-Report-Template-v4.1_eng.docx
				VCS-Joint-Project-Description-Monitoring-Report-Template-v4.1_eng.pdf
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				Jurua-VCS-Risk-Report-Calculation-Tool-v4-V2.xls
				VCS-Joint-Project-Description-Monitoring-Report-Template-v4.1_eng.docx
	03-infos-projetos/			Same content as *03-infos-projetos/* listed above
	04-findings/		Juruá Findings report (002)-reply1.docx	
		planilhas-emissoes/		VM0015_planilha de calculo_jurua-v4.xlsx
				vcs-monitreport-jurua-2021-v4.xlsx
		certidao-negativa/		2022-certidao-judicial.pdf

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					certidao-MPF.pdf
					certidao-negatv-efeitos-MPT-RO-AC.pdf
				processo-08.2012.00150211-4/	documento (1).pdf
					documento.pdf
				processo-08.2021.00014562-9/	documento (2).pdf
					documento (3).pdf
					documento (4).pdf
			certid-negat-distrib/		certidao-civil-distribuicao.pdf
		CAR05/			Desmate_2000.TIFF
					Desmate_2010.TIFF
					Desmate_2020.TIFF
		CAR08/			AP-v1.kml
		CAR09/			embrapa-manejo-sustentavel-unha-de-gato.pdf
			global-wetlands-1993-unep-wcmc/		sources.htm
					struct.htm
					wetlands_93_new.shapefile
				image/	wetland_small.jpg
					wetlands.jpg
			mapa-de-uso-e-cobertura-da-terra-2020br-ibge/		Fonte-mapa-de-usoda-terra-2020.pdf
					Fonte-mapa-de-usoda-terra-acre-2020.pdf
					mapa-de-uso-da-terra-2020-ibge.png
					mapa-uso-da-terra-acre-2020-ibge-legenda.png
					mapa-uso-da-terra-acre-2020-ibge.png
				shape-cobertura-e-uso-da-terra-acre-2020/	Cobertura_uso_terra_2020_AC_serie_revisada.shapefile
		CAR12/			reply-email-Verra.pdf
		CAR14/			MIRANDA_2001.pdf
					plano-exploracao-especie-nao-madeireira-2019.pdf
					stakeholders-jurua-project.pdf
		CAR16/			formulario-caixinha-sugestao.pdf
					formulario-registro.xlsx
					plano-comunicacao-jurua.pdf
		CAR22/			stakeholders-jurua-project.pdf
		CAR23/			stakeholders-jurua-project.pdf
		CAR25/			curriculo-james-cameli.pdf
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Folder			File
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			curriculo-lattes-Gilberto-do-Carmo-Lopes-Siqueira.pdf
			cv-Veriton-Viana-da-Costa.pdf
			cv-marcio-sales.pdf
			linkedin-aline-ribeiro.pdf
			linkedin-amanda-fiallos.pdf
			linkedin-caio-gallego.pdf
			linkedin-claudio-padua.pdf
			linkedin-franciane-almeida.pdf
			linkedin-luana-cordeiro.pdf
			linkedin-maco-antonio.pdf
			linkedin-nathanael-de-campos.pdf
			linkedin-paula-conde.pdf
			linkedin-plinio-ribeiro.pdf
			linkedin-rafael-costa.pdf
			linkedin-shaxahmary-de-mori.pdf
			linkedin-susane-rasera.pdf
			linkedin-taisi-sorrini.pdf
		CAR27/	PPCDQ_2017_2020.pdf
			cv_v4.gpkg
			mv_v1.gpkg
			COMPLETO Resumo Executivo do ZEE-Acre Fase III_V16_WEB.pdf
			AC_CAR_Julho_2020.shapefile
			AC_RedeHidrografica_100000_ZEE_FASEII.shapefile
			AC_UnidadesProdutivas_ZEEII_IBGE_2017.shapefile
			AC_BaseFundiaria_2021_ZEE_III.shapefile
			DINÂMICA DO DESMATAMENTO E QUEIMADAS EM 2017 NO ESTADO DO ACRE_Revisado_20180422.doc
			DINÂMICA DO DESMATAMENTO E QUEIMADAS EM 2019 NO ESTADO DO ACRE_FINAL_20191218.docx
			DINÂMICA DO DESMATAMENTO E QUEIMADAS EM 2021 NO ESTADO DO ACRE_FINAL_21-12-2021.doc
			Relatorio-Desmatamento-UCEGEO-2018-20-11-2018.doc
			Relatorio_Desmatamento_2015_30Dez15_FINAL_revisado_03_17.doc
			Relatorio_Desmatamento_2016_20170307_Revisado_04_17.doc
			DESMATE_ACRE_1988_2021_UCEGEO.shapefile
			ANEXO Termo de Cessão_221021_083033.pdf

Folder						File
***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)*						
		CAR28/	Ofício solicitação de Dados IMC - Ambiental.pdf			
			Termo Cessão (3).pdf			
			reference-map-of-forest-cover-until-2020-in-the-reference-region.jpg			
			DESMATAMENTO E FLORESTA RASTER/	2010/	565/	Desm05065_2010.TIFF
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					566/	Desm05066_2010.TIFF
						Floresta05066_2010.TIFF
				2011/	565/	Desm565_2011.TIFF
						Floresta565_2011.TIFF
					566/	Desm566_2011.TIFF
						Floresta566_2011.TIFF
				2012/	565/	Desm565_2012.TIFF
						Floresta565_2012.TIFF
					566/	Desm566_2012.TIFF
						Floresta566_2012.TIFF
				2013/	565/	Desm565_2013.TIFF
						Floresta565_2013.TIFF
					566/	Desm566_2013.TIFF
						Floresta566_2013.TIFF
				2014/	565/	Desm565_2014.TIFF
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					566/	Desm566_2014.TIFF
						Floresta566_2014.TIFF
				2015/	565/	Desm565_2015.TIFF
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						Floresta566_2015.TIFF
				2016/	565/	Desm565_2016.TIFF
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	Floresta565_2019.TIFF
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	Floresta566_2019.TIFF
2020/565/	Desm565_2020.TIFF
	Floresta565_2020.TIFF
2020/566/	Desm566_2020.TIFF
	Floresta566_2020.TIFF
CAR32/	rr_v3_pixelated.gpkg
CAR32/ucegeo shapefile/	DESMATE_ACRE_1988_2021_UCEGEO.shapefile
CAR34/	ACRE-2013-Ucegeo capa e caderno-rev.pdf
	Artigo Final_metodologiaUCEGEO_latufeCarmo_2010.pdf
	Pontosdecontrole.shapefile
	Referências Metodológicas - Anexo 04.pdf
	accuracy.xlsx
CAR34/Imagens-sentinel/	20201009T150731_C1.TIFF
	T18MYS_20201009_C3.TIFF
	T18MZS_20201009_C4.TIFF
CAR41/	2022.03.23-contrato-amazonia-agroindustria-final-v2-Clicksign.pdf
CAR43/	Descritivo da análise LIDAR e equação alométrica utilizada_ProjetoValparaiso_04122022.pdf
	Relatório Monitoramento Flora Valparaíso com desenho amostral da parcela 04-11-22 (1).pdf
	Relatório descritivo do inventário florestal_04122022.pdf
CAR47/	Same content as 00-auditoria/04-findings/CAR25/
CAR50/	14092022-certidao-inteiro-teor.pdf
CAR54/	reply-email-Verra.pdf
CL06/	Mapa SIGEF X CAR ing_v1.jpg
CL06/AREA_IMOVEL_CAR/	AREA_IMOVEL_SIRGAS_18S_UTM.shapefile
CL06/Sigef Brasil_AC_SERINGAL/	SIGEF_JURUA_18S_UTM.shapefile
CL11/	portaria-419-11.pdf
CL15/	formulario-caixinha-sugestao.pdf
	formulario-registro.xlsx
	plano-comunicacao-jurua.pdf
CL17/	PP-asking-comentor-contact-pdf.pdf
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		CL19/		COMPLETO Resumo Executivo do ZEE-Acre Fase III_V16_WEB.pdf
		CL20/		stakeholders-jurua-project.pdf
		CL21/	operacao-unha-de-gato/	2012-licenca-operação.pdf
				licenca-manejo-unha-de-gato.pdf
				plano-exploracao-especie-nao-madeireira-2019.pdf
		CL24/		Política de Diversidade e Inclusão-Ambipar.pdf
		CL26/		BROWN, S_2007.pdf
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		CL48/		4Q21 Financial Statements_Ambipar Group.pdf
				Adicionalidade Juruá_v19.xlsx
		CL49/		Adicionalidade Juruá_v19.xlsx
		CL51/	ARAUJO, H.J.B_2015.pdf	
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			SANFORD, R.L_2013.pdf	
			Schroeder_2009.pdf	
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	02-cash-flow/			Adicionalidade Juruá_v20.xlsx
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				curriculo-juridico-Scarlett-Siqueira-do-Valle.pdf
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				cv-Veriton-Viana-da-Costa.pdf
				cv-marcio-sales.pdf
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	CAR14/		Ata reunião comunidade ramal do james 28nov2021.pdf
			Declaracao_Representante_TI_Arara.pdf
			MIRANDA_2001.pdf
			plano-exploracao-especie-nao-madeireira-2019.pdf
			stakeholders-jurua-project.pdf
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			plano-comunicacao-jurua_vf.pdf
			reunioes-stakeholders-nov2021.pdf
	CAR27/	cv_v4.gpkg	
		mv_v1.gpkg	
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			Desmatamento_Zero_Amazônia.pdf
			Diniz & Junior 2009.pdf
			Fearnside, 2005.pdf
			Giboshi et al., 2002.pdf
			Lemos e Silva, 2011.pdf
			Margulis, 2003.pdf
			PPCDQ_2017_2020.pdf
			Publicação_ZEE_ACRE_2006.pdf
			Rebello e Homma, 2005.pdf
			Schmitt, 2015.pdf
			Silva, 2013.pdf
			Sousa et al., 2020 (1).pdf
			Sousa et al., 2020.pdf
			Ângelo e Sá, 2007.pdf
		ZEE/	AC_BaseFundiaria_2021_ZEE_III.shapefile
			AC_CAR_Julho_2020.shapefile
			AC_RedeHidrografica_100000_ZEE_FASEII.shapefile
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			COMPLETO Resumo Executivo do ZEE-Acre Fase III_V16_WEB.pdf
		hybas_sa_lev12_v1c/	hybas_sa_lev12_v1c.shapefile

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					DINÂMICA DO DESMATAMENTO E QUEIMADAS EM 2021 NO ESTADO DO ACRE_FINAL_21-12-2021.doc
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					Relatorio_Desmatamento_2015_30Dez15_FINAL_revisado_03_17.doc
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			2014/	565/	565_24082014_rgg.TIFF
				566/	566_20092014_rgb.TIFF
			2015/	565/	565_27082015_rgb.TIFF
				566/	566_27082015_rgb_2.TIFF
			2016/	565/	465_07092016_Am.TIFF
				566/	466_07092016_Am.TIFF
			2017/	565/	565_15072017_rgb.TIFF
				566/	566_15072017_rgb.TIFF
			2018/	565/	565_29082018_am.TIFF
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			2019/	565/	565_06082019_am.TIFF
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				566/	566_11102020_am.TIFF
		ucegeo shapefile/			DESMATE_ACRE_1988_2021_UCEGEO.shapefile
	CAR34/	ACRE-2013-Ucegeo capa e caderno-rev.pdf			
		Artigo Final_metodologiaUCEGEO_latufeCarmo_2010.pdf			
		Pontosdecontrole.shapefile			
		Referências Metodológicas - Anexo 04.pdf			
		VM0015-Methodological-Procedures-Deforestation-Modelin-Annex.pdf			
		accuracy.xlsx			
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			Lemos e Silva, 2011.pdf
			Margulis, 2003.pdf
			Rebello e Homma, 2005.pdf
			Schmitt, 2015.pdf
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			Sousa et al., 2020 (1).pdf
			Sousa et al., 2020.pdf
			Ângelo e Sá, 2007.pdf
	CAR41/		2022.03.23-contrato-amazonia-agroindustria-final-v2-Clicksign.pdf
			Cadastro dos produtores Murumuru.xlsx
			comunidades-murumuru-jurua.jpg
			mapa-comunidades-rio-jurua.jpg
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			IF_VALPARAISO_Caderneta de Campo_UPA2_2012_RF_2022_0106.xlsx
			IF_VALPARAISO_Caderneta de Campo_UPA3_2011_RF_2022_0106.xlsx
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			Relatório Monitoramento Flora Valparaíso com desenho amostral da parcela 04-11-22 (1).pdf
			Relatório descritivo do inventário florestal_04122022.pdf
			Tabela_Sintese_parcelas_atualizado_mais_amostragem.xlsx
	CAR50/		14092022-certidao-inteiro-teor.pdf
			2022.03.23-contrato-amazonia-agroindustria-final-v2-Clicksign.pdf
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	CL15/		comunicacao-stakeholders-v.pdf
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			formulario-registro.xlsx
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				Jurua-VCS-Risk-Report-Calculation-Tool-v4-V3.xls
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		CAR05/		Documento_2022-06-03_193950.pdf TERMO DE CESSÃO DE DIREITO USO DADOS GEOESPACIAIS.pdf
		CAR09/		land_coverage_2020_ac.shapefile
		CAR13/		VM0015_planilha de calculo_jurua-v6.xlsx vcs-monitreport-jurua-2021-v6.xlsx
		CAR27/		ACRE_2006.pdf ACRE_2010.pdf ACRE_2018.pdf ACRE_2021.pdf HUMANS et al 2005.pdf

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		CAR43/		Brown,1997.pdf IPCC_GPG_LULUCF_FULLEN.pdf Nogueira, 2008.pdf VM0015_planilha de calculo_jurua-v6.xlsx salimon et al foreco 2011.pdf vcs-monitreport-jurua-2021-v6.xlsx
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3. Annexes	F07	Adicionalidade Juruá_v19.xlsx	
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		SOUZA, A. L. de; CIMERMAN, S._2010.pdf	
		WILLIAMS, J. E._2001.pdf	
		Ometto, J.P., Dutra Aguiar, A.P., Martinelli, L.A.,_2011.pdf	
		VALDIONES, A.P_2021.pdf	
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		Barreto, P.; Amaral, P.; Veríssimo, A. (2006).pdf	
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	F02	VVB cross-check.xlsx	
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	F03	Plano de Comunicação REDD+ Juruá - v.1.2.pdf	
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	F06	scripts.zip	
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				04- spatial allocation.ego
				05 - projection statistics simulations.Rmd
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	F11	Estimating state-wide biomass carbon stocks for a REDD plan in Acre, Brazil.pdf		
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				DESMATE_ACRE_1988_2021_UCEGEO_RECORTE_RR.qix
				DESMATE_ACRE_1988_2021_UCEGEO_RECORTE_RR.qmd
				DESMATE_ACRE_1988_2021_UCEGEO_RECORTE_RR.shp
				DESMATE_ACRE_1988_2021_UCEGEO_RECORTE_RR.shx
				DESMATE_ACRE_1988_2021_UCEGEO_RECORTE_RR_LAND_VOID.cpg
				DESMATE_ACRE_1988_2021_UCEGEO_RECORTE_RR_LAND_VOID.dbf
				DESMATE_ACRE_1988_2021_UCEGEO_RECORTE_RR_LAND_VOID.prj
				DESMATE_ACRE_1988_2021_UCEGEO_RECORTE_RR_LAND_VOID.qix
				DESMATE_ACRE_1988_2021_UCEGEO_RECORTE_RR_LAND_VOID.qmd
				DESMATE_ACRE_1988_2021_UCEGEO_RECORTE_RR_LAND_VOID.shp
				DESMATE_ACRE_1988_2021_UCEGEO_RECORTE_RR_LAND_VOID.shx
	F12	09_MP_RED_PJURUA_AP_LIM_00_PT_Analise_Acuracia_Projeto_REDD_Jurua.pdf		
		09_MP_RED_PJURUA_AP_LIM_00_PT_Analise_Acuracia_Projeto_REDD_Jurua.png		
		rev-monitoramento-geo-MapBiomas_Alerta.pdf		
		Revisao_Acuracia_PRODES22_MBAlerta	acuracia_desmat_floresta_prodes_mapbiomas.cpg	
			acuracia_desmat_floresta_prodes_mapbiomas.dbf	
			acuracia_desmat_floresta_prodes_mapbiomas.prj	
			acuracia_desmat_floresta_prodes_mapbiomas.qmd	
			acuracia_desmat_floresta_prodes_mapbiomas.shp	
			acuracia_desmat_floresta_prodes_mapbiomas.shx	
			acuracia_desmat_floresta_prodes_mapbiomas.tif	
			limite_ap_cv.cpg	
			limite_ap_cv.dbf	

			limite_ap_cv.prj
			limite_ap_cv.qmd
			limite_ap_cv.shp
			limite_ap_cv.shx
			mapbiomas_alerta_jul2020_jul_2022.cpg
			mapbiomas_alerta_jul2020_jul_2022.dbf
			mapbiomas_alerta_jul2020_jul_2022.prj
			mapbiomas_alerta_jul2020_jul_2022.qmd
			mapbiomas_alerta_jul2020_jul_2022.shp
			mapbiomas_alerta_jul2020_jul_2022.shx
			pontos_acuracia_acatama_labeled.gpkg
	F05	COMPLETO-Resumo-Executivo-do-ZEE-Acre-Fase-III_V16_WEB.pdf	
		Documento_Sintese_ZEE.pdf	
		Distancia_desmatamento2010.tif	
		Distancia_estradas_2019.tif	
		fundiario_corrected.tif	
		prob_2021.tif	
		solos.tif	
		woes.png	

PRR 2

Round 1	PRR_VCS_R_PRR_3430_9May2025.docx		
	PRR_VCS_R_PRR_3430_9May2025_VVB.docx		
Round 2	VCS.VAL.22.155_Val_Ver_Juruá_ver_4_TC.docx		
	PRR_VCS_R_PRR_3430_24June2025.docx		
	PRR_VCS_R_PRR_3430_24June2025_VVB.docx		
	PDD_MR		
	F09	vcs-monitreport-jurua-2021-v11.1.xlsx	
		VM0015_planilha de calculo_jurua-v11.1.xlsx	
Round 3	PRR_VCS_R_PRR_3430_24June2025_VVB.docx		
	VCS.VAL.22.155_Val_Ver_Juruá_ver_4_TC.docx		
	PDD_MR	VCS-Joint-Project-Description-Monitoring-Report-Template-v4.2_eng-V14.docx	
	PDD_MR	VCS-Joint-Project-Description-Monitoring-Report-Template-v4.2_eng-V14.pdf	
	Supports	F09	factor_maps.pdf
			vcs-monitreport-jurua-2021-v11.1.xlsx
			VM0015_planilha de calculo_jurua-v11.1.xlsx
		F06	factor_maps.pdf

APPENDIX 2: FINDINGS

CAR ID	01	Date: 04/11/2022

Description of CAR

In reviewing the land ownership documents, the following issues were note:
The Certificates issued by the State Court of Justice, of the location of the Property(s) and the domicile of the Owner(s) (Certidão Negativa dos Distribuidores CIVEIS da Justiça Estadual do Acre) and the Certificates issued by the Federal and State Prosecutors Office - Attorneys / Environmental Attorneys (Certidões Negativas do Ministério Público Federal e Estadual) are missing.
The links conintained in Table 1 of PD&MR v2.0 do not work. The Project proponent is requested to provide verifiable information to this audit team.
The Project proponent is requested to provide sufficient evidence about land tenure and proof of rights, therefore the full accessibility to the provide information.

Project participant response — **Date:** 12/01/2023

The missing documents (1) (2), they were shared with the VVB, in order to provide sufficient evidence about land tenure and proof of rights.
Regarding the links contained in Table 1 of PD&MR v2.0, they cannot be accessed as it is private information. In this way, they were removed from the PD&MR v2.0, updating the section 1.7. Although the links are being removed from the Project document, there is no harm done in the process as the SIGEF documents were previously shared with the VVB.

Documentation provided by project participant

Evidence files contemplated:

1. certid-negat-distrib
2. certid-negat-MP

DOE assessment — **Date:** 26/01/2023

-We received the real estate record issued by the Real Estate Registry Office of Cruzeiro do Sul - AC related to this property, owned by James Castro Cameli (CNPJ: 02.257.256/0001-04) current name Amazônia Agroindústria Eirelli, dated on 2022/09/14. According to this title the total area remaining of this property/title contain 24.976,3199 hectares (Av-13 - 5197), and there is one mortgage dully registered.

This property has been divided into two areas: (i) Seringal Valparaíso - parte I, with contain 21.110,5117 hectares; and (ii) Seringal Valparaíso - parte II, with contains 3.865,8082. hectares.

-We received the chain of domain which dating back until 1952/21/11 by the Real Estate Registry Office of Cruzeiro do Sul - AC (Espólio de João Bussons).

-We also received evidence of the agreement entered into with INCRA and the land owner that recognized the owner's ownership of this property.

This real estate chain of domain certificate is a valid document, with public-faith granted by the Real Estate Registry Office with jurisdiction to record the titles of properties in this location. In view of that, the regularity of this chain of domain can be presumed."

CAR ID	01	Date: 04/11/2022

-We received the CCIR from the year of 2021.
The property Seringal Valparaíso with 21,110.5117 ha - parte I was certified by Incra with the code nº 541cb795-9eb0-4b2a-9290-e87d4c6d5d8c dated on 2015/05/02
The property Seringal Valparaíso with 3,865.8082- parte II was certified by Incra with the code nº 714a6031-ac10-4119-ab77-c37a600a02cd dated on 2015/05/02
-We received the clearance certificate of debts from the ITR for this property.
-We received the CAR-AC of This Property nº AC-1200203-1D7851AAAE39467A977D86030DF2AE0B, dated on 2015/04/23.
-We received the negatives Certificates of embargo and debts issued by the Ministry of the Environment – IBAMA
-We receive the certificate issued by the Federal and State Prosecutors Office. According to the analysis of this certificates, there are no lawsuits regarding the location of the property and the owner's domicile, with implications related to this property.
-We receive the certificate issued by the Federal Court and by the State Court. According to the analysis of this certificates, there are no lawsuits regarding the location of the property and the owner's domicile, with implications related to this property.
We can confirm that, the proof of title for the project area has been demonstrated by means of review of several legal documents as detailed in attached Excel sheet.

Finding closed successfully

CL ID	02	Date: 04/11/2022

Description of CAR

The name of the Project proponent (Biofílica Ambipar Environment) differs between the PD&MR v2.0 and the listing representation.
The Project proponent is requested to clarify the name of their organization and ensure consistency between all documents related to the Project.

Project participant response	Date: 12/01/2023

The name of the organization (Biofílica Ambipar Environmental Investments S/A) has been adjusted, as requested, ensuring consistency between all documents related to the Project.

Documentation provided by project participant

DOE assessment	Date: 26/01/2023

The project proponents updated the joint PD/MR in which there are no discrepancies with the name of the organizations and the listing representation.

Finding closed successfully

CL ID	03	Date: 04/11/2022

Description of CL

CL ID	03	Date: 04/11/2022

VCS Joint Project Description & Monitoring Report, v4.1: "Provide a summary description of the project to enable an understanding of the nature of the project and its implementation, including the following (no more than one page):
… A brief description of the scenario existing prior to the implementation of the project
· An estimate of annual average and total GHG emission reductions and removals."

1. The Project proponent does not include in section 1.1a brief description of the scenario that existed prior to the implementation of the project, as required by the template.

2. The Project proponents state in PD&MR v2.0 section 1.1: "…about 1,937,742 tCO2e by reducing GHG emissions throughout 20 years of the project". However, it is necessary to include an estimate of average annual and total GHG emission reductions and removals in this section as the template requires.

The Project proponent is requested to provide complete information in section 1.1 of the Joint Project Description & Monitoring Report a brief description of the pre-project implementation scenario and an estimate of average annual and total GHG emission reductions.

Project participant response	Date: 12/01/2023

A brief description of the pre-project implementation scenario of the VCS Joint Project Description & Monitoring Report, V4.1 and an estimate of average annual and total GHG emission reductions, has been adjusted, in section 1.1, as requested.

Documentation provided by project participant

DOE assessment	Date: 26/01/2023

1. The project proponents updated the joint PD/MR a brief description of the scenario existing prior to the implementation of the project including in section 1.1. However, they stated, "*It is found that, between 2010 and 2020, the Project Reference Region had a historical deforestation rate of 2,463 hectares*" but the supporting document for this information was not found. The PPs are requested to provide documentary evidence to support the historical deforestation mentioned.
2. The project proponents have updated the joint PD/MR, including in section 1.1 the annual average of GHG emission reductions, however this is different from the one presented in section 1.10.

The PPs are requested to present consistent data throughout document.

Project participant response	Date: 03/03/2023

1. The average deforestation in the historical reference period is actually 2,451 ha/year and is fixed in the text. This value is extracted directly from the Table 17 from the section 3.4 of the joint PD/MR V3 *"Matrix of land use change in the Reference Region between 2010 and 2020 (Table 7a of Methodology VM0015)."*, dividing the total area converted to deforestation (24,511) by number of years of the historical reference period (10). The table itself can be easily reproduced by cross tabulating the class areas of rasters "Desmate2010.tif" (1) and "Desmate2020.tif" (2), which has been shared with the VVB.
2. The value of the average annual GHG emission reduction was corrected in the sections 1.1 and 1.10 of the joint PD/MR V3, the value consists of 112,056 tCO2e.

Documentation provided by project participant

1. Desmate_2010
2. Desmate_2020

DOE assessment	Date: 13/03/2023

1. The project proponents updated the joint PD/MR and attached the two raster files used identify the average deforestation in the historical reference period.

CL ID	03	Date: 04/11/2022
2.	The project proponents updated the joint PD/MR, which does not have discrepancies in the annual average of GHG emission reductions value presented in sections 1.1 and 1.10.	
Finding closed successfully		

CL ID	04	Date : 04/11/2022
Description of CL		
VCS-Program-Guide-v4.2, 1,1: *"…Readers shall ensure that they are using the most current version of this and all other program documents".* In section 1.3 of PD&MR v2.0 the Project proponents cite the 'VCS Methodology Requirements, v 4.1', which is not the current version of the standard. On the other hand, in section 1.7 and 3.3 of PD&MR v2.0, the Project proponents cite VCS Standard v4.2. The Project proponents are requested to use the current version of the program documents in accordance with VCS Program Guide v4.2.		
Project participant response		**Date:** 12/01/2023
Section 1.3 of the PD&MR v2.0 was adjusted to be in accordance with what was applied to the Project, as presented in in section 1.7 and 3.3 of PD&MR v2.0. Throughout the project development process, it was used the current version of the program documents in accordance with VCS Program Guide v4.2.		
Documentation provided by project participant		
DOE assessment		**Date:** 26/01/2023
The project proponents have updated the joint PD/MR, the most current version of the program documents.		
Finding closed successfully		

CAR ID	05	Date 04/11/2022
Description of CAR		
VCS Standard v4.3, A1.5: *"…The project area shall meet an internationally accepted definition of forest, such as those based on UNFCCC host country thresholds or FAO definitions, and shall qualify as forest for a minimum of 10 years before the project start date…"* *VM0015 – Methodology for Unplanned Avoided Deforestation, version 1.1, 2 (d) "At project commencement, the project area shall include only land qualifying as "forest" for a minimum of 10 years prior to the project start date".* The Project proponents do not provide documentary evidence to support that the Project area meets the UNFCCC definition of forests and has been classified as forest for at least 10 years prior to the project start date. The Project proponents do not demonstrate that they have met the application criteria (d) of VM0015 – Methodology for Unplanned Avoided Deforestation, version 1.1. The Project proponents are requested to include complete cartographic supports to demonstrate eligibility based on the forest definition and consistent with the project start date data.		

CAR ID	05	Date 04/11/2022
Project participant response		Date: 12/01/2023

Section 3.3 of the PD&MR V2.0 was edited to better explain the forest definition of the reference used (UCEGEO). The UCEGEO forest definition is the same as FAO, that is:

"Forest - an area measuring more than 0.5 ha with trees greater than 5 m in height and canopy cover greater than 10%, or trees capable of achieving these parameters in situ. This does not include land that is predominantly under agricultural or urban use."

Therefore, the forest areas considered within the project boundaries are only the ones that classified as "forest" for at least 10 years in the UCEGEO data bases, as required by VCS Standard v.4.2, A15 and VM0015 v.1.1, 2(d). The cartographic data with raster files for the years of (1) 2000, (2) 2010 and (3) 2020, were shared with VVB. Each raster can be reclassified, where class named 1 correspond to forest and 2 correspond to anthropic vegetation. As described in the PD&MR V2.0, the data source is UCEGEO.

Documentation provided by project participant

Evidence files contemplated:

1. Desmate_2000
2. Desmate_2010
3. Desmate_2020

DOE assessment	Date: 26/01/2023

The project proponents updated the joint PD/MR, clarifying in section 3.3 that the data source to support the project boundaries are only those that classified as "forest" for at least 10 years is UCEGEO since its forest definition is the same as that of the Brazilian Forest Service. However, it was mentioned "*Land cover classification data from UCEGEO in vector (shapefiles) and audited (attached annual assessment reports) formats were requested from the Climate Change Institute through a request letter*", but there is not support of it. The PPs are requested to provide the letter sent to the Climate Change Institute and support of its answer.

Project participant response	Date: 03/03/2023

The Letter sent to the Climate Change Institute (Instituto de Mudanças Climáticas do Acre-IMC) was shared (1) with the auditors.

Documentation provided by project participant

Evidence files contemplated:

1. Ofício solicitação de Dados IMC – Ambiental

DOE assessment	Date: 13/03/2023

The project proponents attached the letter sent to the Climate Change Institute; however, they did not include evidence of the answer from the Institute as requested. The project proponents are requested to provide evidence of the Climate Change Institute's response to the letter sent.

In addition, regarding the project start date, the project proponents mentioned in section 1.8 of the joint PD/MR that "*[...] the proponents have chosen August 1, 2020 as the starting date [...]*", which is associated with preliminary meetings between the owner and the technical team to plan the Project's activities and,

CAR ID	05	Date 04/11/2022

consequently, with the initial allocation of resources for the Project's construction. However, the attached support (memory of the meeting) presents a date that does not coincide with the one indicated above.

The project proponents are requested to provide adequate evidence to support the project start date.

Besides, considering the definition of the project start date, the project proponents are requested to clarify how these the preliminary meetings led to the generation of GHG reductions.

> VCS Standard 4.4, section 3.8: " […] *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 (e.g., preparing land for seeding, planting, changing agricultural or forestry practices, rewetting, restoring hydrological functions, or implementing management or protection plans)* […]".
>
> VCS Program Definitions v4.2, Project Start Date: "*See "Crediting Period Start Date"*"; Crediting Period Start Date: " *[…] The start date of an AFOLU project or jurisdictional REDD+ program is the date on which activities that led to the generation of GHG emission reductions or removals are implemented (e.g., planting, changing agricultural or forestry practices, rewetting, restoring hydrological functions, or implementing management or protection plans) […]*".

Project participant response	Date: 16/05/2023

1. The evidence of the answer from the Climate Change Institute (Instituto de Mudanças Climáticas do Acre-IMC) was shared (1) with the auditors.

2. The Project start date was changed to July 31, 2020 to match with the meeting date (2) that supports the implementation of management and protection plans as Project's activities that led to the generation of GHG emissions reductions. Section 1.8 of the PD/MR_v4 was adjusted.

Documentation provided by project participant

1. TERMO DE CESSÃO DE DIREITO USO DADOS GEOESPACIAIS
2. Documento_2022-06-03_193950

DOE assessment	Date: 31/05/2023

1. The Project proponent attached the evidence of the Climate Change Institute's response.

2. The project proponent clarified that the start date was changed to July 31, 2020 in order to be in accordance with the evidence of the meetings attached. The project proponent updated the joint PD/MR and the spreadsheets, which do not have inconsistences with project start date.

Finding closed successfully

CL ID	06	Date: 04/11/2022

Description of CL

In PD&MR v2.0 section 1.1 states "*including an area of 24,076 hectares, in relation to the total property that represents 24,976,3199 hectares*."

And the information provided, as below:

CL ID	06	Date: 04/11/2022

Support name	Area
Section 1.1 of PD&MR v2.0	Juruá REDD+ Project is located at Seringal Valparaíso property, in the Alto Juruá region, between the municipalities of Cruzeiro do Sul and Porto Walter, including an area of 24,076 hectares, in relation to the total property that represents 24,976,3199 hectares. Juruá River basin is formed by four micro-
cadeia-dominial-n°-5197-seringal-valparaíso.pdf	Uma Área de Terra Rural, denominada "Seringal Valparaízo", com 49.686,7506 ha
car-valparaiso-faz-belo-horinzonte.pdf	Nome do Imóvel Rural: Seringal Valparaíso Município: Cruzeiro do Sul Coordenadas Geográficas do Centroide do Imóvel Rural: Área Total (ha) do Imóvel Rural: 25.113,7607
ccir-valparaiso-2021.pdf	DADOS DO IMÓVEL RURAL CÓDIGO DO IMÓVEL RURAL: 011.010.931.128-6 DENOMINAÇÃO DO IMÓVEL RURAL: Seringal Valparaiso ÁREA TOTAL (ha): 24.976,3199 CLASSIFICAÇÃO FUNDIÁRIA: Grande Propriedade Produtiva
14092022-certidao-inteiro-teor.pdf	R-0-5197, 18/07/2007. Uma área de terra rural, denominada SERINGAL VALPARAÍSO I, situada neste MUNICÍPIO E COMARCA, com 49.686,7506 ha. e um perímetro de
doc-incra-valparaiso.pdf	401670, CPF 721 628 302-30 *(presumíveis proprietários de parte do Seringal Valparaíso com 49.915,6313 hectares, localizada nos municípios de Cruzeiro do Sul, Porto Valter e Tarauacá, estado do Acre)* e as testemunhas abaixo identificadas, GLEBA VALPARAISO/União Federal: MEMORIAL DESCRITIVO – Imóvel: Terras Devolutas da União. Município: Cruzeiro do Sul, Porto Walter e Tarauacá. Estado do Acre. Área: 24.942,6129 ha. Perímetro: 117.919,71 m. DESCRIÇÃO DO PERÍMETRO: Inicia-se a descrição deste perímetro no vértice ATNM-M997, de For this support, the project proponent clarify they made a term of agreement with INCRA, as part of the land title regularization process in 2014, relinquishing an area of 24,942.61 hectares, which was subsequently incorporated into the property of the Federal Government, directly benefiting indigenous people and settlers in the region.
certid-negat-deb-itr-amaz-agro.pdf	Número do Imóvel na Receita Federal - NIRF: 3.711.941-9 Nome do Imóvel: SERINGAL VALPARAISO Município: CRUZEIRO DO SUL Área total (em hectares): 24.976,3 Contribuinte: AMAZONIA AGROINDUSTRIA EIRELI CNPJ: 02.257.256/0001-04

CL ID	06	Date: 04/11/2022

memorial-seringal-valparaiso-parte-I.pdf and memorial-seringal-valparaiso-parte-II.pdf

Sum: 24,976.31990 ha

Denominação: Seringal Valparaíso / Parte 1 **Proprietário:** James Castro Cameli **Matrícula do imóvel:** 5.197 - Livro - 2Q... continua na página 11. **Município/UF:** Cruzeiro do Sul-AC ... e outros **Responsável Técnico:** ERIVELTON DOS SANTOS LIMA **Formação:** Engenheiro Florestal **Código de credenciamento:** FHG **Sistema Geodésico de referência:** SIRGAS 2000 **Área (Sistema Geodésico Local):** 21110,5117 ha	**Denominação:** Seringal Valparaíso / Parte 2 **Proprietário:** James Castro Cameli **Matrícula do imóvel:** 5.197 - Livro - 2Q... continua na página 11. **Município/UF:** Cruzeiro do Sul-AC ... e outros **Responsável Técnico:** ERIVELTON DOS SANTOS LIMA **Formação:** Engenheiro Florestal **Código de credenciamento:** FHG **Sistema Geodésico de referência:** SIRGAS 2000 **Área (Sistema Geodésico Local):** 3865,8082 ha

The Project proponent is requested to clarify the Project property area and the Project area due the discrepancies between the PD&MR v2.0 and the onsite audit with the GIS team.

Project participant response	Date: 12/01/2023

The Seringal Valparaiso property area value used by GIS team refers to the limit found in the SIGEF database (1) equivalent to 24,976.3199 ha. The SIGEF is a system developed by INCRA to manage land information of the Brazilian rural environment.

There is a small difference between the value attributed by SIGEF and the value attributed by CAR. In the CAR (2) we found an area referring to 25,113.7607 ha. This difference is due to the fact that the CAR considers the river area of "Igarapé Grande" within the property boundary and SIGEF disregards this area, as seen on map (3).

Thus, depending on the document evaluated, either the area referenced by the SIGEF is used, as identified in the evidence ccir-valparaiso-2021.pdf, certid-negat-deb-itr-amaz-agro.pdf and memorial-seringal-valparaiso-parte -I.pdf plus memorial-syringal-valparaiso-part-II.pdf, or the area referenced by CAR is used, as in evidence doc-incra-valparaiso.pdf.

In relation to the other values of areas, as shown in the evidence cadeia-dominial-n°-5197-seringal-valparaíso.pdf and 14092022-certidao-inteiro-teor.pdf, these are values prior to the land title regularization process in 2014.

These areas are different from the Project Area, which was calculated according to the methodology guidelines, presented in section 3.3.

Section 1.12 has been adjusted for better interpretation of the information.

Documentation provided by project participant

Evidence files contemplated:

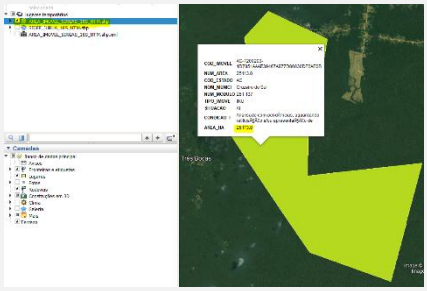
1. Sigef Brasil_AC_SERINGAL.zip
2. AREA_IMOVEL_CAR.zip
3. Mapa SIGEF X CAR ing_v1.jpg

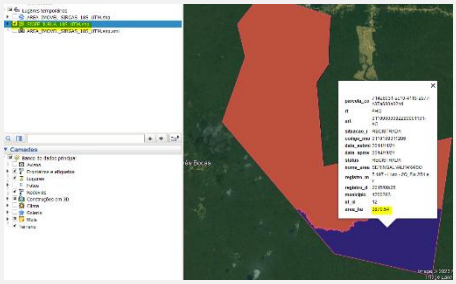
DOE assessment	Date: 26/01/2023

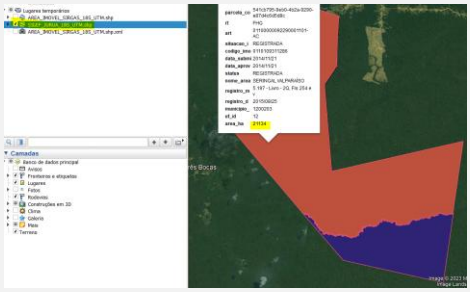
The project proponents clarified the project property area and the project area, providing evidence to support the explanation of the discrepancies and updating the joint PD/MR.

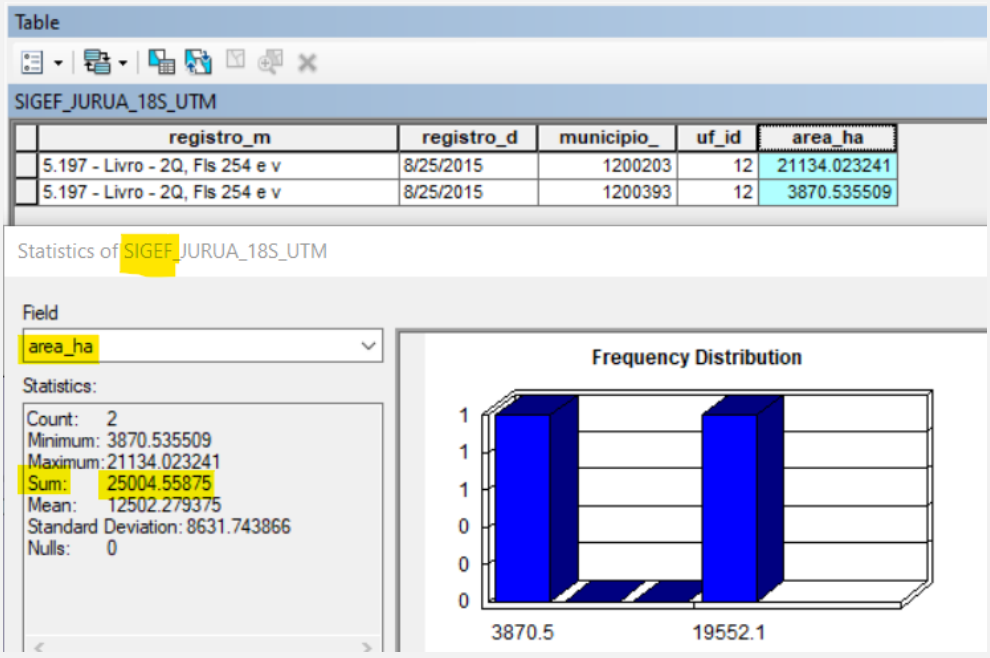
CL ID	06	Date: 04/11/2022

The project proponents attached two shapefiles to support the explanation of the discrepancies in the property area, however, the shapefile named '*SIGEF_JURUA_18S_UTM*' have an area value different from the one indicated in table 1 of the updated joint PD/MR. The PPs are requested to clarify the value of the project property area.









Project participant response	Date: 03/03/2023

The value of the Seringal Valparaiso property area used by the GIS team refers to the limit found in the SIGEF database (1) equivalent to 24974.5 ha, recalculated in the QGIS 3.28.2 software. SIGEF is a system developed by INCRA to manage the land information of the Brazilian rural environment. This value is very

close to the value found in the descriptive memorial and in the property's negative certificate, equivalent to 24,976.3199 ha.

The calculation of areas in GIS software are variable, each software has its specificities, settings and even algorithms that differ from one GIS software to another (1) (QGIS, 2023). The calculation of areas can be generated based on the ellipsoid of revolution, Datum or Earth Model generating different results for each user.

For example, we recalculated in QGIS 3.28.2 software, the area of the property using the shapefile SIGEF_JURUA_18S_UTM, with the following settings:

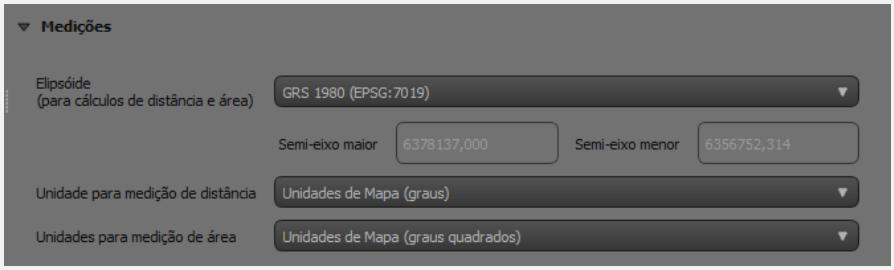


Figure 1: QGIS settings for measurements

The following values were obtained (figure 2, 3 and 4):

Calculated in

area_ha	area_qgis
21134,02324120000	21109,025
3870,53550929000	3865,518

Calculated in

Figure 2: Calculated values

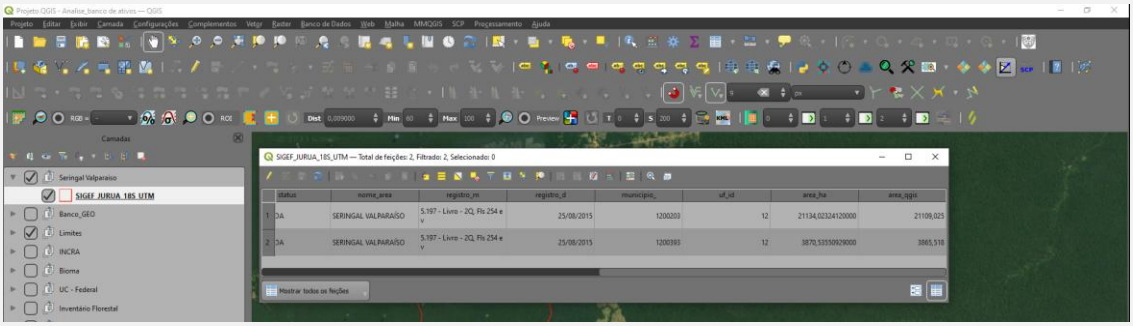


Figure 3: QGIS Screen

CL ID	06	Date: 04/11/2022

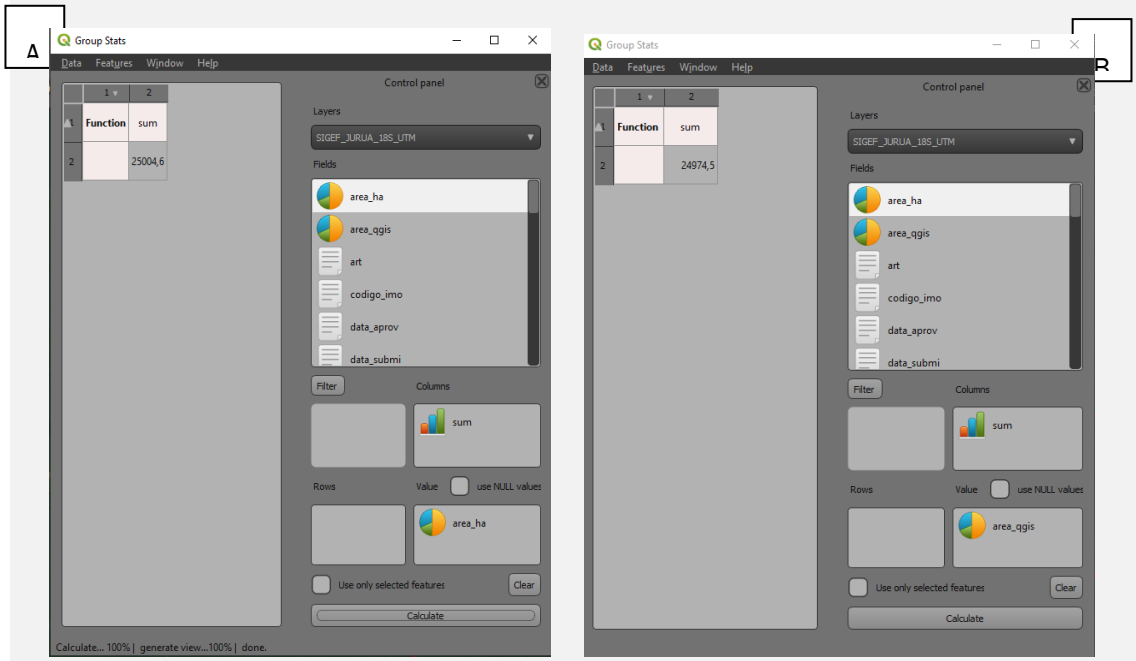


Figure 4: Sum of the area calculations in ArcGIS and QGIS (Figure A, sum of the values calculated in ArcGIS and Figure B, sum of the values calculated in QGIS)

The value of the area calculated by ArcGIS is equivalent to 25004,06 ha and the value of the area calculated by QGIS is equivalent to 24974,5 ha as shown in the Figure 4.

This explains the difference in area calculations for each GIS software. However, it does not explain why there are area differences in the SIGEF shapefile in relation to the SIGEF blueprints and descriptive memorials. What occurs is that the area calculation procedure in SIGEF is different from what we are used to. The blueprints and descriptive memorials inform the calculated area through the Local Geodetic System (LGS) instead of adopting the Universal Transverse Mercator (UTM) projection plane. When we open the shapefile in any GIS software and perform the area calculations according to the GIS software definitions, we lose this Local Geodetic System (LMS).

The Local Geodetic System (LMS) is a Cartesian system composed of three mutually orthogonal axes (e, n, u), where the "n" axis points toward the geodesic north, the "e" axis points toward the east and is perpendicular to the "n" axis, both contained in the
topographic plane, and the "u" axis coincides with the normal to the ellipsoid that passes through the vertex chosen as the origin of the system (2) (BRASIL, 2013). The LMS is a more precise system, because it was created exactly for the topographical conditions of the property. Figure 5 shows how the LGS is created.

CL ID	06	Date: 04/11/2022

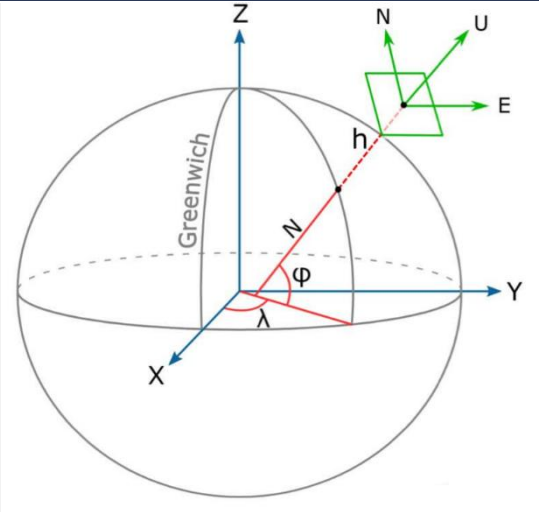


Figure 5: Local Geodetic System (LMS)
Source: GEO ONE (3)

Divergence of area values between property documents

A large part of the documents presented and that have variation in the value of the area of the property are documents issued before the georeferencing, that is, before the certification with SIGEF. This variation is completely expected.

Documentation provided by project participant

1. QGIS. Definindo as medidas. Disponível em: https://docs.qgis.org/3.22/pt_BR/docs/training_manual/processing/extents.html. Acesso em: 31 de janeiro de 2023.
2. norma_tecnica_georreferenciamento_imoveis_rurais_3ed
3. GEO ONE. Sistema Geodésico Local. Disponível em: https://geoone.com.br/sistema-geodesico-local/. Acesso em: 31 de janeiro de 2023.

DOE assessment	Date: 13/03/2023

The project proponents clarified that the variation of the values between property documents, however in figure 4 presented above it is said "*Sum of the area calculations in ArcGIS and QGIS (Figure A, sum of the values calculated in ArcGIS and Figure B, sum of the values calculated in QGIS*)"; but both of the figures are taken from QGIS software as its icon shows. Besides, the value presented in section 1.7 of the updated joint PD/MR does not correspond to none of the values indicated in figure 4 of the project proponents response.

Furthermore, the sum of the values presented in table 1 of joint PD/MR (24,976.32 ha) does not match with the one presented in the description under the aforementioned table (24,942.61 ha). The PPs are requested to clarify the value of the project property area.

Project participant response	Date: 16/05/2023

1. As requested, the sum of the area calculations in ArcGIS software (25,004.6 ha) is shown in Figure 1 below. In Figure 2 we only replicate what was already shared in the previous answer to demonstrate that the values are the same (25,0004.6 ha).

CL ID	06	Date: 04/11/2022

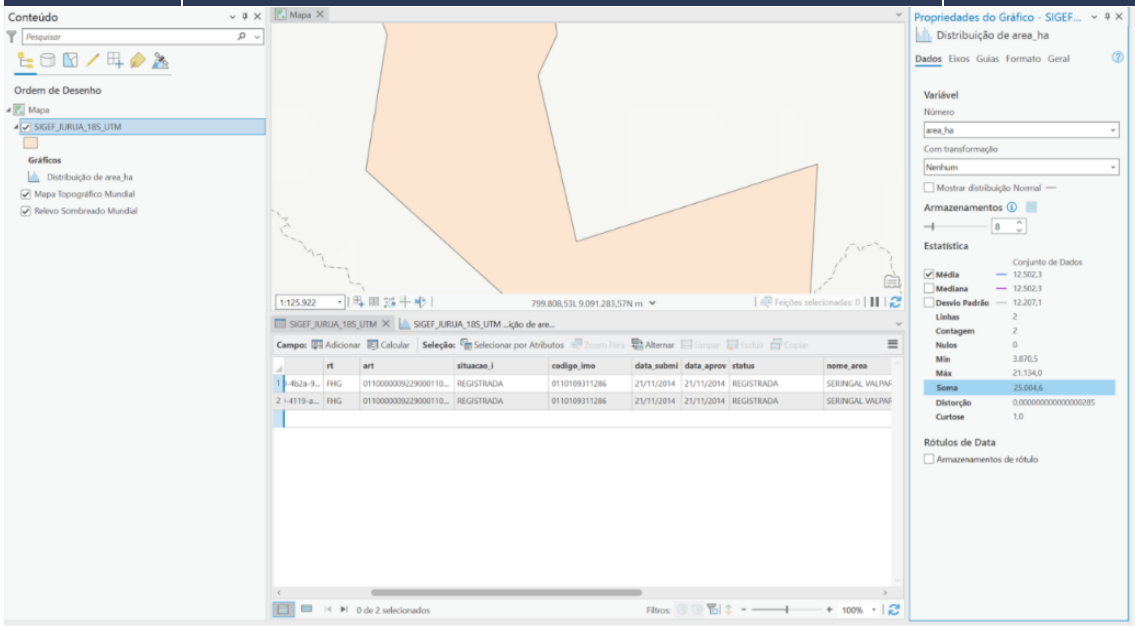


Figure 1: Sum of the area calculations in ArcGIS software (25,004.6 ha)

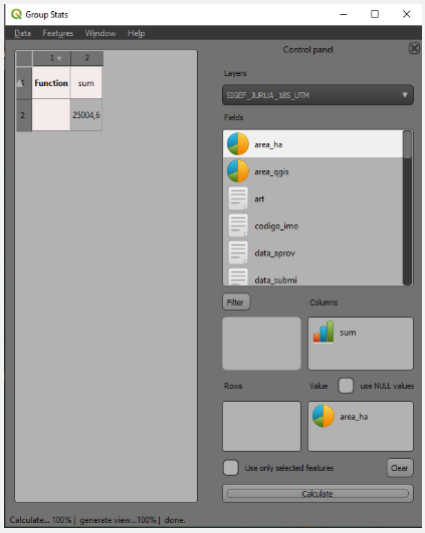


Figure 2 - Sum of the values calculated in QGIS software (25,0004.6 ha)

2. In section 1.7 of the joint PD/MR_v4 we included a justification regarding the area of the property used:

"The Project uses the geographic database provided by SIGEF to calculate the area of the property (24,974.54 ha). The geographic data was developed in QGIS 3.28.2 software that uses the Universal Transverse Mercator (UTM) projection.

The blueprints and descriptive memorials inform the calculated area through the Local Geodetic System (LGS) instead of adopting the Universal Transverse Mercator (UTM) projection plane. For this reason, there is a slight difference between the property documents (24,976.32 ha) and geographic database (24,974.54 ha)."

CL ID	06	Date: 04/11/2022

In addition, we adjusted Table 1 of the joint PD/MR_v4 to demonstrate the differences found between the values from the descriptive memorial and the SIGEF geographical database:

Name	Ownership registration	Area (ha) in Descriptive Memorial	Area (ha) in SIGEF geographic database
Seringal Valparaíso - Part 1	5,197	21,110.51	21,109.02
Seringal Valparaíso - Part 2	5,197	3,865.81	3,865.52
Seringal Valparaíso - Total	5,197	24,976,32	24,974.54

With this justification included in the PD/MR_v4 along with what has already been shared with VVB, we set the value of the property area at 24,974.54 ha like what was shown in figure 4.

3. The value 24,942.61 hectares mentioned in the PDD is justified in section 1.7, this value is not related to the area of the property used in the Project, this area refers only to the agreement to give up part of the area to INCRA, which no longer belongs to the owner.

"To define the final limits of the two parts of the property, the owner made a term of agreement with INCRA, as part of the land regularization process in 2014, giving up an area of 24,942.61 hectares, which was subsequently incorporated into the property of the Federal Government, directly benefiting indigenous people and settlers in the region. The supporting documents were submitted to VVB."
The document proving this process is attached (1).

Documentation provided by project participant

1. doacao-incra

DOE assessment	Date: 31/05/2023

1. The project proponent attached evidence to confirm the sum of the area calculations in ArcGIS software.
2. The project proponent updated the joint PD/MR, including in section 1.7 a clarification of discrepancies areas between the descriptive memorial and the SIGEF database (which was used to calculate the area of the property).
3. The project proponent clarified that the value 24,942.61 hectares refers only to the agreement to give up part of the area to INCRA; the value was validated with the evidence provided by the project proponent.

Finding closed successfully

CL ID	07	Date: 04/11/2022

Description of CL

In section 1.11 of PD&MR v2.0 the Project proponent states: *"...the Project will seek to strengthen relationships with these stakeholders through the CCB (Climate, Community and Biodiversity) certification procedures and guidelines"*.

Section 1.17.1: "*The natural resource and socio-economic studies already carried out, as well as the supplementary studies to be carried out, required to meet CCB certification, and other technical studies to maintain VCS requirements...*"

CL ID	07	Date: 04/11/2022

Section 1.18: "*…This involvement with these stakeholders will be carried out through procedures and guidelines by CCB (Climate, Community and Biodiversity) certification, as explained in the section 1.11.*"

Section 2.2: "*…This involvement with these stakeholders and others that may be deemed appropriate by the project will be conducted through the procedures and guidelines of CCB (Climate, Community and Biodiversity) certification, as explained in the section 1.11*"

Section 2.5: "*…Therefore, the Project provides, through CCB standard guidelines, a closer relationship with stakeholders, also proposing to update the socioeconomic and environmental studies (section 1.11).*"

Section 2.5: *"…in line with the studies to be carried out for CCB standard, targeted by the project for future incorporation"*

NPK Report, Internal risk, Project Management: "*The "updating and complementary studies" activity will make it possible to -2 strengthen the relationship with stakeholders, especially those who live within the 20 km radius of the Project Area, based on the CCB certification guidelines"*

NPK Report, external risk, Land Tenure and Resource Access: "*The Juruá REDD+ Project intends to strengthen the relationship with the community, with the intention of reaching the 20% required in line with the studies to be developed for the CCB standard, targeted by the project for future incorporation"*

The Project proponents are requested to clarify whether the project is also applying to the CCB standard or if the project is commitment to including the CCB standard as part of meeting some VCS requirements as a Forward action request (FAR).

Project participant response	Date: 12/01/2023

The Project proponents are not applying to the CCB standard, nor the project is committed to include CCB standard as part of meeting some VCS requirements. The PD&MR and the NPK Report, were edited and all CCB mention removed.

Documentation provided by project participant

DOE assessment	Date: 26/01/2023

The project proponents clarified that the project is not applying under CCB standard; the joint PD/MR and NPR report were updated removing CCB mentions.

Finding closed successfully

CAR ID	08	Date: 04/11/2022

Description of CAR

VCS Standard v4.3, 3.10.2 (3): *"A KML file with geodetic polygons that precisely delineate the boundary of the AFOLU project area generating emission reductions and removals"*

The proponents do not provide the KML file as required by the VCS Standard, 3.10.2 (3).

The Project proponent is requested to provide the KML file of the project in accordance with the verra website, all project supports and the PD&MR v2.0.

Project participant response	Date: 12/01/2023

The proponents provided the KML file (1) as required by the VCS Standard, 3.10.2 (3).

It is the same as the KML presented on the Project page of Verra Registry – section "VCS OTHER DOCUMENTS": https://registry.verra.org/app/projectDetail/VCS/3430

Documentation provided by project participant

CAR ID	08	Date: 04/11/2022

Evidence files contemplated:

1. AP-v1

DOE assessment	Date: 26/01/2023

The project proponents attached the KML file with the project area which does not have discrepancies with the one available on Verra's website.

Finding closed successfully

CAR ID	09	Date : 04/11/2022

Description of CAR

VSC Standard v4.3, 3.2.5: "*Activities that drain native ecosystems or degrade hydrological functions to generate GHG credits are not eligible under the VCS Program. Evidence shall be provided in the project description that any AFOLU project area was not drained or converted to create GHG credits. Such proof is not required where such draining or conversion took place prior to 1 January 2008. The onus is upon the Project proponent to demonstrate this, failing which the project shall not be eligible*".

The Project proponents state in section 1.3 of Joint PD&MR v2.0 "*Other VCS eligibility requirements that the project meets relate to … The project will not be implemented in wetlands and does not drain native ecosystems or degrade hydrological functions;"*. However, there is no evidence of compliance with this requirement, Project proponents are requested to provide supporting evidence.

The Project proponent is requested to provide sufficient information to support the assumption.

Project participant response	Date: 12/01/2023

Evidence from 2 different sources were shared with the auditors, showing that the Project complies with VCS Standard v4.3, 3.2.5 eligibility requirements that it will not be implemented in wetlands and does not drain native ecosystems or degrade hydrological functions.

1. Wetland Global dataset in shapefile format produced by the UN Environment World Conservation Monitoring Center (UNEP-WCMC), an official global data that shows no wetland in the project area.
2. Data from Land Cover and Land Use Map of Brazil produced by the Brazilian Institute of Geography and Statistics (IBGE), a national institution that is the main provider of data and information in Brazil that shows there are no wetlands in the project area nor in the state of Acre.

Aside from that, none of the project activities, described in section 1.11 of the PD&MR have the potential to degrade hydrological functions, as they are related to improve surveillance and monitor deforestation via satellite images, which only strengthens the forest and its hydrologic resources protection. The only forest products expected to be managed are non-timber products, specifically the *Uncaria tomentosa*, whose extraction has no impact on hydrological functions, as explained in section 2.1 and in the Embrapa document (3).

Documentation provided by project participant

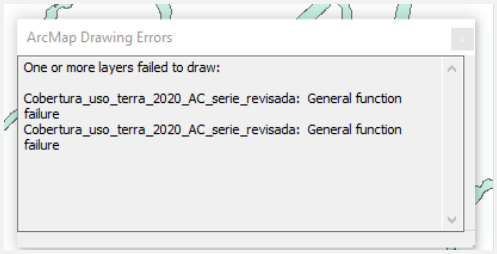
Evidence files:

1. global-wetlands-1993-unep-wcmc
2. mapa-de-uso-e-cobertura-da-terra-2020br-ibge
3. embrapa-manejo-sustentavel-unha-de-gato

DOE assessment	Date: 26/01/2023

CAR ID	09	Date : 04/11/2022

The project proponents attached documentary evidence to support the compliance with the conditions mentioned. However, the second evidence file attached is not available:



The PPs are requested to provide documentary evidence available.

Project participant response	Date: 16/05/2023

The adjusted documentary evidence was shared with the VVB (1).

Documentation provided by project participant

1. land_coverage_2020_ac.shp

DOE assessment	Date: 31/05/2023

The project proponent attached the evidence file required, which is now available.

Finding closed successfully

CL ID	10	Date: 04/11/2022

Description of CL

VCS Joint Project Description & Monitoring Report, v4.1, section 1.13: *"For AFOLU projects in all other cases, include the present and prior environmental conditions of the project area, including as appropriate information on the climate, hydrology, topography, relevant historic conditions, soils, vegetation, and ecosystems."*

The Project proponents do map climate, geology, geomorphology, topography, relevant historical conditions, and ecosystems.

The Project proponents do not provide adequate information on topography and ecosystems.

In Table 3, the sum of the percentages is greater than 100%

The Project proponent is requested to include mapped data on the climate, geology, geomorphology, topography, relevant historical conditions, and ecosystems;

It will be required to include appropriate topography and ecosystems information and;

Clarify the percentage distribution of soils in the project area.

Project participant response	Date: 12/01/2023

Section 1.13 of the PD&MR V2.0 was edited to include mapped data on the climate, geology, geomorphology, topography, relevant historical conditions, and ecosystems, and to include appropriate topography and ecosystems information.

Regarding the Table 3, it considers both order and suborders of soil information, which must have conditioned a sum greater than 100%. Thus, the table was formatted to highlight the information of the orders in bold, which added up to 100%. Furthermore, the details of the suborders were maintained.

CL ID	10	Date: 04/11/2022

Documentation provided by project participant

DOE assessment	Date: 26/01/2023

The project proponent updated the joint PD/MR, including adequate information on the climate, hydrology, topography, relevant historic conditions, soils, vegetation, and ecosystems of the project area in section 1.13. Besides, the PPs clarified the percentage distribution in table 3, in which there are not inconsistences with the values presented.

Finding closed successfully

CL ID	11	Date: 04/11/2022

Description of CL

VCS Joint Project Description & Monitoring Report, v4.1, section 1.14: *"Identify and demonstrate compliance of the project with all and any relevant local, regional and national laws, statutes and regulatory frameworks."*

The Project proponents have identified and listed the major relevant laws and regulations applicable to the project, but do not demonstrate how the project complies with all of them.

The Project proponent is requested to demonstrate compliance of the project with all relevant local, regional, and national laws, statutes and regulatory frameworks.

The Project proponent is requested to clarify the compliance with the legislation *'Portaria Interministerial n.º 419, de 26 de outubro de 2011'*, as there is an Indigenous Land within the buffer of 20 km around the Project Area.

The Project proponent is requested to clarify if the indigenous land is a stakeholder and if any stakeholders directly depend on the area for their livelihood or other activities.

Project participant response	Date: 12/01/2023

Section 1.14 of PD&MR V2.0 was edited to further demonstrate the project compliance with relevant local, regional and national laws, statutes and regulatory frameworks, such as Law nº 12.651, dated 05/25/2012, known as the Forest Code.

The 'Portaria Interministerial nº 419, de 26 de outubro de 2011' (1) regulates the activity of Federal Public Administration bodies and entities involved in environmental licensing. It applies for the installation of an enterprise or activity that are potentially harmful for the environment and must undertake environmental licensing, such as activities/enterprises that are potentially polluters or that might cause environmental degradation, and that are listed in Annex 2 of this legislation, which is not the case for a REDD+ project. Therefore, the Portaria Interministerial nº 419 does not apply to the Project.

Documentation provided by project participant

Evidence files:

1. portaria-419-11

CL ID	11	Date: 04/11/2022
DOE assessment		Date: 26/01/2023

1. The project proponents updated the joint PD/MR, including in section 1.14 an explanation of how the project meet relevant local, regional and national laws, statutes and regulatory frameworks.
2. PPs clarified why the legislation *'Portaria Interministerial n.º 419, de 26 de outubro de 2011'* does not apply to the project.
3. No response was provided to for the finding: "*The Project proponent is requested to clarify whether the indigenous land is a stakeholder and if any stakeholders directly depend on the area for their livelihood or other activities*" with supports. PENDING

Project participant response	Date: 03/03/2023

The indigenous land *Arara do Igarapé Humaitá* is a stakeholder, which was properly informed and consulted about the carbon project (1), but they do not directly depend on the project area for their livelihood or other activities, as stated in the document in the declaration signed by the representative of the indigenous land (2) and in the Territorial and Environmental Management Plan for the Arara do Igarapé Humaitá Indigenous Land (3)

Documentation provided by project participant

(1) Ata reunião FUNAI e TI ARARA do Igarapé Humaitá 29nov2021.pdf

(2) Declaracao_Representante_TI_Arara.pdf

(3) Plano de Gestão Territorial e Ambiental da Terra Indígena Arara do Igarapé Humaitá_2021.pdf

DOE assessment	Date: 13/03/2023

2. The project proponents clarified that the indigenous land *Arara do Igarapé Humaitá* is a stakeholder, and it was consulted by the project team by a meeting held on 29 November, 2021. This community does not directly depend on the project area for their livelihood or other activities, as stated in the document in the declaration signed on 29 November, 2022 by the representative of the indigenous land attached by the PPs. The PPs attached documentary proper evidence to support the aforementioned information.

Finding closed successfully

CAR ID	12	Date: 26/01/2023
Description of CAR		

VCS Joint Project Description & Monitoring Report, v4.1, section 1.16: "*In all other cases, indicate whether the project reduces GHG emissions from activities that are included in an emissions trading program or any other mechanism that includes GHG allowance trading, and include details about any such programs or mechanisms".*

In section 1.16 of PD&MR v2.0 the Project proponents state "*Not applicable*". However, according to VCS Joint Project Description & Monitoring Report, v4.1, section 1.16, the Project proponents shall indicate whether the project reduces GHG emissions from activities that are included in an emissions trading program or any other mechanism that includes GHG allowance trading, since part of the project area is part of the other carbon project registered in Verra.

The Project proponent is requested to provide the facts about the issue indicated in the numeral.

Project participant response	Date: 12/01/2023

CAR ID	12	Date: 26/01/2023

Section 1.16 was edited to further explain that the Project is not involved with other GHG emissions trading programs or mechanism, as requested in the VCS Joint Project Description & Monitoring Report v4.1.

Regarding the position of Verra about the overlapping matter, Project Proponents are watching a response for the other projects and their VVB, as stated in the last e-mail replied by Verra (1).
between the project area of other carbon project registered in Verra, the Project proponents.

Documentation provided by project participant

Evidence files:

1. reply-email-Verra

DOE assessment	Date: 26/01/2023

The project proponents updated the joint PD/MR, clarifying that the Project has no current or historical connection with any credit generation initiative related to the CDM or other regulatory or voluntary schemes. Besides, the PPs indicated the Jurua project has the entire ownership of the overlapping area and attached the email interchange made with Verra about this topic.

Finding closed successfully

CAR ID	13	Date: 04/11/2022

Description of CAR

1. In section 1.17.1 of PD&MR v2.0 the Project proponents state that the project will contribute to several goals, including 12.8 and 13.3; however, it is not clear how it will contribute to these goals.

The Project proponent is requested to outline how the project activities will specifically contribute to the selected Sustainable Development Goals (SDGs) and how contributions to these goals will be monitored.

2. In section 1.17.2 of PD&MR v2.0 the Project proponents state, "*The Project contributed to the purpose (13) Action Against Global Climate Change, ensuring the preservation of 102 hectares of a forest coverage preventing the emission of 43,594 tCO2 and GHG emissions during the monitored period…*";

And, in table 6 the Project proponents state, "*When preserving 389 ha of rain forest, the Juruá REDD+ Project prevented the release of 168,552 tCO2e to the atmosphere during the monitoring period.*";

In Table 69, the total ex-post GHG emissions reduced during the monitoring period are reported as 168,551 tCO2.

The Project proponent is requested to clarify the total ex-post GHG emissions reductions and maintain consistence throughout the documents.

Project participant response	Date: 12/01/2023

1. Goals 12.8 and 13.3 in section 1.17.1 of PD&MR v2.0 were edited to include more information. For goal 12.8 the improve of cat's claw management through enhance the knowledge of the species life cycle and better harvesting technique favor the regrowth of the mother plant are among the mapped opportunities of the REDD+ Juruá project, which favor people awareness relevant to sustainable development.

CAR ID	13	Date: 04/11/2022

For goal 13.3 the project's communication channels will allow the dissemination of the project's activities, achievements and positive impacts in relation to climate change to interested parties, contributing to awareness and human capacity on global climate mitigation.

2.The total ex-post GHG emissions reduction was revised, and section 1.17.2 of PD&MR v2.0 were edited, ensuring the consistency.

Documentation provided by project participant

DOE assessment	Date: 26/01/2023

1. The project proponents updated the joint PD/MR, providing more information about how the project activities contribute to Goals 12.8 and 13.3 in section 1.17.1, however, there is not information about how these contributions will be monitored. The Project proponents are requested to outline how contributions to these goals will be monitored.

2. The project proponents updated the joint PD/MR in which there are not inconsistences with the total ex-post GHG emissions reductions. However,

-The PPs stated in section 1.17.2 "*through the conservation of 102 hectares of forest during the monitoring period that would have been deforested in a scenario if the project was not carried out, and through the development of non-timber forest product management activities in the Project Area, respectively*" but in section 6.2 they indicated " […] *the number of hectares of each forest class that could be deforested in the absence of the project was extracted from the land use and land cover maps. The results of the baseline projections show acumulated deforestation of 389 hectares in the Project Area* […]".

1. Tables 44, 52, 59, and 75 and the descriptions on page 197 contain different values of total ex-post GHG emissions reductions.
2. In section 1.17.1 the description of 1,937,742 tCO2 from GHG emissions in 30 years differs from the description in section 1.1 of 3,361,691tCO2.

The project proponent is requested to provide consistent values throughout the documents.

Project participant response	Date: 03/03/2023

1. Goals 12.8 and 13.3 were removed from section 1.17.1.

2. Section 1.17.2 of the joint PD&MR was revised and now it states "*through the conservation of **389** hectares of forest during the monitoring period that would have been deforested in a scenario if the project was not carried out, and through the development of non-timber forest product management activities in the Project Area, respectively*"
    1. All tables were checked to present consistent values. The only difference in values is in table 72 "Ex-post reduction of anthropogenic GHG emissions (ΔREDDt) and Verified Carbon Units (VCUt) (Table 36 VM0015)" in the section 6.5 of the joint PD/MR V3 because the "ex-post GHG emissions reduced" column has been rounded down to be conservative. The values of table 72 are consistent with the ones presented on (1) "vcs-monitreport-jurua-2021-v5"
    2. The description in section 1.17.1 of the joint PD/MR V3 from GHG emissions in 30 years was adjusted to 3,361,691tCO2e.

Documentation provided by project participant

(1) "vcs-monitreport-jurua-2021-v5"

CAR ID	13	Date: 04/11/2022
DOE assessment		Date: 13/03/2023

1. The project proponents updated the joint PD/MR, which section 1.17.1 does not have inconsistences with the goals reported.
2. The Project Proponent updated the description of section 1.17.2 of the joint PD&MR v2 with the value of 389 hectares of conserved areas in the monitoring period. However, the values are not consistent with section 1.1 of the joint PD&MR v2 (Table 40: 3,640,279 tCO2e and section 1.1: 3,361,691 tCO2e).

In addition, it was found that "VM0015_planilha de calculo_jurua-v5" has some inconsistencies:

"Table_34" tab – "*Table 34. Ex ante estimated leakage due to activity displacement*", cell C9 has a formula that references "Table_21; cell L11".

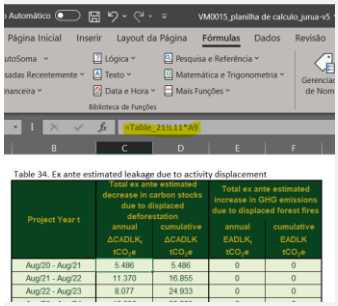
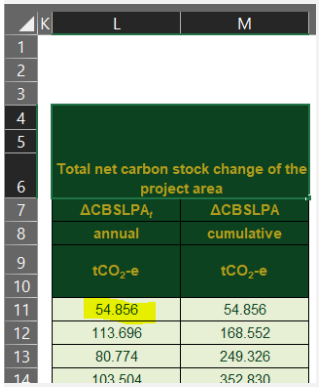


Table 34. Ex ante estimated leakage due to activity displacement

Project Year t	Total ex ante estimated decrease in carbon stocks due to displaced deforestation		Total ex ante estimated increase in GHG emissions due to displaced forest fires	
	annual $\Delta CADLK_t$ tCO_2e	cumulative $\Delta CADLK$ tCO_2e	annual $EADLK_t$ tCO_2e	cumulative $EADLK$ tCO_2e
Aug/20 - Aug/21	5.486	5.486	0	0
Aug/21 - Aug/22	11.370	16.855	0	0
Aug/22 - Aug/23	8.077	24.933	0	0

"Table 21" tab – "*Tables 21.b. Baseline carbon stock change in the project área*", cell L11 corresponds to the value of "*Total net carbon stock change of the project area*".



	Total net carbon stock change of the project area	
	$\Delta CBSLPA_t$	$\Delta CBSLPA$
	annual	cumulative
	tCO_2-e	tCO_2-e
	54.856	54.856
	113.696	168.552
	80.774	249.326
	103.504	352.830

The ex-ante project carbon stock changes values are the same as the ex-ante leakage carbon stock changes.

Table 36. Ex ante estimated net anthropogenic GHG emission reductions ($\Delta REDD_t$) and Verified Carbon Units (VCU_t)

Project Year t	Baseline carbon stock changes		Baseline GHG emissions		Ex ante project carbon stock changes		Ex ante project GHG emissions		Ex ante leakage carbon stock changes	
	annual $\Delta CBSLPA_t$ tCO_2e	cumulative $\Delta CBSLPA$ tCO_2e	annual $\Delta EBBBSLPA_t$ tCO_2e	cumulative $\Delta EBBBSLPA$ tCO_2e	annual $\Delta CPSPA_t$ tCO_2e	cumulative $\Delta CPSPA$ tCO_2e	annual $EBBPSPA_t$ tCO_2e	cumulative $EBBPSPA$ tCO_2e	annual ΔCLK_t tCO_2e	cumulative ΔCLK tCO_2e
Aug/20 - Aug/21	54.856	54.856	0	0	5.486	5.486	0	0	5.486	5.486
Aug/21 - Aug/22	113.696	168.552	0	0	11.370	16.855	0	0	11.370	16.855
Aug/22 - Aug/23	80.774	249.326	0	0	8.077	24.933	0	0	8.077	24.933
Aug/23 - Aug/24	103.504	352.830	0	0	10.350	35.283	0	0	10.350	35.283

It is not clear what the correct values for ex-ante project carbon stock changes and ex-ante leakage carbon stock changes are. The Project Proponent is requested to clarify values in spreadsheets and the joint PD&MR v2.

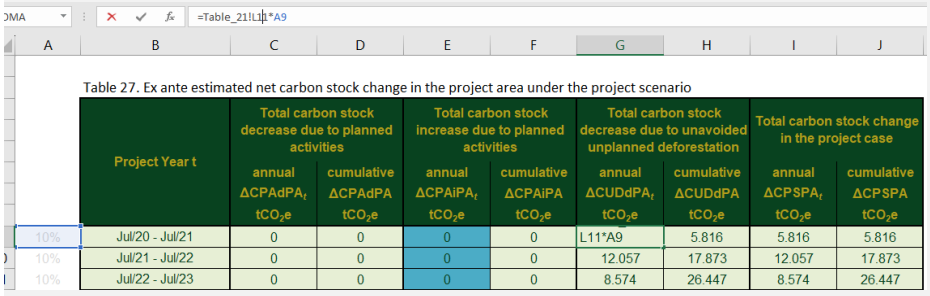
3. - The Project Proponent updated section 1.17.1 of the joint PD&MR v2 and the value of GHG emissions avoided in 30 years was adjusted to 3,361,691 tC0e.

CAR ID	13	Date: 04/11/2022
Project participant response		Date: 16/05/2023

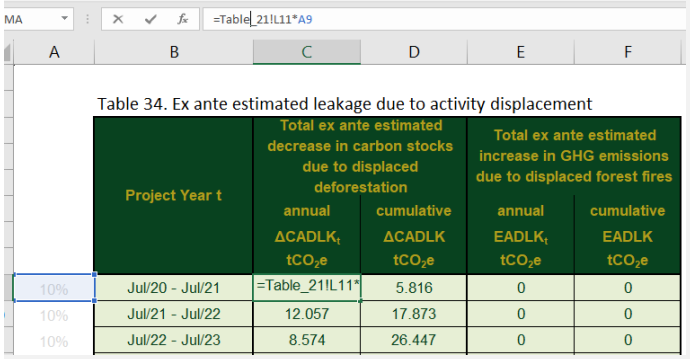
1. All emission values of the PD&MR v4 were revised and are now consistent with the emissions spreadsheets (**1** and **2**).

As described in section 4.2 Project Emissions - Step 7.1.2 (*Ex ante estimation of carbon stock changes due to unavoidable unplanned deforestation within the project* area) and in section 4.3 Leakage - Step 8.2 (*Ex ante estimation of the decrease in carbon stocks and increase in GHG emissions due to activity displacement leakage*), which are supported by the calculations in tabs "Table_27" and "Table_34" of the validation emissions spreadsheet respectively (1), the *ex-ante* project carbon stock changes and *ex-ante* leakage carbon stock changes conservatively adopted the same 10% inefficiency factor. Once these emissions will subtract from the *Baseline carbon stock changes* to result the *Ex-ante estimated net anthropogenic GHG emission reductions* ("Table_36" tab – "Table 36. Ex ante estimated net anthropogenic GHG emissions reductions (ΔREDDt) and Verified Carbon Units (VCUt)"), as formula ΔREDDt = (ΔCBSLPAt + EBBBSLPAt) – (ΔCPSPAt + EBBPSPAt) – (ΔCLKt + ELKt), the project conservatively applies the 10% inefficiency factor to the *Total net carbon stock change of the project area* (tab "Table_21") for both emissions, *unavoidable unplanned deforestation within the project area* ("Table_27" tab – "Table 27. Ex ante estimated net carbon stock change in the project area under the project scenario", cell G9 formula that references "Table_21; cell L11") and *due to activity displacement leakage* ("Table_34" tab – "Table 34. Ex ante estimated leakage due to activity displacement", cell C9 formula that references "Table_21; cell L11").

"Table_27" tab – "Table 27. Ex ante estimated net carbon stock change in the project area under the project scenario", cell G9 formula that references "Table_21; cell L11"



"Table_34" tab – "Table 34. Ex ante estimated leakage due to activity displacement", cell C9 formula that references "Table_21; cell L11"



"Table_36" tab – "Table 36. Ex ante estimated net anthropogenic GHG emissions reductions (ΔREDDt) and Verified Carbon Units (VCUt)"

CAR ID	13	Date: 04/11/2022

Table 36. Ex ante estimated net anthropogenic GHG emission reductions ($\Delta REDD_t$) and Verified Carbon Units (VCU_t)

Project Year t	Baseline carbon stock changes		Baseline GHG emissions		Ex ante project carbon stock changes		Ex ante project GHG emissions		Ex ante leakage carbon stock changes		Ex ante leakage GHG emissions		Ex ante net anthropogenic GHG emission reductions	
	annual $\Delta CBSLPA_t$ tCO_2-e	cumulative $\Delta CBSLPA$ tCO_2-e	annual $\Delta EBBBSLPA_t$ tCO_2-e	cumulative $\Delta EBBBSLPA$ tCO_2-e	annual $\Delta CPSPA_t$ tCO_2e	cumulative $\Delta CPSPA$ tCO_2e	annual $EBBPSPA_t$ tCO_2e	cumulative $EBBPSPA$ tCO_2e	annual ΔCLK_t tCO_2e	cumulative ΔCLK tCO_2e	annual ELK_t tCO_2e	cumulative ELK tCO_2e	annual $\Delta REDD_t$ tCO_2e	cumulative $\Delta REDD$ tCO_2e
Jul/20 - Jul/21	58.158	58.158	0	0	5.816	5.816	0	0	5.816	5.816	0	0	46.527	46.527
Jul/21 - Jul/22	120.574	178.732	0	0	12.057	17.873	0	0	12.057	17.873	0	0	96.459	142.986
Jul/22 - Jul/23	85.736	264.468	0	0	8.574	26.447	0	0	8.574	26.447	0	0	68.588	211.574

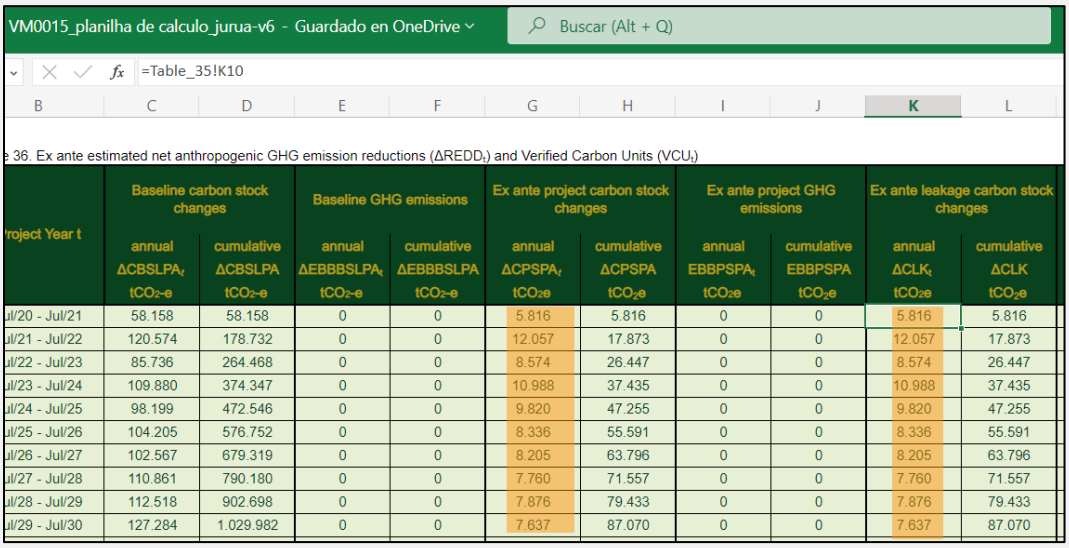
Documentation provided by project participant

1. VM0015_planilha de calculo_jurua-v6
2. vcs-monitreport-jurua-2021-v6

DOE assessment — Date: 31/05/2023

1. The project proponent updated the joint PD/MR, which does not have inconsistences with the value of GHG emissions reductions (3,579,232 tCO2e).

Besides, it is understood that the ex-ante project carbon stock changes and ex-ante leakage carbon stock changes conservatively adopted the same 10% inefficiency factor, however, it is still not clear why the values for ex-ante project carbon stock change and ex-ante leakage carbon stock change are the same, Since it is assumed that climate activities such as plantings are developed in the project area and not in the leakage areas.



e 36. Ex ante estimated net anthropogenic GHG emission reductions ($\Delta REDD_t$) and Verified Carbon Units (VCU_t)

roject Year t	Baseline carbon stock changes		Baseline GHG emissions		Ex ante project carbon stock changes		Ex ante project GHG emissions		Ex ante leakage carbon stock changes	
	annual $\Delta CBSLPA_t$ tCO_2-e	cumulative $\Delta CBSLPA$ tCO_2-e	annual $\Delta EBBBSLPA_t$ tCO_2-e	cumulative $\Delta EBBBSLPA$ tCO_2-e	annual $\Delta CPSPA_t$ tCO_2e	cumulative $\Delta CPSPA$ tCO_2e	annual $EBBPSPA_t$ tCO_2e	cumulative $EBBPSPA$ tCO_2e	annual ΔCLK_t tCO_2e	cumulative ΔCLK tCO_2e
ul/20 - Jul/21	58.158	58.158	0	0	5.816	5.816	0	0	5.816	5.816
ul/21 - Jul/22	120.574	178.732	0	0	12.057	17.873	0	0	12.057	17.873
ul/22 - Jul/23	85.736	264.468	0	0	8.574	26.447	0	0	8.574	26.447
ul/23 - Jul/24	109.880	374.347	0	0	10.988	37.435	0	0	10.988	37.435
ul/24 - Jul/25	98.199	472.546	0	0	9.820	47.255	0	0	9.820	47.255
ul/25 - Jul/26	104.205	576.752	0	0	8.336	55.591	0	0	8.336	55.591
ul/26 - Jul/27	102.567	679.319	0	0	8.205	63.796	0	0	8.205	63.796
ul/27 - Jul/28	110.861	790.180	0	0	7.760	71.557	0	0	7.760	71.557
ul/28 - Jul/29	112.518	902.698	0	0	7.876	79.433	0	0	7.876	79.433
ul/29 - Jul/30	127.284	1.029.982	0	0	7.637	87.070	0	0	7.637	87.070

On the other hand, the project proponent does not include ex ante net anthropogenic GHG emission reductions on table 47 of PD.

VCS Joint PD/MR template v4.2, section 5.4: "*Describe the procedure for estimation of net GHG emission reductions and removals. Include all relevant equations. For AFOLU projects, include equations for the quantification of net change in carbon stocks.*

Provide the ex-ante calculation (estimate) of baseline emissions/removals, project emissions/removals, leakage emissions and net GHG emission reductions and removals in the table below for the project crediting period. Specify the breakdown of GHG emissions reductions and removals by calendar year. […]"

Project participant response — Date: 22/06/2023

As described in section "5.2 - Project Emissions", the project's inefficiency factor was conservatively considered as 90%, using equation 16 of the VM0015 Methodology version 1.1 and taking as assumption the deforestation history in the project area. Still, it is worth saying that the project aims to reach 100% of the agents at baseline, and therefore a "leakage displacement factor" was conservatively considered to be 90% as well. However, it is consistent to say that although the project area and the leakage belt present the same agents as the baseline and the project proposes to seek to achieve 100% of these agents, as a matter of dependence on the effectiveness of the proposed climate activities, which cannot be measured ex-ante, and also in the difficulty of management and governance beyond the boundaries of the project area, the PP has chosen to conservatively alter the leakage factor to 88%. The changes were made in section 5.3 of the model and the calculations were redone for better understanding of the VVB.

Documentation provided by project participant
Evidence files: *1.* VM0015_planilha de calculo_jurua-v7

DOE assessment	**Date:** 04/07/2023
The VVB evidenced that in the ex-ante estimates a leakage displacement factor was evaluated with which an estimate of the displaced deforestation is obtained and the effectiveness of the project activities in which a decrease in the carbon stock is obtained due to the deforestation likely to be unavoided, which is consistent both in the spreadsheet and in section 5.2 and 5.3 of the joint PD/MR.	
Finding closed successfully	

CAR ID	14	**Date:** 04/11/2022
Description of CAR		
VCS Joint Project Description & Monitoring Report, v4.1, section 2.1: *"Summarize any potential negative environmental and socio-economic impacts and the steps taken to mitigate them"* VCS-Standard v4.3, 3.17.10: "*Where AFOLU project activities do not impact local stakeholders, projects are not required to meet the requirements set out in Sections 3.17.11 – 3.17.18 below. The Project proponent shall provide evidence that project activities do not impact local stakeholders at validation and each verification*". 1. In section 2.1 of PD&MR v2.0 the Project proponents state "*The Project activities do not cause any negative impact on stakeholders.*". However, in accordance with VCS-Standard_v4.3, 3.17.10, the Project proponents shall provide evidence to support it. The Project proponent shall provide evidence that project activities will not impact local stakeholders at validation and each verification. 2. In section 2.1 of PD+MR the Project proponents state "*Even if there is little probability, mitigating measures are already applied to mitigate possible negative impacts in the management of non-timber forest products,*		

CAR ID	14	Date: 04/11/2022

and one of them is the existence of a management plan…"; However, it is not clear what potential adverse impacts are associated with the project are and what the other mitigation measures are.

The Project proponent is requested to clarify whether there are any potential adverse environmental and socioeconomic impacts and what steps will be taken to mitigate them.

Project participant response	Date: 12/01/2023

1. In relation to socio-economic impacts, we can say that there are none, because in the first moment the Project activities will focus on the Project Area and, therefore, will not involve any local rural community. The Project foresees the execution of the activities only within the limits of the property belonging to Amazônia Agroindustry, that is, no activities will be performed in other areas such as private properties, areas belonging to indigenous communities and traditional communities or in other public areas. Furthermore, it is important to highlight that there are no indigenous people or traditional communities in the Project Area, as seen in Figure 12 (1), only around the Seringal Valparaíso Farm, and they do not depend directly on the area for subsistence or for any other activity.

2. The mitigation measures to the possible environmental impacts adopted are in the Cat's Claw Exploitation Plan (2), prepared in 2019, which includes a characterization as to the type of appropriate exploitation to be carried out within the property. This document was based on a technical publication called "Technical Subsidies for the Sustainable Management of Cat's Claw (*Uncaria spp.*) in the Juruá River Valley, AC" (3).

This information is described in PD&MR v2.0, section 2.1.

Documentation provided by project participant

Evidence files:

2. stakeholders-jurua-project
3. plano-exploracao-especie-nao-madeireira-2019
4. MIRANDA_2001

DOE assessment	Date: 26/01/2023

1. The project proponents mentioned that the local stakeholders will not have any impacts since they are not within the project area, however, in the document "*stakeholders-jurua-project.pdf*" and in Figure 12 of the joint PD/MR it is shown that there are some families near the northern boundary of the project, within a radius of 20 km. The PPs are requested to provide evidence to demonstrate that there will be no negative impacts on these local stakeholders, as the standard required (VCS-Standard v4.3, 3.17.10). *Where AFOLU project activities do not impact local stakeholders, projects are not required to meet the requirements set out in Sections 3.17.11 – 3.17.18 below. The Project proponent shall provide evidence that project activities do not impact local stakeholders at validation and each verification.*

2. The Project proponents updated section 2.1 of the PD&MR v2 and clarified what are the negative impacts in the management of non-timber forest products and the steps that will be taken to mitigate them.

Project participant response	Date: 03/03/2023

The project activities were informed to the local stakeholders for consultation during a meeting held on 28/11/2021 in the Escola Municipal de Ensino Fundamental Maria José Bezerra Fontes

Cruzeiro do Sul – Acre. As stated in the meeting record (1) and in the declaration from the indigenous land *Arara do Igarapé Humaitá* signed by their leader shared as evidence with the VVB, the local stakeholders don't foresee any negative impacts from the project activities.

CAR ID	14	Date: 04/11/2022
Documentation provided by project participant		
1. Ata reunião comunidade ramal do james 28nov2021 2. Declaracao_Representante_TI_Arara.pdf		
DOE assessment		**Date:** 13/03/2023
1. The project proponents attached documentary evidence of the meetings held with local stakeholders (including indigenous land Arara do Igarapé Humaitá), describing the information shared with them, including the benefits and positive impacts of the project; 2. The Project Proponent provided a "Declaracao_Representante_TI_Arara" and this document does contain statement about the positive impacts of the project on the Indigenous Land, signed by the legal representant of the indigenous land.		
Finding closed successfully		

CL ID	15	Date: 04/11/2022
Description of CL		
VCS-Standard v4.3, 3.17.4: "*The Project proponent shall establish mechanisms for ongoing communication with local stakeholders to allow stakeholders to raise concerns about potential negative impacts during project implementation*" The Project proponents do not demonstrate how they have established mechanisms for ongoing communication with local stakeholders. The Project proponent is requested to establish mechanisms for ongoing communication with local stakeholders so that stakeholders can raise concerns about potential adverse impacts during project implementation.		
Project participant response		**Date:** 12/01/2023
The Juruá REDD+ Project will implement and consolidate a communication plan (1) containing guidelines on the communication channels available and on the necessary steps to be taken in cases where suggestions and complaints are received from the interested parties. Through the communication channels, the Project will communicate its development and implementation, including the monitoring results and the VCS Program validation and verification processes, making available all the documents and information related to the Project. All procedures are described in the Juruá REDD+ Project communication plan. Besides the communication plan, we will use the suggestion form (2) and the registration form (3) to add to this process of improving the communication between the interested stakeholders. All this information was mentioned in VCS Joint Project Description & Monitoring Report, v4.1, section 2.2 – Communication.		
Documentation provided by project participant		
Evidence files 1. plano-de-comunicacao-jurua 2. formulario-caixinha-sugestao 3. formulario-registro		
DOE assessment		**Date:** 26/01/2023
The project proponent clarify it will implement and consolidate a communication plan that includes communications channels, however, it is not clear how local stakeholders who had suggestions during the		

CL ID	15	Date: 04/11/2022

monitoring period could communicate with the project, as the communication channel has not yet been implemented.

VCS Standard v4.4, 3.18.4: "*The project proponent shall establish mechanisms for ongoing communication with local stakeholders to allow stakeholders to raise concerns about potential negative impacts during project implementation.*"

Project participant response	Date: 03/03/2023

The stakeholder consultation and the implementation of the communication channel during the monitoring period was held by Ambiental Amazônia, which is the previous carbon project developer. In the invitation to the consultation events, Ambiental Amazônia made available to the stakeholders the communication channels, which were names, e-mails and telephone contacts of those responsible (1). After the event, all documentation related to the project was made available in physical form at the project office located in the municipality of Cruzeiro do Sul (70 km from the project area).

During this public consultation there were no complaints/dissatisfactions/suggestions/complaints from the local community forwarded after the consultations. The observations that were made during the consultations were recorded in minutes (attached as evidence of the communication and recording strategy) (1).

Complement to previous evidence, the document (1) shows the communication strategy used by Ambiental Amazônia, the information leaflet distributed to the community, the invitation made to stakeholders informing the presentation of the project, and the letter sent to stakeholders.

The documents related to the Juruá Carbon Project were delivered to the Project office via e-mail (2) and personally on November 25, 2021 to the owner, Mr. James Cameli (2), which was left available to any interested party for access (2).

Documentation provided by project participant

1. estrategia-de-comunicação-registros
2. comunicacao-stakeholders-v

DOE assessment	Date: 13/03/2023

The project proponents attached the file called '*estrategia-de-comunicação-registros.pdf*', which have evidence that the contact information was shared as a communication channel with stakeholders. Besides, the PPs mentioned "*After the event, all documentation related to the project was made available in physical form at the project office located in the municipality of Cruzeiro do Sul (70 km from the project area)*", but there is no evidence of this affirmation.

In addition, the PPs indicated that "*The observations that were made during the consultations were recorded in minutes (attached as evidence of the communication and recording strategy)*", however, The record does not appear in said file.

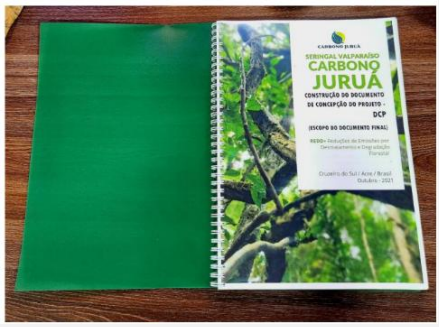
The project proponents are requested to provide evidence about that documentation was made available in physical form at the project office and the minutes that were filled during the consultations.

Project participant response	Date: 03/05/2023

1. The document shared in the latest assessment "comunicacao-stakeholders-v" (1) page 2 presents evidence that the materials were physically made available in James Cameli's office:

CL ID	15	Date: 04/11/2022

The documents related to the Juruá Carbon Project were delivered to the Project office via e-mail (below copy of the prints of two of these forwarding e-mails) and in person on November 25, 2021 to the owner, Mr. James Cameli (Photos below), which was left available for any interested party to access (Photo of the printout available at the office.)



2. The observations that were made during the consultations were described in document "estrategia-de-comunicação-registros" (2) but are not formally recorded in the minutes. The participation of the local community and their involvement can be demonstrated through the signatures collected in the public consultation process. This communication document is in attachment in "202111-reuniao-registro" (3) and “Ata reunião comunidade ramal do james 28nov2021” (4).

Documentation provided by project participant

1. *comunicacao-stakeholders-v*
2. estrategia-de-comunicação-registros
3. *202111-reuniao-registro*
4. *Ata reunião comunidade ramal do james 28nov2021*

DOE assessment	Date: 31/05/2023

1. The project proponent attached documentary evidence to support that documentation was made available in physical form at the project office.

2. The project proponent clarified that the observations that were made during the consultations were not formally recorded. Besides, it was attached two files to support the participation of the local community and their involvement in the public consultation process, however, there is still not evidence that during the public consultation there were no complaints/dissatisfactions/suggestions/complaints from the local community forwarded.

Project participant response	Date: 22/06/2023

During the public consultation meetings organized by the project management team, the project summary documentation was disseminated. In these exchanges space was given to collect feedbacks, suggestions, and criticisms in which, although not formalized, could be identified. Still, for the channels made available, e-mail, telephone, and the address of the project office, we received no complaints, satisfactions, suggestions, or denunciations from the local community, as described in the document (1) communication strategy and records "item 4", "Appendix B", and "Appendix C".

In addition to these meetings and meetings for community participation and other stakeholders described above, the project went through the public consultation event on the Verra registration platform for comments, suggestions and clarification of doubts about the Juruá REDD+ Project, which took place in the period from August 22, 2022 to September 21, 2022 (2). The importance of the engagement and collaboration of these stakeholders in this process was reinforced by sending formal invitations to those directly and indirectly involved in the forest conservation sector, such as community associations, non-

CL ID	15	Date: 04/11/2022

governmental organizations (NGOs), educational institutions, private companies, and public agencies present in the city of Cruzeiro do Sul - Acre. The invitation was made through a list of stakeholders created for the project (3), with information about the public consultation and an invitation to participate (4).

Furthermore, this public consultation was widely publicized by Biofílica Ambipar Investimentos Ambientais S/A (5) and Amazônia Agroindústria EIRELI through virtual communication such as LinkedIn (6) and whatsapp (7). In this period, the Project received from the conformation of the Verra agency and availability of supporting documents (8), only one anonymous comment indicating interest in the Project, not being considered complaints/dissatisfactions/suggestions/complaints.

The two public consultation processes were further described in VCS Joint PD/MR v4.2, section 2.2 and 2.4, for further clarification to the VVB.

Documentation provided by project participant

(1) estrategia de comunicação e registros
(2) verra-reply-pdf
(3) mailing-consulta-email
(4) email-consulta-publica-jurua
(5) 220831-operacoes-emkt-cpjurua (1)
(6) chamada-linkedin-consulta-publica
(7) consulta-publica-whatsapp-jurua
(8) Public_Comments_Summary_3430 (1)

DOE assessment	Date: 04/07/2023

The VVB evidenced that the proponent of the project disseminated the communication mechanisms and channels and within the results of the public consultations there are no complaints and/or petitions.

Finding closed successfully

CAR ID	16	Date 04/11/2022

Description of CAR

VCS Joint Project Description & Monitoring Report, v4.1, section 2.2: "*For AFOLU projects, also demonstrate how the project has or will communicate the following: • The project design and implementation, including the results of monitoring. • The risks, costs and benefits the project may bring to local stakeholders. • All relevant laws and regulations covering workers' rights in the host country. • The process of VCS Program validation and verification and the validation/verification body's site visit.*"

VCS-Standard v4.3, 3.17.17: "*The Project proponent shall take all appropriate measures to communicate and consult with local stakeholders in an ongoing process for the life of the project. The Project proponent shall communicate: 1) The project design and implementation, including the results of monitoring. 2) The risks, costs and benefits the project may bring to local stakeholders. 3) All relevant laws and regulations covering workers' rights in the host country. 4) The process of VCS Program validation and verification and the validation/verification body's site visit.*"

CAR ID	16	Date 04/11/2022

In the documentation provided by the Project proponents in section 2.2 of PD&MR V2.0 +MR, there is not evidence how they will communicate the following information to stakeholders, as required by the Standard: the risks, costs and benefits that the project may bring to local stakeholders; any relevant laws and regulations covering workers' rights in the host country; and the process of validation and verification of the VCS Program and the on-site visit by the validation/verification body.

Project participant response	Date: 12/01/2023

The Juruá REDD+ Project will implement and consolidate a communication plan (1) containing guidelines on the communication channels available and on the necessary steps to be taken in cases where suggestions and complaints are received from the interested parties.
Through the communication channels, the Project will communicate its development and implementation, including the monitoring results and the VCS Program validation and verification processes, making available all the documents and information related to the Project.
All procedures are described in the Juruá REDD+ Project communication plan.
Besides the communication plan, we will use the suggestion form (2) and the registration form (3) to add to this process of improving the communication between the interested stakeholders.

This information is indicated in the document VCS Joint Project Description & Monitoring Report, v4.1, section 2.2 – "Communication".

Documentation provided by project participant

1. plano-de-comunicacao-jurua
2. formulario-caixinha-sugestao
3. formulario-registro

DOE assessment	Date: 26/01/2023

The project proponents updated the joint PD/MR, indicating in section 2.2 "*Through the communication channels, the Project will communicate its development and implementation, including the monitoring results and the VCS Program validation and verification processes, making available all the documents and information related to the Project, including the risks, costs and benefits that the project may bring to local stakeholders, and any relevant laws and regulations covering workers' rights in the host country. All procedures are described in the Juruá REDD+ Project communication plan"*.

However, it is not clear from the project's communication plan ('plano-de-comunicacao-jurua.pdf') what specific information will be shared with local stakeholders. In addition, there is no information and support for communication about the on-site visit by the validation/verification body.

It is not clear how the information required by the VCS Standard v4.4 (3.18.18, 3.17.17) was communicated with the stakeholders since the communication plan has not yet been implemented.

VCS Standard v4,4, 3.18.18: "*The project proponent shall take all appropriate measures to communicate and consult with local stakeholders in an ongoing process for the life of the project. The project proponent shall communicate: […] 4) The process of VCS Program validation and verification and the validation/verification body's site visit."*

CAR ID	16	Date 04/11/2022

3.17.17: "*The Project proponent shall take all appropriate measures to communicate and consult with local stakeholders in an ongoing process for the life of the project. The Project proponent shall communicate: 1) The project design and implementation, including the results of monitoring. 2) The risks, costs and benefits the project may bring to local stakeholders. 3) All relevant laws and regulations covering workers' rights in the host country. 4) The process of VCS Program validation and verification and the validation/verification body's site visit.*"

Project participant response	Date: 03/03/2023

The communication process carried out initially by Ambiental Amazônia had the principle of demonstrating, from the meetings held, the risks (page 24, document 1 "reunioes-stakeholders-nov2021"), costs and benefits that the project may bring to local stakeholders, all relevant laws and regulations covering workers' rights in the host country, the validation and verification process of the VCS Program, and the visit of the validation/verification body to the site (page 23, document 1 "reunioes-stakeholders-nov2021").

Some information that was passed on to stakeholders:

Risks and impacts: considering that, in theory, REDD+ projects like Seringal Valparaíso do not bring social and environmental risks, and also that REDD+ projects are already a "safeguard", these issues were addressed during the meetings with stakeholders, presenting the main risks previously identified, that although they are possible to occur, the probability of occurrence is low, once the area has no record of encroachment. The identification of risks is an iterative process, once new risks can be known as the Project is implemented throughout its life cycle, but at the time of the meeting in which the point was addressed, there was no presentation of other risks, nor disagreement about the risks presented (2)

Labor laws: in principle it is not planned to hire people from the community, their participation was designed as beneficiaries of training activities on best production practices and technical assistance. Therefore, there was no need to address labor issues during the meetings. During project implementation, if there is this possibility, people from the communities surrounding the project area will have equal opportunities to fill the positions, in a fair and transparent process, when applicable.

Today the project has a clear communication plan (3) that guides on how to transmit the necessary information to attend the VCS requirements, which are 1) The project design and implementation, including the results of monitoring. 2) The risks, costs and benefits the project may bring to local stakeholders. 3) All relevant laws and regulations covering workers' rights in the host country. 4) The process of VCS Program validation and verification and the validation/verification body's site visit.

Documentation provided by project participant

1. reunioes-stakeholders-nov2021
2. Ata reunião comunidade ramal do james 28nov2021
3. plano-comunicacao-jurua_vf

DOE assessment	Date: 13/03/2023

The project proponents attached documentary evidence to support the communication of the risks, costs and benefits that the project may bring to local stakeholders, the validation and verification process of the VCS Program to the stakeholders. However, in the documentation attached there is no evidence that the information about all relevant laws and regulations covering workers' rights in the host country and the visit of the validation/verification body (VVB) to the site were shared; the PPs indicated that in page 23 of the '*reunioes-stakeholders-nov2021.pdf*' file was the evidence about the visit of the VVB, but in this page there

CAR ID	16	Date 04/11/2022

is only mentioned the dates on which the validation and verification and verification audit process will be monitored, but not when the visit was carried out as such.

The PPs are requested to provide evidence to support that information about all relevant laws and regulations covering workers' rights in the host country and the visit of the validation/verification body was shared with local stakeholders.

Project participant response	Date: 16/05/2023

As described in section 2.2 of the joint PD/MR_v4, the project will consolidate communication channels and inform about all relevant laws and regulations covering workers' rights in the host country and the visit of the validation/verification body will be shared with local stakeholders before the next verification audit.

Documentation provided by project participant

-

DOE assessment	Date: 31/05/2023

The project proponent clarified that the requested information will be informed shared with local stakeholders before the next verification audit, however, the project is still not in compliance with the requirements of the VCS Standard item 3.18.18 (3) and 3.18.18 (4).

VCS Standard v4,4, item 3.18.18: *"The project proponent shall take all appropriate measures to communicate and consult with local stakeholders in an ongoing process for the life of the project. The project proponent shall communicate:*

1) The project design and implementation, including the results of monitoring.

2) The risks, costs and benefits the project may bring to local stakeholders.

3) All relevant laws and regulations covering workers' rights in the host country.

4) The process of VCS Program validation and verification and the validation/verification body's site visit."

Project participant response	Date: 22/06/2023

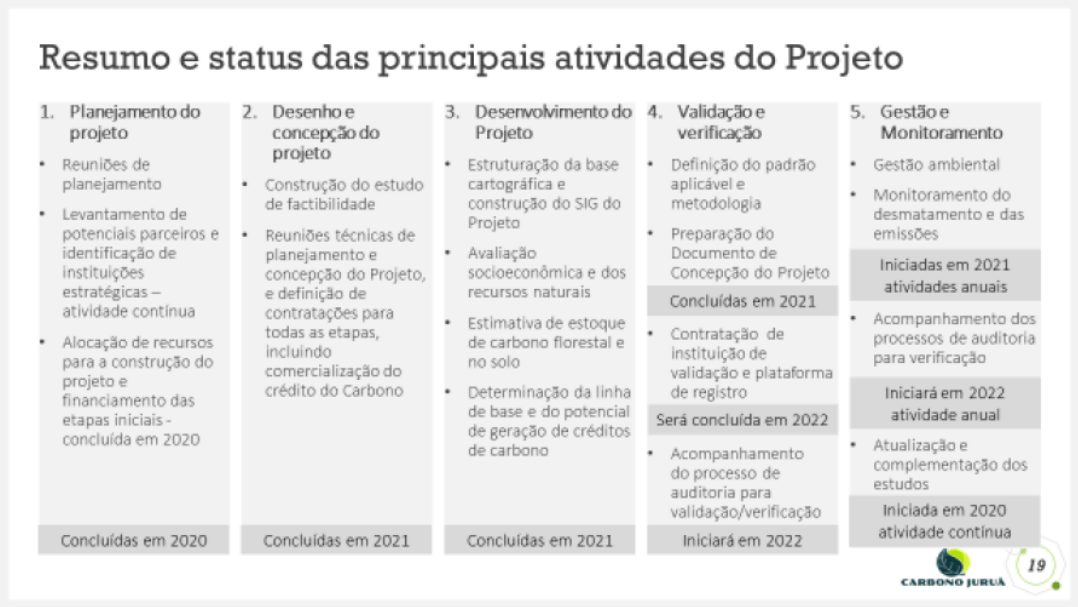
The project proponents did not attach all relevant laws and regulations covering workers' rights in the host country in the public consultations held and commit from the project validation onwards to always comply with the requirement.

Regarding the "although the VCS Program validation and verification process and the site visit of the validation/verification body was communicated in advance", the project proponents understand that they should have informed them again when the proponents knew the certain date of the field audit as this would increase community engagement, however, there is no clear guideline in the VCS Standard norms nor a defined timeframe of how this site visit body should take place.

The VCS Program validation and verification process and the on-site visit of the validation/verification body cited in the document shown in (1) meetings-stakeholders-nov2021 on the slide attached below:

CAR ID	16	Date 04/11/2022

RELATÓRIO – CONSULTA LOCAL DE STAKEHOLDERS



This information is indicated in the document VCS Joint Project Description & Monitoring Report, v4.1, section 2.2 – "Communication".

Documentation provided by project participant

1. reunioes-stakeholders-nov2021

DOE assessment	Date: 04/07/2023

VCS Standard v4,4, item 3.18.18: *"… The project proponent shall communicate:*

3) All relevant laws and regulations covering workers' rights in the host country.

The VVB couldn't validated in the report neither the supports that the project proponent has communicated and consulted with stakeholders on compliance with the regulations related to workers' rights (VCS requirement 3.18.18.3).

The project proponent is requested to provide supporting evidence that the project proponent has communicated and consulted with stakeholders on compliance with regulations relating to workers' rights in an ongoing process for the life of the project (VCS requirement 3.18.18.3). PENDING

"… The project proponent shall communicate:

4) The process of VCS Program validation and verification and the validation/verification body's site visit."

The VVB reviewed the report, where it is communicated as an activity accompanying the audit, but there is no support for communication and consultation with stakeholders (VCS requirement 3.18.18.4).

CAR ID	16	Date 04/11/2022

The project proponent is requested to attach the evidence about the communication and consulted with stakeholders (VCS requirement 3.18.18.4). PENDING

In accordance with item 1.2 of the VCS standard, the project proponent is requested that all applicable documentation be translated into English.

VCS Standard v4,4, item 1.2: *"The operating language of the VCS Program is English. The project and program description, validation report, monitoring report, verification report, and all other documentation (including all and any appendices) required under the VCS Program shall be in English".*

Project participant response	Date: 26/07/2023

In order to comply with the VCS-Standard requests, a new consultation with the Project stakeholders was carried out.

All information regarding this process is described in the VCS Joint Project Description and Monitoring Report, section 2.2 - "Local Stakeholder Consultation - Second Stakeholder Consultations".

There were eight meetings between July 11, 12, 13 and 14, 2023, in the city of Cruzeiro do Sul, at the headquarters of the institutions visited and with the surrounding community, at the Municipal School of Elementary Education Maria José Bezerra Fontes.

Evidence of the process such as attendance lists, photos, power point presentation, questionnaire applied and the descriptive minutes of each meeting are shared in the folders referring to each meeting held: (1) Associação Asa Real do Riozinho Liberdade - RESEX LIBERDADE, (2) Comunidade local, moradores do entorno do Seringal Valparaíso, (3) Cooperativa da Agricultura Familiar Recanto do Projeto de Assentamento Florestal – PAF Recanto, (4) Equipe Técnica - Escritório central – Amazônia Agroindústria, (5) Fundação Nacional do Índio – Alto Juruá (FUNAI-CZS), (6) Proprietário Amazônia Agroindústria - James Castro Cameli, (7) SEAGRI – Secretaria de Estado de Agricultura e EMATER - Empresa de Assistência Técnica e Extensão Rural do Acre and (8) SEBRAE - Serviço Brasileiro de Apoio às Micro e Pequenas Empresas.

Documentation provided by project participant

Evidence files contemplated:

(1) Associação Asa Real do Riozinho Liberdade - RESEX LIBERDADE
(2) Comunidade local, moradores do entorno do Seringal Valparaíso
(3) Cooperativa da Agricultura Familiar Recanto do Projeto de Assentamento Florestal – PAF Recanto
(4) Equipe Técnica - Escritório central – AMAZÔNIA AGROINDÚSTRIA
(5) Fundação Nacional do Índio – Alto Juruá (FUNAI-CZS)
(6) Proprietário AMAZÔNIA AGROINDÚSTRIA - James Castro Cameli
(7) SEAGRI – Secretaria de Estado de Agricultura e EMATER - Empresa de Assistência Técnica e Extensão Rural do Acre
(8) SEBRAE - Serviço Brasileiro de Apoio às Micro e Pequenas Empresas

DOE assessment	Date: 28/07/2023

The VVB reviewed the evidence and verified that stakeholder communication is being reinforced on missing issues such as workers' rights and the process and visit of the audit team.

The documents of the evidence that corresponds to the communication process that is carried out in the local language.

Finding closed successfully

CL ID	17	Date: 04/11/2022

Description of CL

VCS Joint Project Description & Monitoring Report, v4.1, section 2.4: "*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*".

VCS-Standard v4.3, 3.17.9: "*The Project proponent shall take due account of any and all comments received during the consultation, which means it will need to either update the project design or demonstrate the insignificance or irrelevance of the comment. It shall demonstrate to the validation/verification body what action it has taken*".

The Project proponents have not outlined how all comments received during the public comment period has been taken were adequately addressed.

The Project proponent is requested to clarify how comments received on August 31, 2022, were considered, including details or updates to the project design, or demonstrate the irrelevance of the comments.

Project participant response	Date: 12/01/2023

Comments received by Verra during the public comment period 22 August - 21 September 2022 of the Juruá REDD+ Project (project ID3430) is shown in the document provided by Verra (1). The project proponent sent an e-mail requesting the information to Verra, as shown in document (2), and got a reply indicating the impossibility of contacting the person who made the comment, as shown in document (3).

The commentor did not provide their contact information as requested, the commentor opted to remain anonymous; thus, we cannot retrieve their contact information. It's important to notice that there was no negative indication of any kind about the Project.

This information is indicated in PD&MR V2.0, section 2.4.

Documentation provided by project participant

Evidence files contemplated:

1. public-comments-summary-3430
2. PP-asking-comentor-contact-pdf
3. verra-reply-pdf

DOE assessment	Date: 26/01/2023

The project proponents updated the joint PD/MR, indicating in section 2.4 that the only comment received during the public comment period was an anonymous stakeholder indicating interest in the Project, the PPs clarified it was impossible to contact this stakeholder since it does not provide its contact information. Adequate evidence was attached to support the aforementioned.

Finding closed successfully

CL ID	18	Date: 04/11/2022

Description of CL

In section 2.5; Identification of local stakeholder-of PD&MR V2.0 +MR report the Project proponents state that they "*Considering a buffer of 20 km surrounding the Project Area (Figure 1.)"* However, no buffer is drawn in Figure 1.

There is no evidence of identifying stakeholders within 20 km of the project boundary to determine Community engagement with external risks.

CL ID	18	Date: 04/11/2022

The Project proponent is requested to provide a figure showing the buffer with stakeholders within 20 km outside the project boundaries

Project participant response	Date: 12/01/2023

Section 2.5 in the theme "Identifying local stakeholders" of PD&MR V2.0 was updated to better explanation of the identification of stakeholders within 20 km of the project boundary to determine the Community's involvement with external risks. Also, the map (Figure 12) was updated to show the buffer of 20 km (1). Also the information has been adjusted in the Jurua-VCS-Non-Permanence-Risk-Report-Template-v4.0 document; in the "Community Engagement" section.

Regarding the evidence of identifying stakeholders within 20 km of the project boundary, together if the identification map (1), Project Proponent is resending evidence (2) regarding the meeting held with representatives of the federal, state and local governments, and representatives of the communities.

Documentation provided by project participant

Evidence files contemplated:

1. stakeholders-jurua-project.pdf
2. reunioes-stakeholders-ambiental-amazonia

DOE assessment	Date: 26/01/2023

The project proponents updated the joint PD/MR, in which the Figure 12 shows the buffer of 20 km surrounding the project and the stakeholders within it. The PPs also updated the NPR report, taking into account the identification made by the buffer. The figure that shows the buffer was attached as an independent file.

Finding closed successfully

CL ID	19	Date: 04/11/2022

Description of CL

VCS Joint Project Description & Monitoring Report, v4.1, section 2.5: "*For AFOLU projects, provide details on the following: • Local stakeholder identification process and a description of results…*"

VCS-Standard v4.3, 3.17.11(1): "…*The project description shall include information on local stakeholders at the start of the project, including: 1) The process(es) used to identify local stakeholders likely impacted by the project and a list of such stakeholders*;"

Project proponents do not describe the process of identifying local stakeholders, as required by the Standard.

The Project proponent is requested to describe the process for identifying local stakeholders, as required by the standard.

Project participant response	Date: 12/01/2023

The process of identifying local stakeholders was described in Section 2.5 in the theme "Identifying local stakeholders" of PD&MR V2.

In addition to the evidence provided in CL 18 ID, which is also related to the stakeholder identification process, PP shares with VVB the information used to compose the study of local populations (1).

CL ID	19	Date: 04/11/2022

Documentation provided by project participant

Evidence files contemplated:

1. COMPLETO Resumo Executivo do ZEE-Acre Fase III_V16_WEB

DOE assessment **Date:** 26/01/2023

The project proponents updated the joint PD/MR, including in section 2.5 the process for identifying local stakeholders; the PPs mentioned "*In order to identify the local stakeholders, a survey of socioeconomic and environmental data of the Project region was conducted by Ambiental Amazônia"*, however, the support of the survey was not attached. The PPs are requested to provide evidence to support the survey developed to identify the local stakeholders.

Project participant response **Date:** 03/03/2023

The first approach to stakeholder identification made by Ambiental Amazônia was geographic, therefore, the 20 km buffer around the project area presents the distribution of the communities in the area of influence (1), which in the specific case were the Projeto de Assentamento Dirigido (PAD) Santa Luzia, Projeto de Desenvolvimento Sustentável (PDS) Jamil Jereissati, Projeto de Assentamento Florestal (PAF) Recanto, Projeto de Assentamento (PA) Tracuá and PA Pedro Firmino; 2 private properties; the Extractive Reserve (Resex) Riozinho da Liberdade; and the Indigenous Land (TI) Arara do Igarapé Humaitá. Therefore, these communities were identified as most likely to be influenced by the Project. Based on the identification of these communities, the community associations and unions that represent them were considered stakeholders.

The land categorization of the buffer allowed us to identify the public agencies responsible for managing the areas (ICMBio, FUNAI, INCRA), besides those that develop public policies in those locations, whether technical assistance, inspection, etc.: (SEMA-AC, IMC, ITERACRE, Cruzeiro do Sul City Hall). From these contacts it was then possible to identify other organizations that develop projects in the area: NGOs, Universities and Federal Institutes; SEBRAE, among other institutions and companies of interest to the owner.

PP has shared with the VVB the folder (2) reunioes-stakeholders-ambiental-amazonia and the document (3) atividades do projeto e comunidade do entorno_Seringal_valparaiso, which contains evidences of the meeting held with the local stakeholders (representatives of the federal, state and local governments, and representatives of the communities).

Documentation provided by project participant

1. stakeholders-jurua-project.pdf
2. reunioes-stakeholders-ambiental-amazonia
3. atividades do projeto e comunidade do entorno_Seringal_valparaiso

DOE assessment **Date:** 13/03/2023

The project proponents indicated a brief description of the process used to identify stakeholders and attached evidence to support it; however, in the section 2.5 of the updated joint PD/MR it is still indicated "*In order to identify the local stakeholders, a survey of socioeconomic and environmental data of the Project region was conducted by Ambiental Amazônia"* and there was not attached evidence about this survey developed by Ambiental Amazonia, therefore, the PPs are requested to provide evidence to support the survey developed.

On the other hand, some the files attached as evidence has reference errors.

Project participant response **Date:** 16/05/2023

CL ID	19	Date: 04/11/2022

Section 2.5 of the PD/MR_v4 has been adjusted to contemplate the method that was used to identify the stakeholders.

References error in document “Juruá_Carbon_Reuniões_Stakeholders_04jan2022” (1) were adjusted as requested.

Documentation provided by project participant

1. Juruá_Carbon_Reuniões_Stakeholders_04jan2022

DOE assessment	Date: 31/05/2023

1. The project proponent updated the joint PD/MR, which does not have inconsistences with the description of the process for identifying local stakeholders.
2. The project proponent has attached the available document.

Finding closed successfully

CL ID	20	Date: 04/11/2022

Description of CL

VCS-Standard v4.3, 3.17.11(5): “...*The project description shall include information on local stakeholders at the start of the project, including: 5) The expected changes in well-being and other stakeholder characteristics under the baseline scenario, including changes to ecosystem services identified as important to local stakeholders*;”

The Project proponents do not describe the expected changes in well-being and other characteristics of stakeholder compared to the baseline scenario, including changes in ecosystem services that are important to local stakeholders.

The Project proponent is requested to provide a description of the expected changes in well-being and other stakeholder characteristics under the baseline scenario, including changes in ecosystem services that are important to local stakeholders.

Project participant response	Date: 12/01/2023

The Project complies with the observation set out in section 3.17.10 of the VCS-Standard v4.3 document: "In cases where AFOLU project activities do not impact local stakeholders, projects are not required to comply with the requirements set out in sections 3.17.11 - 3.17.18 below. The project proponent shall provide evidence that the project activities do not affect local stakeholders at validation and at each verification.".

Section 2.5 of the PD&MR V2.0 was updated to better contextualize that the Project do not impact local stakeholders, so do not expect to create changes in their well-being.

As stated in this section, “There are no stakeholders in the Project area, only around, as shown in Figure 12” (1).

Documentation provided by project participant

Evidence files contemplated:

1. stakeholders-jurua-project

DOE assessment	Date: 26/01/2023

CL ID	20	Date: 04/11/2022

The project proponents updated the joint PD/MR, indicating in section 2.5 that "*The Project does not impact local stakeholders*". In accordance with VCS Standard v4.4 (3.18.11) "*Where AFOLU project activities do not impact local stakeholders, projects are not required to meet the requirements set out in Sections 3.18.12 – 3.18.20 below. The project proponent shall provide evidence that project activities do not impact local stakeholders at validation and each verification*"; the project proponents shall provide evidence to support that the project do not impact local stakeholders, which is analyzed in finding 14.1.

Project participant response	Date: 03/03/2023

To provide evidence that the Project does not impact local stakeholders, Ambiental Amazônia presents in the developed document (1) a study that demonstrates the land context of the Project and the surrounding area, land cover and use in the Project and surrounding area, economic activities and livelihoods of the surrounding communities, and the relationship of the surrounding communities with the Project area.

In addition, consultations were held with interested parties and with institutions representing stakeholders. The project activities were informed to the local stakeholders for consultation during a meeting held on 28/11/2021 in the Escola Municipal de Ensino Fundamental Maria José Bezerra Fontes Cruzeiro do Sul – Acre. As stated in the meeting record (2 and 3) shared as evidence with the VVB, the local stakeholders don't foresee any negative impacts from the project activities.

Documentation provided by project participant

1. atividades-do-projeto-e-comunidade
2. Ata reunião comunidade ramal do james 28nov2021
3. Jurua_Reuniões_Stakeholders_nov2021

DOE assessment	Date: 13/03/2023

As it was aborded in finding 14.1, the project proponents attached documentary evidence of the meetings held with local stakeholders, describing the information shared with them, including the benefits and positive impacts of the project;

Finding closed successfully

CL ID	21	Date: 04/11/2022

Description of CL

1. In section 2.5 of PD&MR V2.0 +MR the Project proponents state "*Risk: Non-timber forest product management activities have a low risk of negative impacts*"; however, the Project proponent did not specify what the impacts are, therefore the Project proponent is requested to clarify what are the impacts derived from non-timber forest product management activities.

2. In section 2.5 of PD&MR V2.0 +MR the Project proponents state "*Mitigation: The Project will maintain the mitigation measures already in place to mitigate potential negative impacts.*" However, the Project proponent has not indicated what these measures are, therefore the Project proponent is requested to explain what mitigation measures are already in use.

Project participant response	Date: 12/01/2023

Section 2.1 of the PD&MR V2.0 was edited to include the impacts derived from the project non-timber forest product (the species *Uncaria tomentosa*) management activities and the mitigation measures already in use. Section 2.1 was also cited in section 2.5.

CL ID	21	Date: 04/11/2022

1.The impacts are only related to the species managed, such as overexploitation and/or unproper cutting at the harvest, hindering the possibility of regrowth.

2. As mitigation measure there is a management plan that regulates the appropriated cutting techniques and the total volume of the harvest.

Project Proponent is resending evidence (1) regarding the mitigation measures.

Documentation provided by project participant

Evidence files contemplated:

1. operacao-unha-de-gato

DOE assessment	Date: 25/01/2023

1. The description of section 2.5 does not specify the impacts of the "Risk: Non-timber forest product management activities have a low risk of negative impacts". The description of section 2.5 references section 2.1, which specifies the impacts of the activity.

2. The description in section 2.5 of not specify the mitigation measures already in place to mitigate potential negative impacts. The description of section 2.5 references section 2.1, which has the activity's mitigation measures.

Finding closed successfully

CAR ID	22	Date: 04/11/2022

Description of CAR

VCS-Standard v4.3, 3.17.12: "*The Project proponent shall identify likely natural and human-induced risks to local stakeholder well-being expected during the project lifetime and outline measures needed to mitigate these risk*".

The Project proponents do not identify the likely natural and human-caused risks to local stakeholder well-being expected during the project lifetime and outline measures needed to mitigate these risks.

The Project proponent is requested to identify likely natural and human-induced risks to local stakeholders that are likely to occur during the life of the project and outline the measures needed to mitigate them

Project participant response	Date: 12/01/2023

Section 2.5 in the theme "Risks to local stakeholders" of the PD&MR V2.0 was updated to better contextualize that the Project do not cause any likely natural and human-caused risks to local stakeholder well-being expected during the project lifetime.

As stated in this section, "There are no stakeholders in the Project area, only around, as shown in Figure 12" (1).

Documentation provided by project participant

Evidence files contemplated:

1. stakeholders-jurua-project

DOE assessment	Date: 25/01/2023

CAR ID	22	Date: 04/11/2022

The project proponents updated the joint PD/MR, indicating in section 2.5 "*There are no stakeholders in the Project area, only around, as shown in (Figure 12), so there is no occurrence of likely natural and human-induced risk to local stakeholders and to their well-being expected during the project lifetime, including project design and consultation*". The figure showing that there are some stakeholders within a 20km radius of the project was attached as evidence.

Finding closed successfully

CAR ID	23	Date : 04/11/2022

Description of CAR

VCS-Standard v4.3, 3.17.13: "*The Project proponent shall identify the risks for local stakeholders to participate in the project, including project design and consultation. Risks should include trade-offs with food security, land loss, loss of yields and climate change adaptation. The project shall be designed and implemented to avoid trade-offs and manage the identified risks to local stakeholders*".

Project proponents do not identify the risks to local stakeholder to participation in the project, including project design and consultation.

The Project proponent is requested to identify the risks to local stakeholder participation in the project, including project design and consultation, including trade-offs with food security, land loss, loss of yield and climate change adaptation and design and implement them in a manner that avoids trade-offs and manages the identified risks to local stakeholders.

Project participant response	Date: 12/01/2023

Section 2.5 in the theme "Risks to local stakeholders" of the PD&MR V2.0 was updated to better contextualize that the Project do not cause any risks for local stakeholders to participate in the project, including project design and consultation.

As stated in this section, "There are no stakeholders in the Project area, only around, as shown in Figure 12" (1).

Documentation provided by project participant

Evidence files contemplated:

1. stakeholders-jurua-project

DOE assessment	Date: 25/01/2023

The project proponents updated the joint PD/MR, indicating in section 2.5 "*There are no stakeholders in the Project area, […]. Risks that may affect food security, land loss and climate changes are also not predictable for the stakeholders*". The figure showing that there are some stakeholders within a 20km radius of the project was attached as evidence.

Finding closed successfully

CL ID	24	Date: 04/11/2022

Description of CL

CL ID	24	Date: 04/11/2022

VCS-Standard v4.3, 3.17.14: "*The Project proponent or any other entity involved in project design or implementation shall not be involved in any form of discrimination or sexual harassment*".

The Project proponents do not demonstrate that they or any other entity involved in project design or implementation are not involve in any form of discrimination or sexual harassment, as the VCS Standard v4.3, 3.17.14 required.

Project participant response	Date: 12/01/2023

Section 2.5 in the theme "Risks to local stakeholders" of the PD&MR V2.0 was updated to better contextualize that project proponent, or any other entity involved in the development or implementation of the project is not involved in any form of discrimination or sexual harassment, and to mention the ethics and conduct policy (1) that is applied to Biofílica Ambipar Environment Investments.

Documentation provided by project participant

Evidence files contemplated:

1. Política de Diversidade e Inclusão-Ambipar

DOE assessment	Date: 25/01/2023

The project proponents updated the joint PD/MR, clarifying in section 2.5 that neither the project proponents nor any other entity involved in the project are involved in any form of discrimination or sexual harassment. The PPs attached their ethics and conduct policy as a support.

Finding closed successfully

CAR ID	25	Date: 04/11/2022

Description of CAR

Risks to Local Stakeholders; VCS-Standard v4.3, 3.17.15: "*The management teams involved in the project shall have expertise and prior experience implementing land management and carbon projects with community engagement at the project scale. Where relevant experience is lacking, the Project proponent shall either demonstrate how they have partnered with other organizations to support the project or have a recruitment strategy to fill the identified gaps*."

The Project proponents do not provide documentary evidence to support the expertise and prior experience implementing land management and carbon projects of the management teams involved in the project.

The Project proponent is requested to provide documentary evidence to support the expertise and prior experience implementing land management and carbon projects of the management teams involved in the project.

Project participant response	Date: 12/01/2023

The Project proponents provide documentary evidence to support the expertise and prior experience implementing land management and carbon projects of the management teams involved in the project.
The documents that prove the request contains the Curriculum Vitae and Linkedin summary of each proponent involved in the Project.

Documentation provided by project participant

Evidence files contemplated:

1. Plínio Ribeiro: linkedin-plinio-ribeiro

CAR ID	25	Date: 04/11/2022

2. Cláudio Pádua: linkedin-claudio-padua
3. Paula Conde: linkedin-paula-conde
4. Caio Gallego: linkedin-caio-gallego
5. Rafael Costa: linkedin-rafael-costa
6. Márcio Sales: cv-marcio-sales
7. Susane Rasera: linkedin-susane-rasera
8. Luana Cordeiro: linkedin-luana-cordeiro
9. Aline Ribeiro: linkedin-aline-ribeiro
10. Shaxamary de M. C. dos Santos: linkedin-shaxahmary-de-mori
11. Amanda Rocha Fiallos: linkedin-amanda-fiallos
12. Taísi Sorrini: linkedin-taisi-sorrini
13. Nathanael Campos: linkedin-nathanael-de-campos
14. Marco Antônio: linkedin-marco-antonio
15. Franciane Almeida: linkedin-franciane-almeida
16. James Cameli: currículo-james-cameli
17. Gilberto Siqueira: curriculo-lattes-gilberto-do-carmo-lopes-siqueira
18. Scarlett Siqueira do Vale: curriculo-juridico-scarlett-siqueira-do-valle
19. Veriton Viana da Costa: cv-veriton-viana-da-costa

DOE assessment	Date: 25/01/2023

The project proponents updated the joint PD/MR, including the expertise and prior experience implementing land management and carbon projects of the management teams involved in the project; the Curriculums Vitae and LinkedIn summaries were attached as evidence.

Finding closed successfully

CL ID	26	Date: 04/11/2022

Description of CAR

VCS-Program-Guide_v4, 3.15.2 *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.*

The following footer links do not work:

-Footer [1] (page 53)

> To define the spatial limits of the Reference Region, the characteristics of the natural resources (soils, relief, hydrographic network and the limits of hydrographic basins) and the main drivers of deforestation were considered. The definition of the Reference Region limit follows the guidelines described in the methodology approved by VCS version VM0015 1.1, as well as dimensions suggested by Brown et al. (2007)[1].

-The link provided in section 3.4/ '*Interpretation and classification*' for the source of the geometric correction (https://zulu.ssc.nasa.gov/mrsid/) does not work.

-The link provides in section 4.1 / 'Post-deforestation classes estimated to exist in the Project Area and Leakage Belt in the baseline case and the existing non-forest classes in leakage management areas' does not work (http://www.ppginpa.eco.br/documents/teses_dissertacoes/wandelli-fearnside-2015-for-colman_Land-use-history-and-capoeira-growth.pdf)

-There are some inconsistences in the documents, such as references not found:

1. Section 3.4 of PD&MR V2.0 +MR

CL ID	26	Date: 04/11/2022

c) Summary of step 4.1.2 (4.1.2.3 VM0015)

In this section, the projection of future deforestation values for the period 2011-2040 in the Reference Region (Table 18**Erro! Fonte de referência não encontrada.**) are presented for the Project Area (Table 19) and Leakage Belt (Table 20).

-Page 1 - Date of Issue: "DD-Month-YYYY this version of the document issued". It is required to update the date according to the template.
- VCS Standard c4.3, section 1.2 "*The operating language of the VCS Program is English. The project and program description, validation report, monitoring report, verification report and all other documentation (including all and any appendices) required under the VCS Program shall be in English*." However, some figures and maps are subtitled in Portuguese.

-In page 57 in "Related Policies and legislation" is "Leakage Management Area," as a typo mistake
-In page 80 states "he projection of future deforestation values for the period 2011-2040 in the Reference Region (Table 18", however table 18 values the period values for the period 2011-2050.
-In Page 92 PD&MR V2.0 Sub-step 1c. Baseline Scenario Selection states "*Described in Section 2 - Application of the Methodology, Item 2.4 Baseline Scenario"* however, Baseline scenario is section 3.4
-Information of Legend of Figure 28 is unconfigured.
- Figure 9. Do not shown the Leakage Management Area as its title states.

VCS-Joint-Project-Description-Monitoring-Report-Template-v4.1 "*Complete all sections using Franklin Gothic Book 10.5 pt, black, regular (non-italic) font. State if a section is not applicable it must be stated under the section (the section must not be deleted from the final document).*" The Project proponent is requested to follow the Template guidelines when completing item 1.6 of the PD&MR V2.0 .

The Project proponent is requested to provide verifiable information to corroborate the sources and to demonstrate the quality control over the project documentation.

Project participant response	Date: 12/01/2023

All the requested changes have been made in PD&MR V2.0 to provide verifiable information to corroborate the sources and to demonstrate the quality control over the project documentation.

Regarding the footer link [1] (page 53) that was not working, the link was removed, and the reference (1) was included in section 7 of the PD&MR V2.0.

Documentation provided by project participant

Evidence files contemplated:
1. BROWN, S_2007.pdf

DOE assessment	Date: 25/01/2023

The project proponents have updated the joint PD/MR and NPR report; however, there are still some inconsistences in the documents, such as:
In the joint PD/MR:
1. References not found:

e (section 3.3 **Erro! Fonte de referência não encontrada.**).

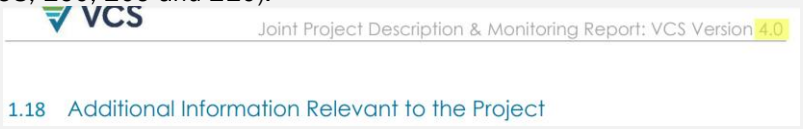
CL ID	26	Date: 04/11/2022

The **Erro! Fonte de referência não encontrada.**

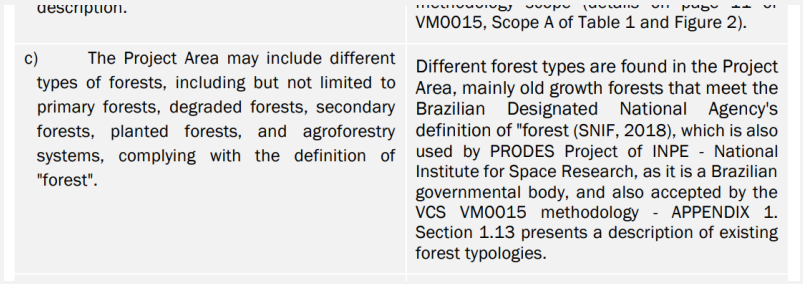
2. Page 1 - Date of Issue:

Date of Issue	*12-January-June-2023*

3. Some pages have neither the correct header nor the page number (e.g., pages 45, 87, 91, 149, 151, 154, 156, 158, 160, 209 and 210).



4. Table 8 has different font size in the same row



description.	VM0015, Scope A of Table 1 and Figure 2).
c) The Project Area may include different types of forests, including but not limited to primary forests, degraded forests, secondary forests, planted forests, and agroforestry systems, complying with the definition of "forest".	Different forest types are found in the Project Area, mainly old growth forests that meet the Brazilian Designated National Agency's definition of "forest (SNIF, 2018), which is also used by PRODES Project of INPE - National Institute for Space Research, as it is a Brazilian governmental body, and also accepted by the VCS VM0015 methodology - APPENDIX 1. Section 1.13 presents a description of existing forest typologies.

5. There are some tables and figures named in Portuguese, and some misspellings, such as: spacial, measure

Tabela 14: Matrix of Potential changes in land use and land cover (table 7a of VM0015)

Figura 18. Physical boundary of the Project Area.

Project participant response	Date: 03/03/2023

All the requested changes have been made in PD&MR V3.0 to provide verifiable information to corroborate the sources and to demonstrate the quality control over the project documentation.

Documentation provided by project participant

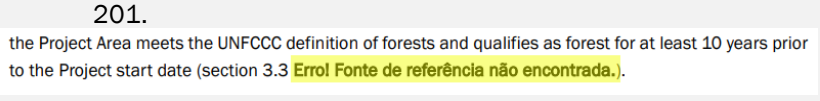
DOE assessment	Date: 13/03/2023

The project proponents updated the joint PD/MR; however, the following inconsistences were found:

6. The PPs mentioned *"All the requested changes have been made in PD&MR V3.0"* but the last document attached is the second version.

Project Title	*Juruá REDD+ Project*
Version	*v.2*
Date of Issue	*03-March-2023*
Prepared By	*Biofílica Ambipar Environmental Investments S/A e Ambiental Amazônia - Engenharia*

7. There is still references not found in pages 5, 69, 75, 86, 108, 127, 128, 151, 196, 199, 200 and 201.



the Project Area meets the UNFCCC definition of forests and qualifies as forest for at least 10 years prior to the Project start date (section 3.3 **Erro! Fonte de referência não encontrada.**).

8. There are some pages that do not have the page number: 42, 89, 93, 142, 145, 148, 151, 153, 156, 206 and 207.
9. There were found some misspellings:

CL ID	26	Date: 04/11/2022

Misspelling	Page
includonly	62
Spacial	63,
Spacial	Table 12
Regionbecause	67
hidrological	70
equilíbrium	table 14
undderlying	87
Envorinmental	88, 108
extration	Table 18
comum	Table 18
thatexplain	94
weigths	102
Onwer	Table 27
gererated	126
);;	130
datas	174
Consering	191
acumulated	192
Ommission	Table 63
Desmatamento	

10. There is a table named in Portuguese

Tabela 41. Carbon stock change baseline in the Leakage Belt area (Table 21c of VM0015 Methodology).

Project participant response	Date: 16/05/2023

All the requested changes have been made in PD&MR V4.0 to provide verifiable information to corroborate the sources and to demonstrate the quality control over the project documentation.

Observation:

the Project Area meets the UNFCCC definition of forests and qualifies as forest for at least 10 years prior to the Project start date (section 3.3 Erro! Fonte de referência não encontrada.).

Regarding this statement, it can be seen in the image below that there are no inconsistencies in the document.

CL ID	26	Date: 04/11/2022

1.3 Project Eligibility

Under the parameters of the VCS Methodology Requirements, v 4.2, the scope of avoided unplanned deforestation and/or degradation (AUDD) has the Project eligibility as a premise and must include activities to reduce greenhouse gas (GHG) emissions by avoiding deforestation and/or forest degradation. Therefore, Juruá REDD+ Project proposes actions in order to reduce (GHG) emissions with activities to contain unplanned deforestation and forest degradation (section 1.11).

Furthermore, according to decision 11/CP.7 of the Marrakesh Agreement, forests are defined as: " area of at least 0.05-1.0 ha with canopy cover (or equivalent density) of more than 10-30%, with trees with possibility to reach a minimum height of 2-5 meters at maturity *in situ*. A forest may consist of both closed (dense) forest formations, where trees of various strata and shelterwood cover a high proportion of the ground, and open forests. Recent natural population settlements and all plantations that have yet to reach a density of 10-30% and a height between 2 and 5 meters are included as forest, as well as areas that are normally part of the forest area and are temporarily deforested as a result of human intervention, such as harvesting, or natural causes, but where forest reversion is expected (UNFCCC, 2002)". As such, the Project Area meets the UNFCCC definition of forests and qualifies as forest for at least 10 years prior to the Project start date (section 3.3).

Other VCS eligibility requirements that the project meets relate to:

- The project applies a methodology within the VCS Program (section 1.2);
- The implementation of the project activities does not violate any applicable law (section 1.14);
- The project is not covered by a REDD+ jurisdictional program (section 1.11);
- The project will not be implemented in wetlands and does not drain native ecosystems or degrade hydrological functions;
- The risk of non-permanence will be analyzed according to the VCS Program (AFOLU Non-Permanence Risk Tool).

Documentation provided by project participant

DOE assessment	Date: 31/05/2023

The project proponent updated the joint PD/MR, however, in the file '*VCS-Joint-Project-Description-Monitoring-Report-Template-**v4.1**_eng-V4.pdf*' there are still some inconsistences:

(*The name of the file does not have consistence with the version indicated in the header (**v4.2**)*)

11. There is still references not found in pages 5, 47, 114, 124, 126 and 194:

> Furthermore, according to decision 11/CP.7 of the Marrakesh Agreement, forests are defined as: " area of at least 0.05-1.0 ha with canopy cover (or equivalent density) of more than 10-30%, with trees with possibility to reach a minimum height of 2-5 meters at maturity *in situ*. A forest may consist of both closed (dense) forest formations, where trees of various strata and shelterwood cover a high proportion of the ground, and open forests. Recent natural population settlements and all plantations that have yet to reach a density of 10-30% and a height between 2 and 5 meters are included as forest, as well as areas that are normally part of the forest area and are temporarily deforested as a result of human intervention, such as harvesting, or natural causes, but where forest reversion is expected (UNFCCC, 2002)". As such, the Project Area meets the UNFCCC definition of forests and qualifies as forest for at least 10 years prior to the Project start date (section 3.3**Errol Fonte de referência não encontrada.**).

CL ID	26	Date: 04/11/2022

Socio-economic aspect

The Project activities do not cause any negative impact on local stakeholdersIn the first instance the Project activities will focus on the Project Area and therefore will not involve any local rural community. The activities of the REDD+ Juruá Project will be developed under the ownership and use rights of Amazônia Agroindústria EIRELI.

The Project foresees the execution of the activities only within the limits of the property belonging to Amazônia Agroindústria, that is, no activities will be performed in other areas such as private properties, areas belonging to indigenous communities and traditional communities or other public areas. Furthermore, it is important to highlight that there are no indigenous people or traditional communities in the Project Area, as seen in **Erro! Fonte de referência não encontrada.**, only around the Seringal V alparaíso Farm, and they do not depend directly on the area for subsistence or for any other activity.

Sub-step 2d. Sensitivity Analysis

Erro! Fonte de referência não encontrada. shows critical assumptions of scenario (ii) as well as its v ariations that are considered reasonable and used here in this sensitivity analysis (Perspective 1: pessimistic variations and Perspective 2: optimistic variations). The base values are those considered for NPV found in Sub-step 2c.

We also used expansion factors found by Nogueira et al (2008). They reported, for open forests in the Brazilian Amazon - the dominant forest type in Acre, including the project area and leakage belt - an expansion factor of 0.119 to add the carbon of palms, lianas and non-tree biomass to aboveground biomass, and 0.137 to include aboveground dead wood biomass. We used these factors after applying a conservativeness discount of 30%, as instructed by the VM0015. Belowground biomass was obtained by multiplying aboveground tree biomass by an IPCC standard shoot-to-root expansion factor of 0.22, which is the low value of the 95% confidence interval for this factor for "primary tropical/subtropical forests" from Table 3A.1.8 of the IPCC LULC GPC Appendix 3A.1.8 (Nabuurs et al, 2003). Because we are using conservative expansion factors, their uncertainty is considered equal to zero and the uncertainties of the different carbon pools were calculated as proportional to the uncertainty of average aboveground tree biomass, as per VM0015. Table 34 **Erro! Fonte de referência não encontrada.**shows the resulting e stimates of average carbon density for aboveground, belowground and dead wood carbon pools, with their respective uncertainty estimates. We calculated the average total carbon stock density for the project area and leakage belt as 571,6 $tCO_2e.ha^{-1}$ (Table 34), with an uncertainty (sampling error for 90% confidence) of 7.0%. All calculations use equations in the VM0015 and were documented and provided to the VVB.

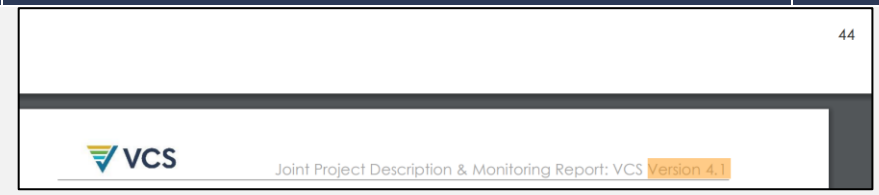
VCS Joint Project Description & Monitoring Report: VCS Version 4.2

In the baseline scenario, the Project considers the change in carbon stock from forest cover replacement by a vegetation type that can be pasture areas, small-scale agricultural plantations, or plantations (temporary or permanent). AFOLU requirements provides that the carbon stock decomposition in soil carbon, below ground biomass, dead wood and harvested wood products in the baseline case be considered. To calculate this reduction in carbon stock, the VM0015 1.1 version applies a standard linear function to explain the reduction in carbon stock in initial forest classes (icl) and increase in carbon stock in post-deforestation use classes. **Erro! Fonte de referência não encontrada.**Table 35 and Table 36 s ummarize how the carbon stock change factor was calculated.

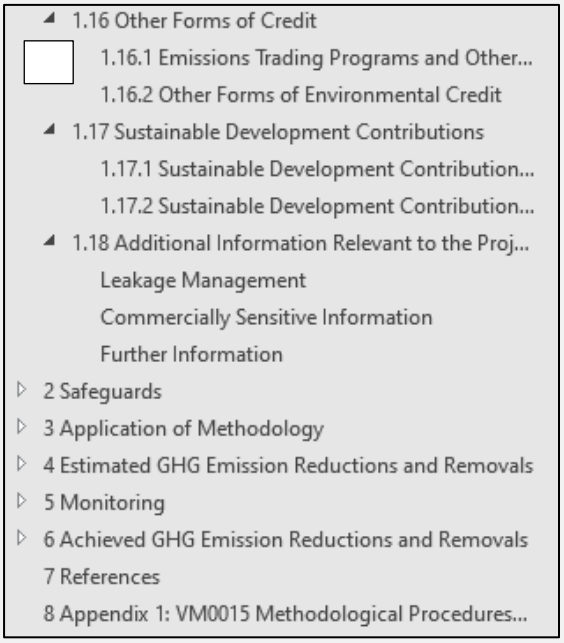
A distribution of 500 points was randomly made in the monitored area, and then the visual interpretation between two classes: forest and deforestation. The **Erro! Fonte de referência não encontrada.** d emonstrates the methodology adopted to evaluate the accuracy of PRODES and SAD mapping (Figure 35).

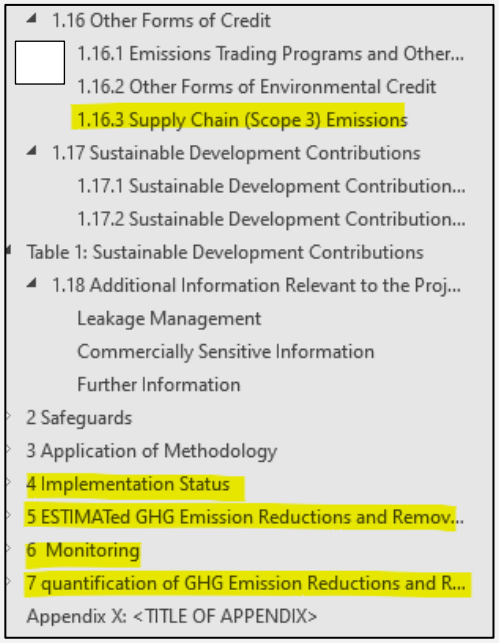
12. It is indicated in the header of the document that the version used is 4.2, however, some pages indicate an older version (pages 45, 90, 94, 138, 141, 144, 147, 149, 151, 202 and 203)

CL ID	26	Date: 04/11/2022



13. In accordance with the header of the document, the project proponent is applying the template version 4.2, however, there are discrepancies between the content of the document (*left image - A*) and the content indicated by the template (*right image - B*).





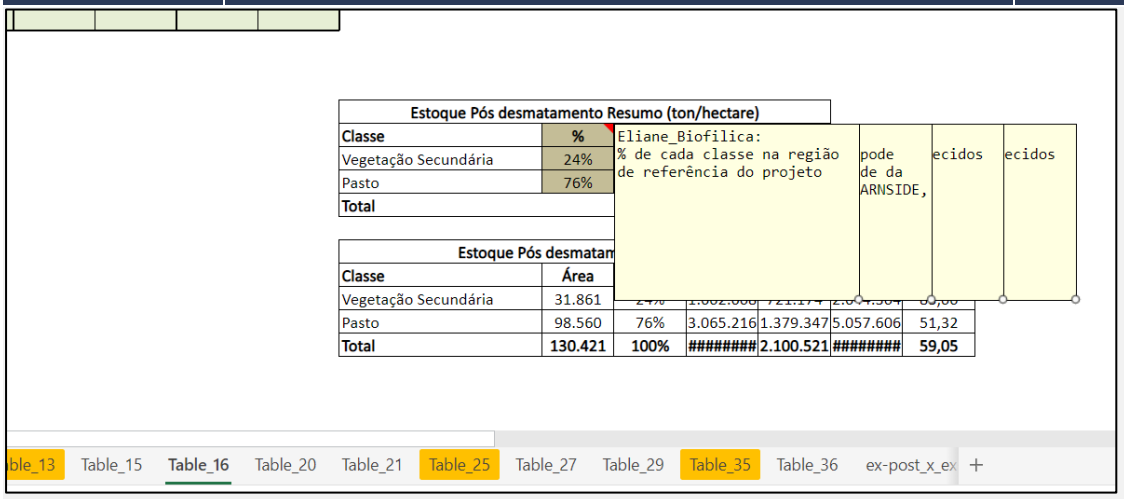
VCS-Program-Guide_v4, 3.15.2 *Quality management procedures to manage data and information shall be applied and established. Where applicable, procedures to account for uncertainty in data and parameters shall be applied in accordance with the requirements set out in the methodology.*

VCS joint PD/MR template v4.2, Instructions for completing the joint project description and monitoring report: "[...] *Complete all sections using Franklin Gothic Book 10.5 pt, black, regular (non-italic) font* [...]"

VCS Standard v4.4, item 1.2.1: "*The operating language of the VCS Program is English. The project and program description, validation report, monitoring report, verification report, and all other documentation (including all and any appendices) required under the VCS Program shall be in English*".

On the other hand, the project proponent include comments in Portuguese within the spreadsheets ('vcs-monitreport-jurua-2021-v6.xlxs' and 'VM0015_planilha de calculo_jurua-v6.xlsx'):

CL ID	26	Date: 04/11/2022



Estoque Pós desmatamento Resumo (ton/hectare)						
Classe	%					
Vegetação Secundária	24%					
Pasto	76%					
Total						

Eliane_Biofilica:
% de cada classe na região de referência do projeto

pode de da ARNSIDE,

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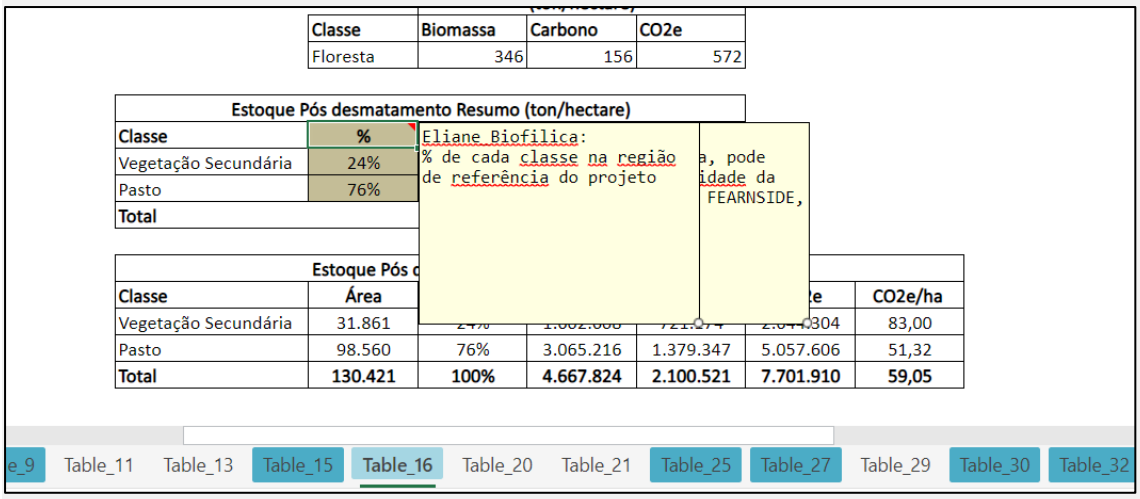
Estoque Pós desmatam						
Classe	Área					
Vegetação Secundária	31.861					
Pasto	98.560	76%	3.065.216	1.379.347	5.057.606	51,32
Total	130.421	100%	########	2.100.521	########	59,05

ble_13 Table_15 Table_16 Table_20 Table_21 Table_25 Table_27 Table_29 Table_35 Table_36 ex-post_x_ex +



Classe	Biomassa	Carbono	CO2e
Floresta	346	156	572

Estoque Pós desmatamento Resumo (ton/hectare)	
Classe	%
Vegetação Secundária	24%
Pasto	76%
Total	

Eliane_Biofilica:
% de cada classe na região de referência do projeto

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FEARNSIDE,

Estoque Pós c						
Classe	Área				e	CO2e/ha
Vegetação Secundária	31.861				2.844.304	83,00
Pasto	98.560	76%	3.065.216	1.379.347	5.057.606	51,32
Total	130.421	100%	4.667.824	2.100.521	7.701.910	59,05

e_9 Table_11 Table_13 Table_15 Table_16 Table_20 Table_21 Table_25 Table_27 Table_29 Table_30 Table_32

The Project proponent is requested to provide verifiable information to corroborate the sources and to demonstrate the quality control over the project documentation.

Project participant response	Date: 22/06/2023

The entire joint PD/MR has been changed to version 4.2 and all inconsistencies picked up by the VVB because of the diverging versions have been corrected and the document is consistent with the latest version made available by Verra (version 4.2).

In addition, the entire document has been thoroughly proofread and formatted with the change log attached so that the VVB can analyze the changes made. All sections have been proofread and formatted using Franklin Gothic 10pt, black, regular (non-italic) font. It is worth mentioning that the template, in its word version and being heavily loaded, may change the formatting at random. For this reason, the PDF version has been shared with the VVB to ensure that there are no inconsistencies.

Finally, although the spreadsheets are not official documents of the VCS Program, they have been reviewed and there is no information without being in the official language of the program, English. All VCS program documents are in English.

Documentation provided by project participant

CL ID	26	Date: 04/11/2022

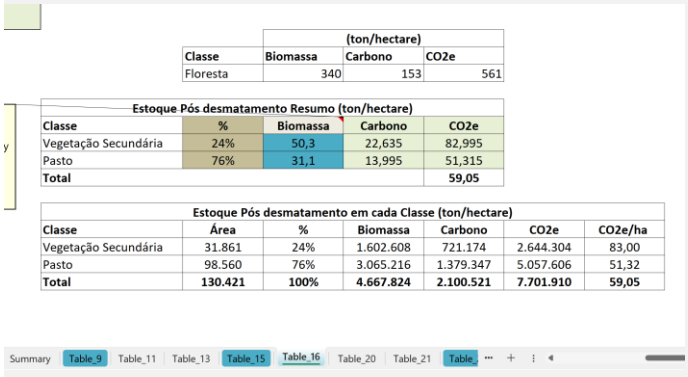
Evidence files:

1. VM0015_planilha de calculo_jurua-v7
2. *vcs-monitreport-jurua-2021-v7*
3. *Jurua-VCS-Non-Permanence-Risk-Report-Template-v4.0-V5*
4. *VCS-Joint-Project-Description-Monitoring-Report-Template-v4.1_eng-V5*

DOE assessment **Date:** 04/07/2023

1. A reference error is still evident on page 48, section 2.1 of the document VCS-Joint-Project-Description-Monitoring-Report-Template-v4.1_eng-V5.
2. An older version of the template (4.1) is still evident in the headers of pages 46, 92, 96, 148, 151, 154, 157, 159, 162, 211 and 213 of the document VCS-Joint-Project-Description-Monitoring-Report-Template-v4.1_eng-V5.
3. It is not yet evident that the spreadsheets (VM0015_planilha de calculo_jurua-v7.xlsx and vcs-monitreport-jurua-2021-v7.xlsx) are fully translated into English:

Eg:



		(ton/hectare)	
Classe	Biomassa	Carbono	CO2e
Floresta	340	153	561

Estoque Pós desmatamento Resumo (ton/hectare)

Classe	%	Biomassa	Carbono	CO2e
Vegetação Secundária	24%	50,3	22,635	82,995
Pasto	76%	31,1	13,995	51,315
Total				59,05

Estoque Pós desmatamento em cada Classe (ton/hectare)

Classe	Área	%	Biomassa	Carbono	CO2e	CO2e/ha
Vegetação Secundária	31.861	24%	1.602.608	721.174	2.644.304	83,00
Pasto	98.560	76%	3.065.216	1.379.347	5.057.606	51,32
Total	130.421	100%	4.667.824	2.100.521	7.701.910	59,05

Summary | Table_9 | Table_11 | Table_13 | Table_15 | Table_16 | Table_20 | Table_21 | Table_

Project participant response **Date:** 26/07/2023

(1) And (2) The Joint PD/MR document was revised and formatted in accordance with version 4.2, ensuring that the inconsistencies pointed out by the VVB were corrected. The template version has been carefully revised, correcting all the inconsistencies of the 4.2 version and, in addition, the indicated reference errors have been revised and corrected. in addition, all the changes that were made in this round were inserted in the track changes document.

(3) The spreadsheets were revised, and all information presented is in the official language of the program (English).

Documentation provided by project participant

Evidence files:

And (2) VCS-Joint-Project-Description-Monitoring-Report-Template-v4.1_eng-V6

VM0015_planilha de calculo_jurua-v8.xlsx: new version of the calculation's spreadsheet for project validation
vcs-monitreport-jurua-2021-v8: new version of the calculation's spreadsheet for project verification

Jurua-VCS-Non-Permanence-Risk-Report-Template-v4.0-V6

DOE assessment **Date:** 28/07/2023

The project proponents updated the joint PD/MR in which there are no discrepancies.

Finding closed successfully

CAR ID	27	Date: 04/11/2022

Description of CAR

CAR ID	27	Date: 04/11/2022

1. VM0015, table 2 (5): "*Methods used to develop the existing baseline must be transparently documented and be consistent with a VCS approved and applicable baseline methodology*"

The source of the information used to determine the reference region (deforestation agents and drives, landscape and ecological conditions, socio-economic and cultural conditions) were not evidence in the document management system provided for the audit process.

The Project proponent is requested to provide sources of the information used to determine the reference region (deforestation agents and drives, landscape and ecological conditions, socio-economic and cultural conditions).

2. VM0015, 1.1.3 (Option II) [a]: "*Using historical data, expert opinion, participative rural appraisal (PRA), literature and/or other verifiable sources of information list all relevant criteria that facilitate (at least one criterion) and constrain (at least one criterion) the mobility of the main deforestation agents identified in step 3. The overall suitability of the land for the activities of deforestation agents shall be considered*."

VM0015, 1.1.3 (Option II) [b]: "For each criterion, generate a map using a GIS."

The Project proponents do not mention the criteria used to build the deforestation risk map (determination of leakage belt).

The Project proponents did not attach the maps using to determine the boundary of the leakage belt.

The Project proponent is requested to provide documental information about the criteria used to build the deforestation risk map (determination of leakage belt).

The Project proponent is requested to attach the maps using to determine the boundary of the leakage belt.

3. VM0015, 1.1.4: "…*The boundary of leakage management areas must be clearly defined using the common projection and GIS software formats used in the project and shall be reassessed and validated at each fixed baseline period*"

The Project proponents do not provide GIS evidence of the definition of the leakage management areas.

The Project proponent is requested to provide GIS evidence of the definition of the leakage management areas.

4. VM0015, 1.1.3 (Option II) [c] [d]: "c) *Using multi-criteria analysis, determine the boundary of the leakage belt. Justify any assumption and weight assigned to the individual criteria. d) Methods used to perform the analysis shall be transparently documented and presented to VCS verifiers at the validation*."

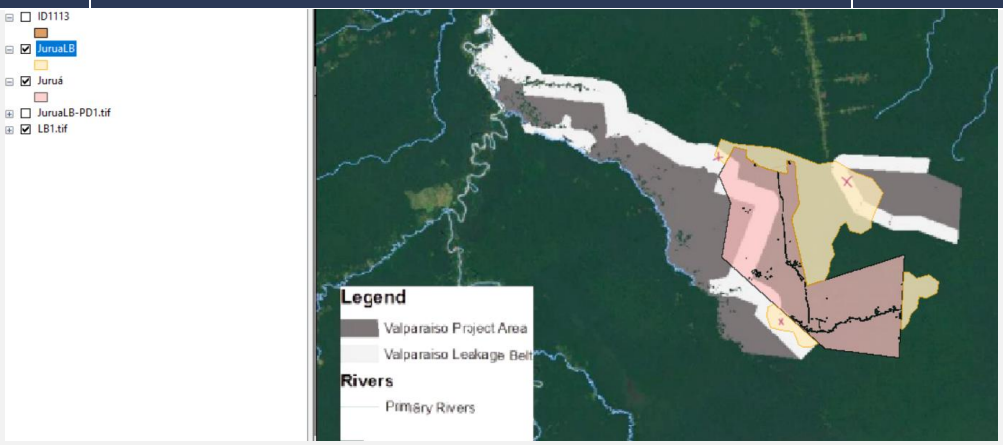
CAR ID	27	Date: 04/11/2022

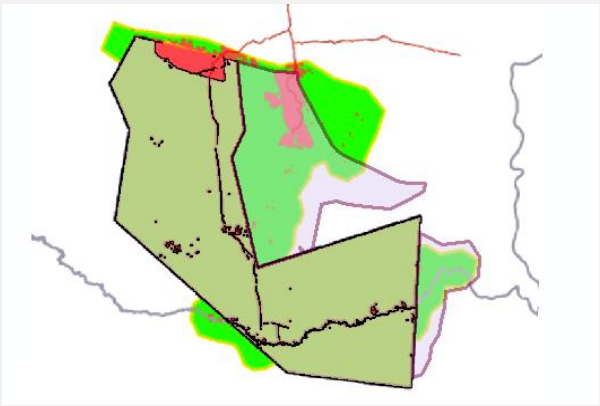
The Project proponents do not mention weight assigned to the individual criteria using in multicriteria analysis to determine leakage belt.

The Project proponent is requested to mention in the PD&MR V2.0 the weight assigned to the individual criteria using in multicriteria analysis to determine leakage belt.

5. VM0015, 1.1.3 (Option II) "*If the leakage belt overlaps with the leakage belt of other VCS AFOLU projects, do the following:*
a) Identify the carbon pools and sources of GHG emissions that are monitored by the other projects. Only for common carbon pools and sources of GHG emissions the boundary of the leakage belt area can be modified as further explained below.
b) Analyze the overlapping area(s) with the proponents of each of the other VCS AFOLU projects and come to an agreement with them on the location of the boundaries of the different leakage belts, so that there will be no overlaps and gaps between the different leakage belt areas as well as carbon pools and GHG sources.
c) As an indicative rule, the percentage of forest land area within the leakage belt of a project relative to the total forest area of all leakage belts shall be similar to the percentage of baseline deforestation of the project relative to the total baseline deforestation of all projects…
Note: The proponents of the different projects shall agree on the criteria used to define the boundaries of their leakage belts in the overlapping areas and are not required to use the above rule. However, if they decide to use this rule, the area of the overlapping leakage belts assigned to Project A shall be the closest to the boundary of Project A; the area of the overlapping leakage belts assigned to Project B shall be the closest to the boundary of Project B and so on (the area of the overlapping leakage belts assigned to Project N shall be the closest to the boundary of Project N).
d) The final boundary of the leakage belt of each project is subject to validation and periodical verification. A project may report a smaller leakage belt only if another VCS registered project has included in its leakage belt the portion left out
e) If the proponents of the different projects do not agree on how to split the overlapping leakage belt area, each project will have to include in its leakage belt the overlapping areas.
f) A "Leakage Belt Agreement" between the proponents of the different projects must be signed and presented to VCS verifiers at the time of validation/verification. The agreement shall contain the maps of the agreed leakage belts and each project shall have a digital copy of these maps in the projection and GIS software formats used in each project.
g) If a project ends or has not presented a verification to the VCS for more than five consecutive years, the other projects participating in the "leakage belt agreement" shall amend the agreement in order to ensure that the whole area of the originally overlapping leakage belts is always subject to MRV-A. The amendment is subject to VCS verification. If no amendment is made, the proposed project will have to include in its leakage belt the land area that is no longer be subject to MRV-A by another VCS project"
The Project proponents are requested to clarify if the leakage belt overlaps with the leakage belt of the project with ID 1113 'the Valparaiso Project', since the file attached do not correspond the one is presented in figure 13 of PD&MR V2.0 +MR.

CAR ID	27	Date: 04/11/2022





If the leakage belt areas are overlapped:

a. The Project proponents did not identify the carbon pools and sources of GHG emissions that are monitored by the other project, as the VM0015 required.

b. The Project proponents do not provide evidence that they analyzed the overlapping area(s) with the proponents of the other VCS AFOLU project and come to an agreement with them on the location of the boundaries of the different leakage belts, so that there will be no overlaps, as the VM0015 required.

c. The Project proponents do not provide documentary evidence to support they agree with the proponents of the other project about the criteria used to define the boundaries of their leakage belts in the overlapping areas, as the VM0015 required.

d. The Project proponents do not provide the “Leakage Belt Agreement”, as the VM0015 required.

The Project proponent is requested to clarify the situation and take the measures due the methodology requirements.

Project participant response	Date: 12/01/2023

1. In section 3.3, the Prevention and Combat Plan against Deforestation of the State of Acre (ACRE, 2018) (1) and the Ecological-Economic Zoning of Acre (ACRE, 2021) (2) were referenced. These two documents that were widely debated with the Acrean society and written by a team of high technical level, which allows the definition of the deforestation vectors with robustness. A vector file (3) of classifying deforestation and the

CAR ID	27	Date: 04/11/2022

reports (4) from the years 2015, 2016, 2017, 2019 and 2021, which were in the UCEGEO database, were made available.

2. The risk map used is the same used for the projections of future deforestation. Project proponents opted for using that map to define the leakage belt boundaries because it is constructed from the weights of evidence analysis (of step 4.2.1 of the VM 0015 Methodology) of the main agents and drivers of deforestation in the region. These agents and vectors are the main facilitators and constrainers of deforestation in the region. Thus, the factors are the same of the Table "List of maps, variables and factor map. (Table 10 of VM0015 Methodology)" and the relative weights, the same as shown in Figure "Estimated weigths of evidence" of the PD&MR V2.0.

3. Project proponent provided GIS evidence (3) of the definition of the leakage management areas. As stated in section 3.3 of the PD&MR V2.0, the Leakage Management Area were defined considering areas that were cleared by 2020 within the Seringal Valparaiso property boundary. Evaluating the UCEGEO data with the boundary of leakage management areas (5) it is possible to see that these areas were previously deforested. And as could be seen during the auditing in the field, its current use consists of planned pasture and infrastructure areas.

4. See 2 above.

5. The boundary of the leakage belt does not overlap that of surrounding REDD+ projects. Project proponent provided the correct boundary in vector format (6) of the boundary of the leakage belt area and updated in Figure "Leakage Belt in Juruá REDD+ Project, Cruzeiro do Sul and Porto Walter municipalities, Acre State." of the PD&MR V2.0 to show the correct leakage belt boundaries.

Documentation provided by project participant

Evidence files contemplated:

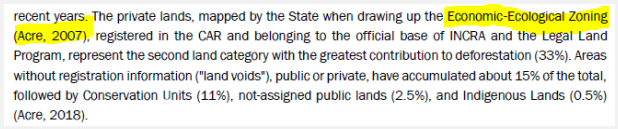
1. ZEE
2. PPCDQ_2017_2020.pdf
3. ucegeo shapefile
4. ucegeo reports
5. mv_v1.gpkg
6. cv_v4.gpkg

DOE assessment	Date: 25/01/2023

1. The project proponents updated joint PD/MR, indicating in section 3.4 "*The identification of the underlying causes in the Reference Region were based on the information of the "Acre State,s Deforestation Prevention and Combat Plan" PPCD-AC, phase I (ACRE, 2018). And the Ecological-Economic Zoning studies – ZEE Phase III (ACRE, 2021).".* However, the PPs were requested to provide sources of the information used to determine the reference region, specifically deforestation agents and drives, landscape and ecological conditions, socio-economic and cultural conditions; the source of the information was not included in the updated report.

In addition, there is a reference described in section 3.3 that is inconsistent with the submitted document:

CAR ID	27	Date: 04/11/2022


recent years. The private lands, mapped by the State when drawing up the Economic-Ecological Zoning (Acre, 2007), registered in the CAR and belonging to the official base of INCRA and the Legal Land Program, represent the second land category with the greatest contribution to deforestation (33%). Areas without registration information ("land voids"), public or private, have accumulated about 15% of the total, followed by Conservation Units (11%), not-assigned public lands (2.5%), and Indigenous Lands (0.5%) (Acre, 2018).

2. The project proponents updated the joint PD/MR and clarified the risk map used is the same used for the projections of future deforestation, and that the variables included in the multi-criteria analysis and their respective weights are the same listed in Table 23 and Figure 28. However, the maps generated for each criterion were not attached. The project proponent is requested to provide for each criterion a map using a GIS.

VM0015 v1.1, 1.1.3 (Option II: Mobility analysis) "*[…] The following methodology steps shall be applied: […] b) For each criterion, generate a map using a GIS.*"

3. The project proponent attached GIS evidence to support the definition of the leakage management areas.

4. The project proponents updated the joint PD/MR, indicating in section 3.3 "*[…] Thus, the variables included in the multi-criteria analysis and their respective weights are the same listed in Table 23 and Figure 28, respectively.*" Figure 28 shows the estimated weights of each criteria.

5. The project proponents attached documentary evidence to support the project leakage belt boundaries does not overlap with the leakage belt of the project with ID 1113 "the Valparaiso Project". The figure that shows leakage belt was updated.

Project participant response	Date: 03/03/2023

1. The Reference Region was defined using hydrographic basins boundaries and the geographic location of the main drivers of deforestation (settlements limits and small farms next to the Project Area), with respect to the Step 1 of VM0015 Definition of Boundaries – 1.1 Spatial boundaries – 1.1.1 Reference region. The text in the section 3.3 of the joint PDD/MR V3 was updated with the aforementioned information, a footnote to the hydrographic basins boundaries data source (HidroSHEDS) was added and the source file "hybas_sa_lev12_v1c.zip" was included in the evidence folder. The similarity of the reference region and the project area on the aspects required by the VM0015 (*deforestation agents and drives, landscape and ecological conditions, socio-economic and cultural conditions*) is demonstrated later in the section 3.4, with the respective data and sources. All sources of information were included in the evidence folder.

   The reference "Acre (2007)" was corrected to "Acre (2006)". The publication ("Publicação_ZEE_ACRE_2006.pdf") was also added in the evidence folder.

2. The mobility analysis was based entirely on the deforestation risk map, which is described in section 3.3 of the joint PD/MR V3, and a map for each variable used in constructing the weights of

CAR ID	27	Date: 04/11/2022

evidence was included as Figure 19 “Maps of all variables used to produce the deforestation risk map, used as the criteria in our mobility analysis.”

Documentation provided by project participant

1. “hybas_sa_lev12_v1c.zip”
2. Folder “References” with all articles that were cited.

DOE assessment	Date: 16/05/2023

1. The project proponents updated the joint PD/MR, including in sections 3.3 and 3.4 adequate sources of information such as academic articles, GIS information, news and information from institutional pages to support identification of deforestation agents and drives, landscape and ecological conditions, socio-economic and cultural conditions. The PPs attached the secondary information used in the aforementioned identification.

Besides, the reference that had inconsistences was corrected in the updated joint PD/MR and its source file was also attached. However, sub-sections “b” and “c” have not been updated and Project Proponent did not provide sources for information used for landscape and ecological conditions and socio-economic and cultural conditions.

2. The project proponents updated the joint PD/MR, including in figure 19 the maps of each criterion used to produce the deforestation risk map.

Project participant response	Date: 03/05/2023

Sub-sections “b” and “c” have been updated in section 3.3 of the joint PD/MR_v4 and the information sources for landscape and ecological conditions and socio-economic and cultural conditions were provided to the VVB.

(1) ACRE_2006
(2) ACRE_2010
(3) ACRE_2018
(4) ACRE_2021
(5) HUMANS et al 2005

The project proponent the joint PD/MR, indicating the sources for information used for landscape and ecological conditions and socio-economic and cultural conditions in section 3.3. The references were attached as evidence.

Finding closed successfully

CAR ID	28	Date: 04/11/2022

Description of CAR

1. The Project proponents neither mentioned nor added support for the process of determining the forest area (Figure 14 of PD&MR V2.0 +MR).
The Project proponent is requested to provide the support for the process of determining the forest area

2. Figure 14 of PD&MR V2.0 +MR presents some conventions that are not applied in the map (for example the area of the project should be in light green).

CAR ID	28	Date: 04/11/2022

The Project proponent is requested to provide consistent and verifiable information.

Project participant response	Date: 12/01/2023

1. Sub-section "forests" of section 3.3 of the PD&MR V2.0 was updated to better clarify the process of determining the forest area. Besides, Project proponent included the evidence files used during the definition of the forest area: official request letter (1), terms of use (2) (3), and UCEGEO deforestation database (4).

2. Figure "Reference map of forest cover until 2020 in the Reference Region of Juruá REDD+ Project." was updated to provide consistent and verifiable information (5).

Documentation provided by project participant

Evidence files contemplated in folder CAR 28:

1. Ofício solicitação de Dados IMC – Ambiental.pdf: Request Letter sent for UCEGEO data.
2. ANEXO Termo de Cessão_221021_083033.pdf: Updated term of use
3. Termo Cessão (3).pdf: Updated term of use
4. DESMATAMENTO E FLORESTA RASTER.zip
5. reference-map-of-forest-cover-until-2020-in-the-reference-region.jpg

DOE assessment	Date: 25/01/2023

1. The project proponent updated the joint PD/MR and attached documentary evidence to support the process of determining the forest area.
2. The project proponent updated the joint PD/MR, in which the aforementioned figure does not present inconsistences with its conventions. The figure was also attached as an independent file.

Finding closed successfully

CAR ID	29	Date: 04/11/2022

Description of CAR

VM0015, 1.2.3: "*Starting date and end date of the first fixed baseline period: the fixed baseline period shall be 10 years. The starting and end dates must be defined"*

The Project proponents do not define the starting and end dates of the first fixed period as the VM0015 required.

The Project proponent is requested to define the starting and end dates of the first fixed period.

Project participant response	Date: 12/01/2023

Sub-section "Temporal Limits (1.2 VM0015)." of section 3.3 of the PD&MR V2.0 was updated to better define the starting and end dates of the first fixed period as the VM0015 required.

Documentation provided by project participant

DOE assessment	Date: 25/01/2023

The project proponents updated the joint PD/MR, in which the first fixed period was defined in section 3.3, however t the starting date and end date of the first fixed baseline period do not meet the requirement of VM0015 section 1.2.3. PENDING

In addition, the title "*Temporal Limits*" is together with the caption of Figure 20

Project participant response	Date: 03/03/2023

The fixed baseline period was adjusted to 08/01/2020 to 07/31/2030 (10 years) in section 3.3. of the joint PD/MR V3. The title "*Temporal Limits*" was separated from the Caption of the Figure 22 above it.

CAR ID	29	Date: 04/11/2022
Documentation provided by project participant		
DOE assessment		Date: 13/03/2023
The project proponents updated the joint PD/MR, in which the first fixed period of the baseline is from 08/01/2020 to 07/31/2030 (10 years) and meets the requirements of VM0015.		
Finding closed successfully		

CL ID	30	Date: 04/11/2022
Description of CL		
The Project proponents do not mention the monitoring period in temporal boundaries section (section 3.3 of PD&MR V2.0 +MR). The Project proponent is requested to mention the temporal boundaries in section "Project Boundary"		
Project participant response		Date: 12/01/2023
The monitoring period of land use change and land use will start from the Project start date, August 1, 2020, until July 31, 2050, covering a 30-year period. This information was described in sub-section "Temporal Limits (1.2 VM0015)." of section 3.3 of the PD&MR V2.0.		
Documentation provided by project participant		
DOE assessment		Date: 25/01/2023
The project proponents updated the joint PD/MR, which mentions the monitoring period within the temporal boundaries.		
DOE assessment		Date: 13/03/2023
The project proponents indicated in section 3.3 of the updated joint PD/MR that "*The monitoring period for land use and land use change will start from the Project start date, August 1, 2020, until July 31, 2050, covering a period of 30 years*"; however, in accordance with the methodology requirements the maximum duration for the monitoring period is one fixed baseline period (10 years). Besides, in accordance with the ex-post reductions registered in section 6 of the joint PD/MR, the current monitoring period is from 2020 to 2022. The PPs are requested to adjust the monitoring period indicated in section 3.3 in accordance with the requirements of the methodology and in accordance with what is recorded in the joint PD/MR. VM0015, 1.2.4: "*The minimum duration of a monitoring period is one year and the maximum duration is one fixed baseline period*."		
Project participant response		Date: 16/05/2023
The monitoring period of land use change and land use was adjusted and better described in section 3.3 and 5.3 of the joint PD/MR_v4. All related tables were also adjusted with the new project start date and monitoring period.		
DOE assessment		Date: 31/05/2023

CL ID	30	Date: 04/11/2022
The project proponent the joint PD/MR, which sections 3.3 and 6 does not have inconsistences with the monitoring period.		
Finding closed successfully		

CL ID	31	Date: 04/11/2022
Description of CL		
VM0015, 1.3 [table 3]: "*Harvested wood products/ included/ To be included when significant*." In table 9 of the PD&MR V2.0 +MR states that the harvested wood products are excluded from the carbon pools of the project. However, the Project proponents did not demonstrate harvested wood products are not significant. The Project proponent is requested to provide sufficient information and demonstrate how the harvested wood products are not significant.		
Project participant response		Date: 12/01/2023
As the VM0015 v.1.1, 1.3 states, harvested wood products must be included when significant, however, there is no harvest of wood products between the activities in the project area, only the harvest of non-timber (as listed in section 1.11). Table "Carbon stocks included or excluded in the limit of Juruá REDD+ Project (Table 23 of VM0015 Methodology)." of section 3.3 of the PD&MR V2.0 was updated to better explanation. Also, according with VM0015, 7.1.1, project activities that will change the carbon stocks, and must be included in calculations are: "a) Planned deforestation (e.g. to build project infrastructure); b) Planned degradation (e.g. timber logging, fuel-wood collection or charcoal production); c) Protection without harvesting leading to carbon sequestration in forest classes that at project start are below their carbon stock potential at maturity in situ." None of those activities apply to the Juruá Project.		
Documentation provided by project participant		
DOE assessment		Date: 25/01/2023
The project proponents updated the joint PD/MR, indicating in table 10 that "*There is no harvest of wood products activities in the project area*".		
Finding closed successfully		

CAR ID	32	Date: 04/11/2022
Description of CAR		
The Project proponents did not attach the Satellite images used to identify and map land cover in the Reference Region. The Project proponents defined two land use and land cover classes in the reference region (section 3.4 of PD&MR V2.0 +MR); however, the sum of the area of these two categories (forest 492.957 ha + anthropic		

CAR ID	32	Date: 04/11/2022

vegetation in balance 140.948 ha = 633.905 ha) do not match to the area of the reference region presented in section 3.3 (RR = 631,841 hectares) nor with the identify in the on-site audit.

The Project proponents are requested to attach the Satellite images used to identify and map land cover in the Reference Region with the data.

And to clarify the correct area of the reference region and its land use and land cover classes.

Project participant response	Date: 12/01/2023

1. Project proponents attached the Satellite images (1) used to identify and map land cover in the Reference Region. The images are from the years 2012 to 2020, since there was a compromise of the UCEGEO database and the years 2010 and 2011 were no longer located.

2. Sub-section "Reference Region" of section 3.3 and sub-section "Definition of land use and land cover classes (2.2 VM0015)" of section 3.4 of the PD&MR V2.0 was updated to clarify the correct area of the reference region and its land use and land cover classes. Also it was included Table "Matrix of land use change in the Reference Region between 2010 and 2020 (Table 7a of Methodology VM0015)."

The area of the reference region reported corresponds to the sum of the areas obtained from UCGEO data, after rasterization. This is the format (2) that is ultimately used for calculating the modeling parameters and deforestation projection results.

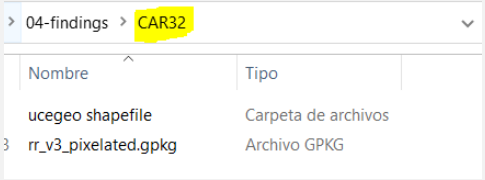
Documentation provided by project participant

Evidence files contemplated:

1. raster
2. rr_v3_pixelated

DOE assessment	Date: 25/01/2023

1. The project proponents mentioned the Satellite images used to identify and map land cover in the Reference Region were attached and they reference the evidence file named 'raster', however, the folder CAR32 of the evidence provided does not have the aforementioned file:



The unique folder included in CAR31 has the eight files associated with the shapefile '*DESMATE_ACRE_1988_2021_UCEGEO*'. Therefore, it is not possible to evaluate this finding. PENDING

2. The project proponents updated the joint PD/MR, which does not have inconsistences with the Reference Region area, and which clarify the land use and land cover classes of this area.

Project participant response	Date: 03/03/2023

The mentioned folder "RASTER" is now in folder CAR32 (1) that was shared with the VVB.

Documentation provided by project participant

1. Folder "RASTER" with all satellite images used by UCGEO to produce the time-series of deforestation data.

DOE assessment	Date: 13/03/2023

CAR ID	32	Date: 04/11/2022
1.	The project proponents attached the RASTER folder, which includes the Satellite images used to identify the map land cover in the Reference Region.	
Finding closed successfully		

CAR ID	33	Date: 04/11/2022
Description of CAR		
1. VM0015, 2.2 [The following criteria shall be used to define the LU/LC classes]: "*The minimum classes shall be "Forest Land" and "Non-Forest Land*"." The Project proponents do not include the minimum LU/LC classes requested by the VM0015. Therefore, the Project proponent is requested to include the minimum LU/LC classes. 2. The methodology VM0015 states in step 2.3: "*List the resulting LU/LC-change categories in table 7.a and 7.b*"; however, the Project proponents do not include the table 7a, therefore the Project proponent is requested to list the resulting LU/LC in both tables.		
Project participant response		**Date:** 12/01/2023
1. Sub-section "Definition of land use and land cover classes (2.2 VM0015)" of section 3.4 of the PD&MR V2.0 was updated to better describe the minimum LU/LC classes requested by the VM0015 as "Forest Land" and "Non-Forest Land, which are represented in the Project as "Forest" and "Anthropic Vegetation", respectively. 2. Sub-section "Results of historical land use and land cover change analysis" of section 3.4 of the PD&MR V2.0 was updated to include the table 7a of the methodology VM0015, which is Table Matrix of land use change in the Reference Region between 2010 and 2020 (Table 7a of Methodology VM0015)."		
Documentation provided by project participant		
DOE assessment		**Date:** 25/01/2023
1. 2.	The project proponents updated the joint PD/MR, including the minimum LU/LC classes requested by the VM0015 in section 3.4. The project proponents updated the joint PD/MR, which includes the use of tables 7a and 7b of the methodology in section 3.4 (tables 14 and 15).	
Finding closed successfully		

CAR ID	34	Date: 04/11/2022
Description of CAR		
1. The Project proponent mentioned that "*The chosen algorithm was SVW (Support Vector Machine) and Sigmoid Kernel type, and the choice of training sample categories*" but they do not mention the source to adopt this method; therefore, they are requested to provide the source of the methods applied 2. The Project proponents are requested to attach the confusion matrix as a support.		

CAR ID	34	Date: 04/11/2022

3. VM0015, 2.6: *"…the detailed methodological procedures used in pre-processing, classification, post classification processing, and accuracy assessment of the remotely sensed data, must be carefully documented in an Annex to the PD*."

The Project proponents did not provide the annex of the PD&MR V2.0 with the detailed methodological procedures used in pre-processing, classification, post classification processing, and accuracy assessment of the remotely sensed data carefully documented as the VM0015 requested. The Project proponents are requested to provide the corresponding document.

4 The folder 3.4 Baseline Scenario/modelagem contains the file 'me leia.docx', in which states ", "*A pasta relatórios contém a versão final do documento com os procedimentos para geração das projeções da linha de base, que serão usados para construção da sessão correspondente no Documento de Descrição do Projeto*". Therefore, the Project proponent is requested to attach the corresponding report.

Project participant response	Date: 12/01/2023

1. Sub-section "Interpretation and classification" of section 3.4 of the PD&MR V2.0 was updated to include the source of the methods applied: Latuf and Carmo, 2010, (1) ACRE and 2013 (2).

2. The confusion matrix is provided by table "Confusion matrix for data assessment from UCEGEO 2020." of the PD&MR V2.0, together with other evidence of the process, which are 88 spots randomly distributed over the Reference Region (3), the scenes T18MZS_20201009_C4, T18MYS_20201009_C3 and 0201009T150731_C1, which were the ones used to verify the accuracy of UCEGEO data (4) and the analysis of these points (5).

3. The Project proponents provided the paper by Latuf and Carmo (2010) (1), which details the methodology used here. The article, which was reviewed by peers and presented at a national congress, presents results and acknowledgements about the quality of the generated data.

4. The appendix (6) produced by Professor Dr. Sonaira, which is the report on the deforestation risk projection method was shared with the VVB.

Documentation provided by project participant

Evidence files:

1. Artigo Final_metodologiaUCEGEO_latufeCarmo_2010.pdf
2. ACRE-2013-Ucegeo capa e caderno-rev.pdf
3. Pontosdecontrole.shp
4. Imagens-sentinel
5. accuracy.xlsx
6. Referências Metodológicas - Anexo 04.pdf

DOE assessment	Date: 25/01/2023

1. The project proponents updated the joint PD/MR, including in section 3.4 the source of the methods applied.
2. The project proponent updated the joint PD/MR, which includes the confusion matrix in table 16. However, the table's "Total" column values are not consistent. PENDING

CAR ID	34	Date: 04/11/2022

Table 16. Confusion matrix for data assessment from UCEGEO 2020.

		Reference			
Land use		Forest	Anthropic Vegetation	TOTAL	User Accuracy (%)
Classification	Forest	51	3	94	94
	Anthropic Vegetation	1	33	97	97
	TOTAL	52	36	88	
	Producer Accuracy (%)	98	92		Overall accuracy: 95

3. The project proponent attached an article that was used as a guide during the application of the methodology (called '*Metodologia De Monitoramento Do Desflorestamento Para O Estado Do Acre'*), however, as the VM0015 requested, the PPs must document in an **Annex to the PD** the detailed methodological procedures used in pre-processing, classification, post classification processing, and accuracy assessment of the remotely sensed data, including the data sources and pre-processing applied, the data classification and post-processing applied and the classification accuracy assessment. PENDING

VM0015, v1.1, 2.6: "[...] *To achieve a consistent time-series, the risk of introducing artifacts from method change must be minimized. For this reason, the detailed methodological procedures used in pre-processing, classification, post classification processing, and accuracy assessment of the remotely sensed data, must be carefully documented in an Annex to the PD. In particular, the following information must be documented:*

a) Data sources and pre-processing: Type, resolution, source and acquisition date of the remotely sensed data (and other data) used; geometric, radiometric and other corrections performed, if any; spectral bands and indexes used (such as NDVI); projection and parameters used to georeference the images; error estimate of the geometric correction; software and software version used to perform pre-processing tasks; etc.

b) Data classification and post-processing: Definition of the LU/LC classes and LU/LC-change categories; classification approach and classification algorithms; coordinates and description of the ground-truthing data collected for training purposes; ancillary data used in the classification, if any; software and software version used to perform the classification; additional spatial data and analysis used for post-classification analysis, including class subdivisions using non-spectral criteria, if any; etc.

c) Classification accuracy assessment: Accuracy assessment technique used; coordinates and description of the ground-truth data collected for classification accuracy assessment; postprocessing decisions made based on the preliminary classification accuracy assessment, if any; and final classification accuracy assessment."

4. The project proponents attached the report called "*Modelagem e projeção do desmatamento futuro na propriedade Valparaiso, Cruzeiro do Sul - Acre (Relatório)"* andf mentioned it is the report on the deforestation risk projection method.

Project participant response	Date: 03/03/2023

1. The table's 16 *Confusion matrix for data assessment from UCEGEO 2020* "Total" values were corrected.

2. The annex document "SILVA,S.S.-VM0015-Methodological-Procedures-Deforestation-Modelin-Annex" (1) describing all the details of the deforestation classification and modeling method was shared with the VVB. Data and methods used for the accuracy assessment of deforestation

CAR ID	34	Date: 04/11/2022

classification maps are described directly in the PD, section 3.4 of the joint PD/MR V3 "*Map Accuracy Assessment (2.5. VM0015)*".

Documentation provided by project participant

1. VM0015-Methodological-Procedures-Deforestation-Modelin-Annex.pdf

DOE assessment **Date:** 13/03/2023

1. The project proponents updated joint PD/MR, which table 16 does not have inconsistences in its values.
2. The project proponents attached the document called "*VM0015-Methodological-Procedures-Deforestation-Modelin-Annex.pdf*" as the annex requested by the VM0015. The aforementioned file contains information about: Definition of variables and assembly of the geographic database; Calculation of the transition matrix; Calculation of intervals and weights of evidence; Correlation analysis of variables; Run the simulation model and validate the deforestation simulation; and Simulation with formation and expansion of deforestation polygons. However, in accordance with VM0015 requirements, the PD Annex must include information about: data sources and pre-processing; data classification and post-processing; and classification accuracy assessment.

The PPs are requested to include de information required by the VM0015 in the PD methodological annex.

VM0015, v1.1, 2.6: "[...] *To achieve a consistent time-series, the risk of introducing artifacts from method change must be minimized. For this reason, the detailed methodological procedures used in pre-processing, classification, post classification processing, and accuracy assessment of the remotely sensed data, must be carefully documented in an Annex to the PD. In particular, the following information must be documented:*

a) Data sources and pre-processing: Type, resolution, source and acquisition date of the remotely sensed data (and other data) used; geometric, radiometric and other corrections performed, if any; spectral bands and indexes used (such as NDVI); projection and parameters used to georeference the images; error estimate of the geometric correction; software and software version used to perform pre-processing tasks; etc.

b) Data classification and post-processing: Definition of the LU/LC classes and LU/LC-change categories; classification approach and classification algorithms; coordinates and description of the ground-truthing data collected for training purposes; ancillary data used in the classification, if any; software and software version used to perform the classification; additional spatial data and analysis used for post-classification analysis, including class subdivisions using non-spectral criteria, if any; etc.

c) Classification accuracy assessment: Accuracy assessment technique used; coordinates and description of the ground-truth data collected for classification accuracy assessment; postprocessing decisions made based on the preliminary classification accuracy assessment, if any; and final classification accuracy assessment."

Project participant response **Date:** 16/05/2023

The methodological annex was revised to include information about the data sources and the pre-processing, classification and post-processing of the data and the evaluation of the classification accuracy (1). The aforementioned document is now mentioned in the Appendix 1 section of the PD/MR_v4 as "VM0015 Methodological Procedures for Deforestation Modeling".

Documentation provided by project participant

1. 20230210_Metodo_Projecao_Futura_Desmatamento_Projeto_REDD+_Jurua_VF_04042023

CAR ID	34	Date: 04/11/2022
DOE assessment		Date: 31/05/2023
The project proponent attached the PD Annex updated, which includes the information required by the VM0015.		
Finding closed successfully		

CAR ID	35	Date: 04/11/2022
Description of CAR		
1. VM0015, 3.2: "*Two sets of driver variables have to be distinguished: a) Driver variables explaining the quantity (hectares) of deforestation…b) Driver variables explaining the location of deforestation, also called "predisposing factors*". The Project proponent did not distinguish the two sets of driver variables as the VM0015 required, therefore they are required to identify drivers explaining quantity. 2. VM0015, 3.2: "*For each of these two sets of variables: 1) List the 1 to 5 key driver variables and provide any relevant source of information that provides evidence that the identified variables have been a driver for deforestation during the historical reference period; 2) Briefly describe for each main agent group identified in step 3.1 how the key driver variables have and will most likely impact on each agent group's decision to deforest; 3) For each identified key driver variable provide information about its likely future development , by providing any relevant source of information; 4) For each identified driver variable briefly describe the project measures that will be implemented to address them, if applicable*." The Project proponents did not provide information of deforestation drivers required by the VM0015; therefore, they are requested to update the information. 3. The Project proponents do not provide the information required by the VM0015 about underlying causes of deforestation, therefore they are requested to provide the corresponding information of each cause of deforestation identified. 4. VM0015, 3.5: "*The analysis of step 3 must conclude with a statement about whether the available evidence about the most likely future deforestation trend within the reference region and project area is: Inconclusive or Conclusive.* The Project proponents do not indicate if the conclusion (step 3 of the methodology) is inconclusive or conclusive as the VM0015 required. The project proponents are requested to clarify the conclusion of step 3.		
Project participant response		Date: 12/01/2023
1. Sub-section "Identification of deforestation drives (3.2 VM0015)" of section 3.4 of the PD&MR V2.0 was updated to better describe distinguish the two sets of driver variables, i identifying drivers that explain quantity. 2. Table "Vetores associados a desmatamento e queimadas na Amazônia e no Acre." was expanded to include required adjustments.		

CAR ID	35	Date: 04/11/2022

3. Sub-section "Identifying of underlying causes of deforestation (3.3 VM0015)" of section 3.4 of the PD&MR V2.0 was updated to better describe about underlying causes of deforestation.

4. Sub-section "Conclusion (3.5 VM0015)" of section 3.4 of the PD&MR V2.0 was updated to better describe that is conclusive the most likely future deforestation trend within the reference region and project area.

Documentation provided by project participant

DOE assessment	Date: 25/01/2023

1. The PP updated sub-section "Identification of deforestation drives (3.2 VM0015)" of section 3.4 of the PD&MR v2 and distinguished the two sets of driver variables as the required VM0015. Furthermore, the PP has included in the description the PD sub-section which contains the explanation of the quantity drivers.

2. The project proponents clarified that the table "*Vetores associados a desmatamento e queimadas na Amazônia e no Acre*" was updated to include missing information, however, there is not any table with said aforementioned name.

   Table 18 of the updated joint PD/MR include information about deforestation drivers, however, it is not provided for the two sets of variables identified (variables explaining the quantity of deforestation, variables explaining the geographic location of deforestation), as the VM0015 required. PENDING

   VM0015, v1.1, 3.2: "*For each of these two sets of variables: 1) List the 1 to 5 key driver variables and provide any relevant source of information that provides evidence that the identified variables have been a driver for deforestation during the historical reference period; 2) Briefly describe for each main agent group identified in step 3.1 how the key driver variables have and will most likely impact on each agent group's decision to deforest; 3) For each identified key driver variable provide information about its likely future development , by providing any relevant source of information; 4) For each identified driver variable briefly describe the project measures that will be implemented to address them, if applicable*."

3. The project proponents clarified "Sub-section "*Identifying of underlying causes of deforestation (3.3 VM0015)" of section 3.4 of the PD&MR V2.0 was updated to better describe about underlying causes of deforestation*", however, in section 3.4 – I*dentifying of underlying causes of deforestation* - of the updated joint PD/MR identifies the source of the underlying causes and describes the main drivers identified in the state of Acre, but the section does not provide the required information about the underlying causes of deforestation. PENDING

   VM0015, v1.1, 3.3: "*[…] 1) List the 1 to 5 key underlying* ***causes*** *and cite any relevant source of information that* ***provides evidence*** *that the identified variables have been an underlying cause for deforestation* ***during the historical reference period****. 2) Briefly describe how each key underlying cause has determined and will most likely determine the* ***key drivers*** *identified in step 3.2 and the decisions of the main agent groups identified in step 3.1. 3) For each identified key underlying cause provide information about its likely future development, by* ***citing any relevant source of information****. 4) For each identified underlying cause describe the* ***project measures*** *that will be implemented to address them, if applicable*".

4. The project proponent updated the joint PD/MR, indicating it is conclusive the most likely future deforestation trend within the reference region and project area.

CAR ID	35	Date: 04/11/2022
Project participant response		Date: 03/03/2023

1. The referred table is called "Drivers related to deforestation and fires in the Amazon and the State of Acre" and is located in section 3.4 of the joint PD/MR V3 as Table 18. The variables explaining the quantity and geographic location of deforestation are now separated in their respective subsections "Variables explaining the quantity of deforestation" and "Variables explaining the geographic location of deforestation".
2. The text in the section 3.4 of the joint PD/MR V3 was altered to explicitly list, with due justifications and support references, the main underlying causes of deforestation:

1. Territorial planning issues related to road pavement, land tenure and lack of technical expertise.
2. Change in deforestation spatial patterns from medium and big parcels to small parcels.

In addition, the section 3.4 of the joint PD/MR V3 was edited to help relate the underlying causes of deforestation with the data on the identified drivers of Table 18 – "Drivers related to deforestation and fires in the Amazon and the State of Acre".

Documentation provided by project participant

1. Folder with references

DOE assessment	Date: 13/03/2023

1. The project proponents indicated the table that was referred is called "*Drivers related to deforestation and fires in the Amazon and the State of Acre*", which is table 18 of the updated joint PD/MR and includes information about drivers of deforestation. Besides, the updated joint PD/MR includes information for the two sets of variables identified (variables explaining the quantity of deforestation, variables explaining the geographic location of deforestation) in its section 3.4, as the VM0015 required.

2. The project proponents updated the joint PD/MR, including "*territorial planning issues related to road pavement, land tenure and lack of technical expertise*", and "*change in deforestation spatial patterns from medium and big parcels to small parcels*" as the main underlaying causes of deforestation; however, it was not clarified if it was applicable for each identified underlying cause project measures that will be implemented to address them.

VM0015, v1.1, 3.3: "*[…] 4) For each identified underlying cause describe the project measures that will be implemented to address them, if applicable*".

Project participant response	Date: 16/05/2023

Project measures that will be implemented to address the identified underlying causes of deforestation have been included as a topic in section 3.4 Baseline Scenario – "Identifying of underlying causes of deforestation (3.3 VM0015)" of the joint PD/MR_v4.

Documentation provided by project participant

DOE assessment	Date: 31/05/2023

The project proponent updated the joint PD/MR, including in section 3.4 a section called "*Project measures that will be implemented to address the identified underlying causes of deforestation*" which clarifies some actions to address the underlying causes identified.

Finding closed successfully

CL ID	36	Date: 04/11/2022
Description of CL		

CL ID	36	Date: 04/11/2022

The Project proponents provided information about the data collected using table 5 of the methodology; however, the in the two last columns of the table 11 in PD&MR V2.0 +MR the Project proponents did not provide the scene or point identifier (path/Latitude and row/longitude) as the VM0015 required.

The Project proponent is requested to update/provide the scene or point identifier (path/Latitude and row/longitude) as the methodology required.

Project participant response	Date: 12/01/2023

Table "Satellite images used to identify and map land cover in the Reference Region of Juruá REDD+ Project (Table 5 of VM0015 Methodology)." of the PD&MR V2.0 was updated correcting the nomenclature of previously used terms. The last two columns of the table already contain this information.

Documentation provided by project participant

DOE assessment	Date: 25/01/2023

The project proponents updated the joint PD/MR, which include in table 12 the scene or point identifier (path/Latitude and row/longitude) of the satellite images used.

Finding closed successfully

CAR ID	37	Date: 04/11/2022

Description of CAR

VM0015, 4.1.2.1: "*The method to be used depends on the baseline approach selected*" ...

To create the Factor Maps, use one of the following two approaches: · Empirical approach... · Heuristic approach...

There are inconsistences in the step 4.1.2 of the methodology (section 3.4 of PD&MR V2.0 +MR) since the Project proponents state in 'Selection of the baseline approach' step: "Thus, approach "c" (modeling) was selected"; however, in 'Quantitative projection of future deforestation' step they applied the approach b.

The Project proponent is requested to clarify the selection and provide consistent information and to clarify which approach was applied for developing the factor maps in the step of preparation of factor maps of the methodology

Project participant response	Date: 12/01/2023

Sub-section "Selection of the baseline approach (4.1.1 VM0015)" of section 3.4 of the PD&MR V2.0 was updated to corrected the text to reflect the method used (approach "b").

Documentation provided by project participant

DOE assessment	Date: 25/01/2023

The project proponents updated the joint PD/MR, which does not have inconsistences with the baseline approach selected, it was applied the approach b.

Finding closed successfully

CAR ID	38	Date: 04/11/2022
Description of CAR		
VM0015, 4.2.2 "*...A list of Factor Maps, including the maps used to produce them and the corresponding sources shall be presented in the PD (table 10) together with a flow-chart diagram illustrating how the Risk Map is generated*" The project proponents did not present a list of the variables, maps, and factor maps as the VM0015 required, therefore, they are requested to provide this information using table 10 of methodology.		
Project participant response		**Date:** 12/01/2023
The information is provided in Table "List of maps, variables and factor maps (Table 10 of the VM0015 Methodology)"		
Documentation provided by project participant		
DOE assessment		**Date:** 25/01/2023
The project proponents updated the joint PD/MR V3.0, which includes the list of the variables, maps, and factor maps in table 23, using the table 10 of the VM0015.		
Finding closed successfully		

CAR ID	39	Date: 04/11/2022
Description of CAR		
VM0015 v1.1, section 5.1 Calculation of baseline activity data per forest class "*Extract from these maps the number of hectares of each forest class that would be deforested and present the results in table 11 (11.a for the reference region, 11.b for the project area and 11.c for the leakage belt area).*" However, in PD&MR V2.0, 4.1 Baseline emissions states "*Project baseline projections results indicate deforestation of approximately 4,657 hectares for the Project Area from 2021 to 2040*" The Project proponent is requested to clarify if the project lifetime is until 2040 o 2050 and to updated consistently the information.		
Project participant response		**Date:** 12/01/2023
The accreditation period of Juruá REDD+ Project will occur from August 1, 2020 to July 31, 2050, comprising a period of 30 years. The necessary corrections have been made in section 4.1 of the PD&MR V2.0.		
Documentation provided by project participant		
DOE assessment		**Date:** 25/01/2023
The project proponents updated the joint PD/MR, which does not have consistence the project lifetime (from August 1, 2020, to July 31, 2050) and the Baseline emissions and leakage belt ...*Project Area from 2021 to 2050*		
Project participant response		**Date:** 03/03/2023
The accreditation period of Juruá REDD+ Project will occur from August 1, 2020 to July 31, 2050, comprising a period of 30 years. The Baseline emissions and leakage belt were defined from intervals, representing a complete verification period. The necessary corrections have been made in section 4.1 of the PD&MR V3.0.		
Documentation provided by project participant		

CAR ID	39	Date: 04/11/2022

DOE assessment	Date: 13/03/2023

The project proponents updated the joint PD/MR, in which section 4.1 is indicated that "*Project baseline projections results indicate deforestation of approximately 7,697 hectares for the Project Area from August, 2020 to August, 2050 (Table 28) and 3,454 hectares for Leakage Belt (Table 29).*". However, as the PPs mentioned in their response and as is stated in section 1.9, the crediting period the project will occur from August 1, 2020 to July 31, 2050, which does not include august, 2050.

> Projected forest area estimates were converted to annual deforestation rates. The deforestation forecast values for the period from 2021 to 2050 are presented in Table 20.

Taking into account the aforementioned, the PPs are requested to be consistent in the values presented throughout the document.

Project participant response	Date: 16/05/2023

Section 4.1 of the PD/MR_v4 has been changed in accordance with the changes made in section 1.9 which refers to the Project crediting period.

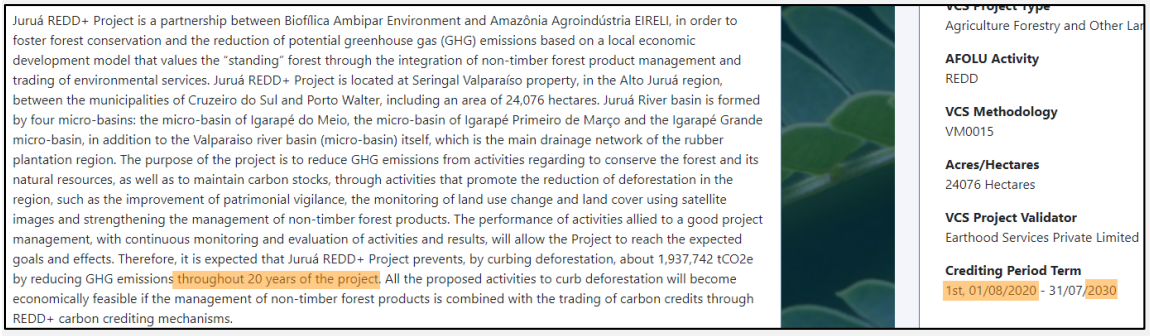
The periods were changed in section 3.4 of the PD/MR, as shown below:

"Projected Forest area estimates were converted to annual deforestation rates. The deforestation forecast values for the period from July 2020 to July 2050 are presented.

Documentation provided by project participant

DOE assessment	Date: 31/05/2023

The project proponent updated the joint PD/MR, which does not have inconsistences with the crediting period stated (from July 31, 2020 to July 30, 2050, comprising a period of 30 years). However, the information available on Verra's website does not have consistence with the one indicated in the joint PD/MR.



The project proponent is advised to update the information available on Verra's website to have consistence with the documentation provided.

Finding closed successfully

CAR ID	40	Date: 04/11/2022

Description of CAR

CAR ID	40	Date: 04/11/2022

1. VT0001, 2.1.1 (b) *"All identified land use scenarios must be credible. All land-uses within the boundary of the proposed VCS AFOLU project that are currently existing or that existed at some time in the period beginning ten years prior to the project start date but no longer exist, may be deemed realistic and credible. For all other land use scenarios, credibility shall be justified. The justification shall include elements of spatial planning information (if applicable) or legal requirements and may include assessment of economic feasibility of the proposed land use scenario"*

The Project proponent did not provide evidence to justify the scenarios identified; therefore, it is requested to provide secondary information and planning information to justify credibility of scenarios.

2. The project proponents state in section 3.5 of PD&MR V2.0 +MR: "Sub-step 1c. Baseline Scenario Selection Described in Section 2 - Application of the Methodology, Item 2.4 Baseline Scenario.", However, section 2 of the document corresponds to Safeguards and item 2.4 is public comments. The Project proponents are requested to clarify the which of the scenarios identified is the baseline scenario selected.

Project participant response	Date: 12/01/2023

1.Secondary information and planning information to justify the credibility of the scenarios was added as requested in section 3.5 of PD&MR V2.0 +MR: Step 1 - Identification of alternative land use scenarios for the proposed VCS AFOLU project activity, Sub-step 1a.

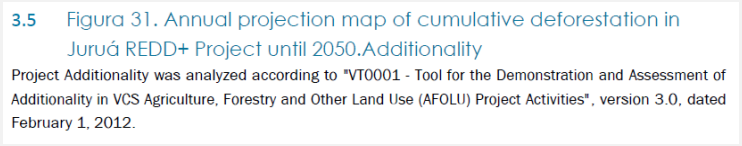
2.The changes were made in section 3.5 of PD&MR V2.0 +MR: "Sub-step 1c. Baseline Scenario Selection Described in Section 2: "Described in Section 2 - Application of the Methodology, Item 3.4 Baseline Scenario."

Documentation provided by project participant

DOE assessment	Date: 25/01/2023

1. The project proponents updated the joint PD/MR, including secondary information to support the scenarios identified in section 3.5.

   The title of section 3.5 is together with the caption of figure 31 above. In this way, the PP is required to adjust the text of the PD.


3.5 Figura 31. Annual projection map of cumulative deforestation in Juruá REDD+ Project until 2050.Additionality

Project Additionality was analyzed according to "VT0001 - Tool for the Demonstration and Assessment of Additionality in VCS Agriculture, Forestry and Other Land Use (AFOLU) Project Activities", version 3.0, dated February 1, 2012.

2. The project proponent updated the joint PD/MR, indicating in section 3.5 Sub-step 1c: "*Described in Section 2 - Application of the Methodology, Item 3.4 Baseline Scenario"*, However Section 2 corresponds to "Safeguards". The PPs are requested to clarify the which of the scenarios identified is the baseline scenario selected.

Project participant response	Date: 03/03/2023

1. The title of section 3.5 of the joint PD&MR V3 has been adjusted, as requested.
2. The number referenced in section 3.5 Sub-step 1c. Baseline Scenario Selection: "Described in Section 3 - Application of the Methodology, Item 3.4 Baseline Scenario" of the joint PD/MR V3 has been adjusted.

Documentation provided by project participant

CAR ID	40	Date: 04/11/2022

DOE assessment	Date: 13/03/2023

1. The project proponents updated the joint PD/MR, which title of section 3.5 does not have inconsistences.
2. The project proponents updated the joint PD/MR, which does not have inconsistences in its step 1c of section 3.5. However, In sub-step 1b, the project proponents did not demonstrate why the second scenario identified is in compliance with all applicable legal and regulatory requirements; it is just stated "*Scenario (ii) is in compliance with all applicable legal and regulatory requirements*".

VT0001 v3.0, 2.1.2: *"[…] Demonstrate that all land use scenarios identified in the sub-step 1a: are in compliance with all mandatory applicable legal and regulatory requirements […]"*

Project participant response	Date: 16/05/2023

2. Step 1c of section 3.5 of the joint PD/MR_v4 was revised to demonstrate why the second scenario is in compliance with all applicable legal and regulatory requirements.

DOE assessment	Date: 31/05/2023

1. The project proponent updated the joint PD/MR, including justification for the second scenario's compliance with all applicable legal and regulatory requirements.

Finding closed successfully

CAR ID	41	Date: 04/11/2022

Description of CAR

VT0001, 2.2.1: *"Determine whether to apply simple cost analysis, investment comparison analysis or benchmark analysis (sub-step 2b)"*

In section 3.5, step 2, sub-step 2a of PD&MR V2.0 +MR the Project proponents do not determine which of the three methods will be applied as the tool required. Therefore, the Project proponent is requested to clarify the method applied in the investment analysis.

The project proponents state in section 3.5, step 3 "*The owner of Juruá REDD+ Project is committed to promoting social and economic development in the Juruá Valley for the past 30 years*", however there is not documentary evidence to support it, therefore, they are requested to provide evidence to support that affirmation.

Project participant response	Date: 12/01/2023

An investment comparison analysis was developed, and this information is described in section 3.5, step 2, sub-step 2a of PD&MR V2.0: "so a comparative investment analysis was performed comparing the scenarios (i), (ii) and (ii-b) described."

The document that supports the statement "*The owner of Juruá REDD+ Project is committed to promoting social and economic development in the Juruá Valley for the past 30 years*" is contract (1) between Biofílica Ambipar Environmental Investments S/A and Amazonia Agroindustry. Through clause 7.1 of the contract, the parties affirm the commitment to the development of the Project for 30 years for the development of activities. Annex II - Summary of Premises and Conditions, reinforces in the item "Period of duration of the REDD+ Project", which will be 30 years.

CAR ID	41	Date: 04/11/2022

Regarding the commitment to socioeconomic development in the Juruá Valley, this can be identified in objective III of the contract, which states that "Amazônia Agroindústria is interested in carrying out projects aimed at the environmental conservation of the forest area of the properties, maintaining its ownership, developing environmental and social activities for the surrounding communities and the possibility of identifying new economic vocations for the forest area of the properties through monetization of environmental services from the activities developed on the property". The excerpt that confirms the quote, was inserted in in section 3.5, step 3 – Territory focus of PD&MR V2.0.

Documentation provided by project participant

Evidence files contemplated:

1. 2022.03.23-contrato-amazonia-agroindustria-final-v2-Clicksign

DOE assessment	Date: 25/01/2023

The PP has updated sub-step 2a of PD&MR v2 and it is clear that the investment comparison analysis was performed to compare the scenarios.

However, the PP states: "E*valuations and comparisons of the results of scenarios (i), (ii) and (ii-b) were made, in which scenario…"*. Scenario (ii-b) was not identified and described in sub-step "*1a. Identify credible alternative land use scenarios in proposals for AFOLU VCS project activities"*.

The project proponents clarify that the support of the affirmation is "*The owner of Juruá REDD+ Project is committed to promoting social and economic development in the Juruá Valley for the past 30 years"* the '*2022.03.23-contrato-amazonia-agroindustria-final-v2-Clicksign.pdf*', in specific the item 7.1 of this file.

However, the evidence attached indicate the clause of permanence of the project for 30 years in point 7.1 and highlights the objective of conservation and preservation of the forested area contained in the project area but does not include any reference to the social and economic development of the Jurua valley; therefore, the PPs are requested to provide adequate evidence to support this affirmation. PENDING

In addition, some issues were found in the updated document: PENDING

a) the first paragraph of sub-step 2a. "Defining the Appropriate Analysis Method" is in bold and this format does not meet the Template guideline.

b) the title of step 2b *"Option II. Applying Comparative Investment Analysis"* is together with the previous paragraph.

Project participant response	Date: 03/03/2023

1. Scenario (ii-b) was described in sub-step "*1a. Identify credible alternative land use scenarios in proposals for AFOLU VCS project activities"* as requested in PD&MR V3.

2. Some projects are developed in the Juruá Valley region by one of Mr. James Cameli's companies, the Vasta Insumos da Amazônia Ltda, which works with riverside communities in the collection of Murumuru seeds. A mapping of these communities was done (1), (2) and (3) and the proposal of a project focused on its extraction (4). These actions demonstrate that the owner is committed to promoting social and economic development in the Juruá Valley.

3. a) The adjustments were made in the first paragraph of sub-step 2a, as requested in PD&MR V3.

CAR ID	41	Date: 04/11/2022

b) The adjustments were made in step 2b" *Option II. Applying Comparative Investment Analysis"* as requested in PD&MR V3.0 +MR.

Documentation provided by project participant

(1) Cadastro dos produtores Murumuru

(2) comunidades-murumuru-jurua

(3) mapa-comunidades-rio-jurua

(4) https://prezi.com/__-mf3h8bms3/vasta/

DOE assessment	Date: 13/03/2023

1. The project proponents updated the joint PD/MR, including in section 3.5, sub-step 1a, a brief description of the scenario ii-b.

2. The project proponents attached documentary evidence to support the actions developed by one of Mr. James Cameli's companies (Vasta Insumos da Amazônia Ltda) to promoting social and economic development in the Jurua Valley. However, the attached evidence does not demonstrate that the owner has worked to promote social and economic development in the Jurua Valley over the past 30 years, as the file that cites dates (https://prezi.com/__-mf3h8bms3/vasta/) indicates that the aforementioned company was funded on 2019.

The PPs are requested to provide evidence to support the affirmation made in the updated joint PD/MR, section 3.5, specially about the social and economic topic.: "*The owner of Juruá REDD+ Project is committed to promoting social and economic development in the Juruá Valley for the past 30 years"*.

3. The project proponents updated the joint PD/MR, which first paragraph of sub-step 2a and title of sub-step 2b from section 3.5 do not have any inconsistences.

Project participant response	Date: 16/05/2023

The affirmation made in section 3.5 - 3. Territory focus: "The owner of Juruá REDD+ Project is committed to promoting social and economic development in the Juruá Valley for the past 30 years" was revised to date 2019 in the joint PD/MR-v4, because the actions that were made before 2019 cannot be supported.

Documentation provided by project participant

DOE assessment	Date: 31/05/2023

The project proponent updated the joint PD/MR, clarifying in section 3.5 that the owner of the project is committed to promoting social and economic development in the Juruá Valley since 2019.

Finding closed successfully

CL ID	42	Date: 04/11/2022

Description of CL

VT0001, 2.4.2: "*Provide documented evidence and, where relevant, quantitative information. Considerations shall be limited to the period beginning 10 years prior to the project start date*"

Furthermore, the land tenure from INCRA information, the Project proponent did not provide enough documentary evidence to support the Common practice analysis, therefore, they are requested to enforce the analysis with secondary information and documentary evidence.

Project participant response **Date:** 12/01/2023

The common practice analysis was based on the land data base of Economic-Ecological Zoning (Acre, 2007) (1), on field activities and on activities planned and carried out by the owner of the land (3). The land tenure from INCRA information (2) and other documentary evidence applied were shared with VVB.

Documentation provided by project participant

Evidence files contemplated:
(1) ZEE
(2) RR_Propriedades_PraticasComuns_31052022.shp
(3) operacao-unha-de-gato

DOE assessment **Date:** 25/01/2023

The project proponents clarified "*The common practice analysis was based on the land data base of Economic-Ecological Zoning (Acre, 2007) (1), on field activities and on activities planned and carried out by the owner of the land (3)*"; however, in the updated joint PD/MR there is just cited INCRA as a source for the common analysis information.

The Project proponents are requested to clarify which is the information that was used the aforementioned sources during the common practice analysis.

Project participant response **Date:** 03/03/2023

All aforementioned information were used (1, 2 and 3), which were properly mentioned in section 3.5 - "Step 3 – Common practice analysis" of the PD&MR V3.0. The literature used to justify the common practice analysis, specifically (1) ZEE – ACRE_2016 and ACRE_2021, has been included in the section 7. References. All evidence were shared with VVB.

Documentation provided by project participant

1. ZEE: ACRE_2016; ACRE_2021.
2. RR_Propriedades_PraticasComuns_31052022.shp
3. Folder "operacao-unha-de-gato" with cat's-claw management documents

DOE assessment **Date:** 13/03/2023

The project proponents updated the joint PD/MR, including all the sources used to develop the step 3 – common practice analysis in section 3.5. These sources were also attached as evidence files.

Finding closed successfully

CAR ID	43	Date: 04/11/2022

Description of CAR

VCS Methodology Requirements v4.2, 3.4.6 (4) "*Where sampling is applied in data collection, the requirements set out in Section 2.1.3 shall be adhered to. The methodology developer shall demonstrate that sampling results provide an unbiased and reliable estimate of the true mean value (i.e., the sampling does not systematically underestimate or overestimate the true mean value)*".

CAR ID	43	Date: 04/11/2022

The validity of the methodology implemented to carry out the parts of the project is not clear. The proponents of the project are requested to clarify the due and validity of the applied methodology.

VCS Methodology Requirements v4.2, 3.4.6: "*Appropriate data sources for developing performance methods include economic and engineering analyses and models, peer-reviewed scientific literature, case studies, empirical data, and common practice data*".

VM0015 v1.1 Annex 3*. In any case, the uneven distribution of sampling plots will be accepted provided that statistical representativeness and the use of standard sampling techniques are granted, clearly reported and archived.*

The project proponents provided three documents (EstatisticaDescritiva_BiomassaAbaixodoSolo_parcelas_VF_01062022.doc, EstatisticaDescritiva_BiomassaTotal_parcelas_VF_01062022.doc, EstatisticaDescritiva_BiomassaacimadoSolo_VF_01062022.doc) about the descriptive statistics of the inventory carried out. However, the information presented, or the source of the developed methods is not clear, since the document does not present an analysis of the information or bibliography.

The Project proponent is requested to provide the flora monitoring report to confirm the procedures develop onsite during the audit process.

The Project proponent is requested to clarify the statistical representativeness of the sampling plots distribution.

There are typo inconsistences through the digitalized Spreadsheets and the Field formats "*fichas de campo*". The Project proponent is requested to provide consistent information and assure the does not underestimate or overestimate the true mean value of aboveground data due the data transcription, and to provide a corrective action for this and next flora inventories.

IPCC Good Practice Guidance for LULUCF, 4.3.3.2: *"STRATIFICATION OF THE PROJECT AREA: …It is good practice to stratify the project area (population of interest) into sub-populations or strata that form relatively homogenous units".*

Project proponents are requested to clarify the source of the implemented sampling method since it is not stratified and in accordance with IPCC guidelines.

IPCC good practice guidance for lulucf, 4.3.3.4.2: *"… it is recommended to use a single plot varying between 100 m2 (for densely planted stand of 1,000 trees/ha or more) and 600 m2 (for sparsely planted stand of multi-purpose trees) in area for even-sized stands".*

The project proponents state in section 4.1 of PD&MR V2.0 +MR: "*each plot has a rectangular shape and variable size according to the information source, for upas, the plots, had an average of 12 hectares, in*

CAR ID	43	Date: 04/11/2022

samples for regeneration, the plots had 0.2 hectares and for floristic assessment samples had 0.5 hectares. samples of 1,113.7 hectares located in conditions of higher risk of deforestation were provided. this sampled area represents 4.6 % of the assessed universe, therefore a rate above the normal standards for statistical modeling". it is not clear the method used for defining the size of plots since there are several areas and they vary between 0.2 ha and 1,113.7 hectares. the project proponents are requested to clarify the methodology used to define size of plots.

The proponents of the project provide as one of the supports of the forest inventory the file called 'Tabela_Sintese_parcelas_VF_01062022.xlsx', however, the information present in this file is not clear, therefore the proponents are asked to clarify the information presented.

Project participant response	Date: 12/01/2023

Section 3.4 of the PD&MR V2.0 was updated to clarify the validity of the methodology implemented to carry out the parts of the project, to better describe the descriptive statistics of the inventory carried out, to clarify the statistical representativeness of the sampling plots distribution, to assure that the true mean value of aboveground data is not underestimate or overestimate, to clarify the source of the implemented sampling method and the forest inventory fille. The updates considered the reports produced (1), (2), (3) that best describe the information.

Also, Project Proponents are sharing the flora monitoring report (3) to confirm the procedures develop onsite during the audit process.

Documentation provided by project participant

Evidence files contemplated:

(1) Relatório descritivo do inventário florestal_04122022.pdf

(2) Descritivo da análise LIDAR e equação alométrica utilizada_ProjetoValparaiso_04122022.pdf

(3) Relatório Monitoramento Flora Valparaíso com desenho amostral da parcela 04-11-22 (1).pdf

DOE assessment	Date: 26/01/2023

The project proponents indicated that the clarifications to response this finding is in section 3.2 of the joint PD/MR, however, this section includes information on the baseline scenario and future deforestation, but there is not information on the statistics of the inventory conducted, the sampling method, the forest inventory, and the other requested information.

On the other hand, the audit team assessed the information provided in section 4.1 of the updated joint PD/MR:

1. The project proponents updated the joint PD/MR, indicating in section 4.1 "*Forest class carbon stock estimate was obtained from data from 192 plots using three data sources: •Forest inventory in the UPAs [...] •Sampling in 7 plots for the purpose of regeneration studies [...] •Sampling carried out in 2021 [...]*". It is also explained that plots were chosen taking into account forest typologies and deforestation risk. Besides, the PPs stated "*The accuracy of the results obtained was analyzed by comparing them with the plots collected for the floristic inventory and with others conducted in the study area. The inventory samples covered an area of 9% of the property*". In addition, the reports of the forest inventory and sampling developed in 2021 were attached.

   However, it is still not clear how the PP ensure that the sample does not systematically underestimate or overestimate the true mean; it is requested to clarify how it was assessed that the estimated results are the true means.

2. The project proponents attached the Descriptive report of the forest inventory ('*Relatório descritivo do inventário florestal_04122022.pdf*'). However, the materiality discrepancies during onsite visit are greater than 5%, more than allowed by the standard, this also applies to the substantial

CAR ID	43	Date: 04/11/2022

discrepancies identified on field compared to the "*Relatorio*", (e.g., in the measurement of tree height and plot size).

3. The project proponents clarified in the updated joint PD/MR, section 4.1 that plots were chosen taking into account forest typologies and deforestation risk and it is shown in figures 35, 36 and 38 how these parameters determined plots distributions. The statistical representativeness of the sampling plots distribution is not clear
4. The project proponents did not attach the digitalized Spreadsheets and the Field formats "*fichas de campo*" corrected.
5. The project proponents clarified in the updated joint PD/MR "*The plots were chosen according to the year in which the inventory was carried out, stratified according to the IPCC guidelines as a function of the diversity of forest typologies and deforestation risk*", however, the final result shows it was taking into account manly the deforestation risk and besides, the forest inventory results do not reflect a stratification.

The Project proponents are requested to clarify the source of the implemented sampling method since it is not stratified and in accordance with IPCC guidelines.

6. The project proponents indicated in the updated joint PD/MR "*Each plot has a rectangular shape and variable size according to the information source, for UPAS, the plots, had an average of 12 hectares, in samples for regeneration, the plots had 0.2 hectares and for floristic assessment samples had 0.5 hectares. Samples of 1,113.7 hectares located in conditions of higher risk of deforestation were provided and 2198 hectares of total plots*". However, it is not yet clear what was the method used to define the plot size and how its statistical quality is ensured, taking into account that the size recommended by IPCC is between 100 m^2 and 600 m^2.

IPCC good practice guidance for LULUCF, 4.3.3.4.2: *"... it is recommended to use a single plot varying between 100 m2 (for densely planted stand of 1,000 trees/ha or more) and 600 m2 (for sparsely planted stand of multi-purpose trees) in area for even-sized stands".*

7. The project proponents do not attach the requested file with its corresponding clarifications.

Project participant response	Date: 03/03/2023

1. To attest the quality and representativeness of the estimates presented, the carbon stocks estimates session was entirely redone. The new estimate is based only on the 3 UPAs (totaling 182 plots and 2,195 hectares). The UPAs are forest inventories of 100% of the trees above 15 cm DBH, selected at random for an assessment required by the Brazilian forestry legislation for timber logging. Using that sample only, we obtained statistically valid carbon stock density estimates for the Project Area. Please revisit the revised session *"Estimation of baseline carbon stock changes (Step 6.1 VM0015)"* of the joint PD/MR V3. The spreadsheets *"Tabela_Sintese_parcelas_atualizado_mais_amostragem.xlsx"* (1) containing all calculations and spreadsheets *"IF_VALPARAISO_Caderneta de Campo_UPA2_2012_RF_2022_0106.xlsx"* (2), *"IF_VALPARAISO_Caderneta de Campo_UPA3_2011_RF_2022_0106.xlsx"* (3) *and "IF_VALPARAISO_CARDERNETA DE CAMPO UPA9_2010_RF_2022_0106.xlsx"* (4) containing the data used in this new assessment were provided.

2. There was a problem with the first few measurements of the field check. The field check was performed in UPA 3 but, accidently, UPA 1's original survey form was being used in the comparisons in the beginning of the assessment. This mistake was identified and corrected still during the field check. When comparing the 71 trees checked in UPA 3 with its original survey form, the following discrepancies were found:

1. 13 trees that had not been included in the initial inventory because they had a CBH (circumference at breast height) of less than 30 at the time of the survey and;

CAR ID	43	Date: 04/11/2022

2. 8 trees that had not been included in the initial inventory and were on the edge of the plot.

Description	Quantity	%
Trees found in the field check and identified in the original survey form	50	70,4
Trees found in the check and not included in the original survey for not being higher than 30 CBH	13	18,3
Trees found in the check but not identified in the original survey form (border of the UPA)	8	11,3
Total	71	100,0

Despite these discrepancies, this is an omission error which can only bias carbon stocks estimates negatively, preserving their conservativeness.

Analyzing the 50 trees that were found in the field check and identified in the original survey form, their CBH was compared as measured in the field with their respective values in the original survey form, shown in the table below. It was found that the average difference in CBH is only of 3.6% and of 4.59% for tree height (however note that tree heights were not used in biomass calculations). These errors are withing the requirements of the VVB field verification. The average error of CBH was of 2.01cm, which corresponds to a 0.64cm average error in DBH measurements:

GPS	Scientific name	Inventory		Audit		Difference		Difference (%)	
		CBH (cm)	Height (m)	CBH (cm)	Height (m)	CBH (cm)	Height (m)	CBH	Height
003	Androanthus serratifolius	147	35	147,4	33	0,4	-2	0,27	-5,71
004	Erisma sp.	37	9	32	9	-5	0	-13,51	0,00
005	Guateria foliosa	45,2	12	45,6	9	0,4	-3	0,88	-25,00
006	Trichilia sp	56,3	14	57,8	9	1,5	-5	2,66	-35,71
007	Pouteria caimito	146	28	139	30	-7	2	-4,79	7,14
008	Maytenos sp.	57	10	57,6	9	0,6	-1	1,05	-10,00
012	Inga sp.	35,7	15	38,2	12	2,5	-3	7,00	-20,00
013	Cecropia sp.	102	18	124	20	22	2	21,57	11,11
016	?	40,5	16	42	10	1,5	-6	3,70	-37,50
018	Jacaranda copaia	79	20	85,7	26	6,7	6	8,48	30,00
019	Cecropia distachya	91	21	93,2	21	2,2	0	2,42	0,00
020	Zanthoxylum rhoifolium	38	15	38	12	0	-3	0,00	-20,00
021	Jacaranda copaia	48,5	16	53,5	19	5	3	10,31	18,75
022	Pouteria caimito	52,4	6	52,5	7	0,1	1	0,19	16,67
024	Sambucus sp.	43,4	12	42	13	-1,4	1	-3,23	8,33
025	Banara nitida	60,3	20	65	20	4,7	0	7,79	0,00
028	Tachigali sp.	53	14	53,4	14	0,4	0	0,75	0,00

CAR ID		43						Date: 04/11/2022	
030	Maquira sp.	86,2	6	87	11	0,8	5	0,93	83,33
031	Rinorea guianensis	83	14	83	14	0	0	0,00	0,00
034	Mataiba sp.	48	8	50	9	2	1	4,17	12,50
035	Maytenos sp.	34,5	7	35	7	0,5	0	1,45	0,00
036	Qualea tesmannii	64	10	67	10	3	0	4,69	0,00
037	Galipea sp.	34	6	35	5	1	-1	2,94	-16,67
038	Mimosaceae	33,5	15	35,8	12	2,3	-3	6,87	-20,00
039	Zygia	32	8	32,6	6	0,6	-2	1,88	-25,00
040	Rinerocarpus sp.	35	9	35	10	0	1	0,00	11,11
041	Pouteria caimito	65	10	65	8	0	-2	0,00	-20,00
042	Aspidosperma vargasii	49,4	8	50	9	0,6	1	1,21	12,50
043	Rinorea guianensis	111	15	113	14	2	-1	1,80	-6,67
044	Metrodorea flavida	91	15	92,6	17	1,6	2	1,76	13,33
045	Rinorea guianensis	41	10	42	9	1	-1	2,44	-10,00
046	Couratari macrosperma	148	31	150	30	2	-1	1,35	-3,23
047	Euterpe precatoria	47	9	48	16	1	7	2,13	77,78
048	Miconia sp.	45	9	49,8	12	4,8	3	10,67	33,33
050	Socratea exorrhiza	43	11	49	9	6	-2	13,95	-18,18
052	Rinorea guianensis	46,5	14	45,2	11	-1,3	-3	-2,80	-21,43
053	Conceveiba guianensis	88,5	12	89,1	11	0,6	-1	0,68	-8,33
054	Quararibea sp.	58	12	57,8	12	-0,2	0	-0,34	0,00
057	Cecropia distachya	39,2	10	42,2	13	3	3	7,65	30,00
058	Rinorea guianensis	49	9	51,4	8	2,4	-1	4,90	-11,11
059	Conceveiba guianensis	57	11	57,4	10	0,4	-1	0,70	-9,09
061	Rinorea guianensis	38,3	8	39,6	9	1,3	1	3,39	12,50
062	Rinorea guianensis	32	7	32	8	0	1	0,00	14,29
063	Rinorea guianensis	38,5	9	36,3	9	-2,2	0	-5,71	0,00
064	Sterculia sp.	58	9	79,6	10	21,6	1	37,24	11,11
066	Siparuna sarmentosa	37,2	7	39,5	9	2,3	2	6,18	28,57
067	Rinorea guianensis	34,8	8	31	8	-3,8	0	-10,92	0,00
069	Zygia sp.	49	7	51,2	11	2,2	4	4,49	57,14
070	Apeiba echinata	34	5	38,6	7	4,6	2	13,53	40,00
071	Vismia	35	5	41	7	6	2	17,14	40,00
	Average error					2,01	0,18	3,60	4,92

3. Also addressed in topic 1

4. Also addressed in topic 1 (files)

5. Also addressed in topic 1

CAR ID	43	Date: 04/11/2022

6. Also addressed in topic 1. The plot or cluster size and shape used is irrelevant as long as the sampling design is correct, and the sampling error of estimates is within the Standard's requirements.

Documentation provided by project participant

1. "Tabela_Sintese_parcelas_atualizado_mais_amostragem.xlsx";
2. "IF_VALPARAISO_Caderneta de Campo_UPA2_2012_RF_2022_0106.xlsx"
3. "IF_VALPARAISO_Caderneta de Campo_UPA3_2011_RF_2022_0106.xlsx"
4. "IF_VALPARAISO_CARDERNETA DE CAMPO UPA9_2010_RF_2022_0106.xlsx"

DOE assessment **Date:** 13/03/2023

1. The project proponents updated the joint PD/MR, which section 4.1, step 6.1 indicates that forest biomass density was estimated using data from the UPAs, three of them were randomly selected (labeled 2, 3 and 9) and it was used a total of 182 plots. The 3 UPAs selected meet the VM0015 requirements as follow:
2. The data are less than 10 years old taking into account the project start date (the oldest is from 2010 – UPA 9)
3. The data were derived from multiple measurement plots (182 plots)
4. The minimum diameter for trees were 30 cm at breast height (DBH)
5. All species above a minimum diameter were included in the inventories
6. Data were sampled from good coverage of the classes, there were selected from UPAs over the entire project area.

Besides, the PPs indicated in table 33 the biomass stock density estimates in the sampled UPAs; however, it is not clear how was obtained these values are not indicated in the calculation file attached("Tabela_Sintese_parcelas_atualizado_mais_amostragem.xlsx").

On the other hand, the project proponents indicated in table 35 the carbon stocks per hectare of initial forest class icl existing in the Project Area and Leakage Belt; however, the value of the average carbon equivalent stock per hectare for underground biomass pool for initial
forest class (Cbb_{icl}) is different from the one indicated in the calculation file (*'VM0015_planilha de calculo_jurua-v5.xlxs'*).

Value in the joint PD/MR:

Table 35. Carbon stocks per hectare of initial forest class icl existing in the Project Area and Leakage Belt (Table 15a of VM0015 Methodology).

Initial forest class *icl*						$Ctot_{icl}$	
Name	Forest						
Id_{icl}	1						
Average carbon stock/ha + 90 % IC							
Cab_{icl}		Cbb_{icl}		Cdw_{icl}			
Stock C $tCO_2e\ ha^{-1}$	90% IC $tCO_2e\ ha^{-1}$	Stock C $tCO_2e\ ha^{-1}$	90% IC $tCO_2e\ ha^{-1}$	Stock C $tCO_2e\ ha^{-1}$	90% IC $tCO_2e\ ha^{-1}$	Stock C $tCO_2e\ ha^{-1}$	90% IC $tCO_2e\ ha^{-1}$
419.7	±16.5	62.8	±2.47	57.5	±2,26	540.0	±21.21

Value in the calculation file:

CAR ID	43	Date: 04/11/2022

Table 15. Carbon stocks per hectare of initial forest classes icl existing in the project area and leakage belt

Table 15.a. Estimated values

Initial forest class *icl*							
Name: Forest							
ID_{icl} 1							
Average carbon stock per hectare + 90% CI							
Cab_{icl}		Cbb_{icl}		Cdw_{icl}		$Ctot_{icl}$	
C stock $tCO_2e\ ha^{-1}$	± 90% CI $tCO_2e\ ha^{-1}$	C stock $tCO_2e\ ha^{-1}$	± 90% CI $tCO_2e\ ha^{-1}$	C stock $tCO_2e\ ha^{-1}$	± 90% CI $tCO_2e\ ha^{-1}$	C stock $tCO_2e\ ha^{-1}$	± 90% CI $tCO_2e\ ha^{-1}$
419.7	16.5	62.8	2.0	57.5	2.3	540.0	21.2
tC ha-1	IC %	tC ha-1	IC %	tC ha-1	IC %	tC ha-1	IC %
114.5	10%	17.1	10%	15.7	10%	147.3	10%

The finding has not been response "*it is still not clear how the PP ensure that the sample does not systematically underestimate or overestimate the true mean; it is requested to clarify how it was assessed that the estimated results are the true means.*"

VM0015 v1.1 section 6.1.1 "*Collect existing carbon-stock data for these classes from local published studies and existing forest and carbon inventories. Do additional field measurements for the classes for which there is insufficient information. Follow the guidance below:*

a) Assess the existing data collected and, where appropriate, use them. It is likely that some existing data could be used to quantify the carbon stocks of one or more classes. These data could be derived from a forest inventory or perhaps from scientific studies. Analyze these data and use them if the following criteria are fulfilled:

☐ *The data are less than 10 years old;*

☐ *The data are derived from multiple measurement plots;*

☐ *All species above a minimum diameter are included in the inventories;*

☐ *The minimum diameter for trees included is 30 cm or less at breast height (DBH);*

☐ *Data are sampled from* ***good coverage of the classes*** *over which they will be extrapolated.*

Existing data that meet the above criteria shall only be applied across the classes from which they were representatively sampled and not beyond that*. See the latest version of the GOFC-GOLD sourcebook on REDD and Gillespie, et al. (1992) for methods to analyze these data*."

It is unclear how 2012, 2011, and 2010 UPAs were randomly selected from the 12 UPAs over the project area and how the sampling is representative of the four classes of typologies identified in the project area.

7. The project proponents clarified that there was a problem with the first few measurements of the field check since UPA 1's original survey form was being used in the comparisons in the beginning of the assessment> Besides the project proponents provided valid information to verify that the margin of error is now under the allowed range (under 5%).

The finding has not been response "*the materiality discrepancies during onsite visit are greater than 5%,* ***more than allowed by the standard****, this also applies to the substantial discrepancies identified on field compared to the "Relatorio", (e.g., in the measurement of tree height and plot size).*"

CAR ID	43	Date: 04/11/2022

8. The project proponents updated the joint PD/MR, which section 4.1, step 6.1 indicates that forest biomass density was estimated using data from the UPAs, three of them were randomly selected (labeled 2, 3 and 9) and it was used a total of 182 plots. Besides, it is also stated that because UPAs have different sizes, the sampled UPAS can either be considered as an onstage cluster sample or a simple random sample with an auxiliary variable (area).

   Furthermore, the PPs included the simplified formulas used to estimated aboveground and total biomass and provided the corresponding source.

   The finding has not been response "*The statistical representativeness of the sampling plots distribution is not clear".* It is not clear how the plots were chosen taking into account forest typologies and the statistical representativeness of the sampling distributions for forest typologies and deforestation risk

9. The project proponents attached the spreadsheets "*Tabela_Sintese_parcelas_atualizado_mais_amostragem.xlsx"* containing all calculations and spreadsheets "*IF_VALPARAISO_Caderneta de Campo_UPA2_2012_RF_2022_0106.xlsx"*, "*IF_VALPARAISO_Caderneta de Campo_UPA3_2011_RF_2022_0106.xlsx"* and "*IF_VALPARAISO_CARDERNETA DE CAMPO UPA9_2010_RF_2022_0106.xlsx"* containing the data used in this new assessment. However, the Field formats "*fichas de campo*" corrected were not attached.

10. The project proponents updated the joint PD/MR, clarifying in section 4.1 that forest biomass density was estimated using data from the UPAs that were randomly selected.

    The finding has not been response "*The Project proponents are requested to clarify the source of the implemented sampling method since it is not stratified and in accordance with IPCC guidelines"*.

11. The project proponents mentioned "*The plot or cluster size and shape used is irrelevant as long as the sampling design is correct, and the sampling error of estimates is within the Standard's requirements."*. However, the plot size is relevant since it is part of the sampling design, and its correct definition is a good practice.

IPCC good practice guidance for LULUCF, 4.3.3.4.2: *"… it is recommended to use a single plot varying between 100 m2 (for densely planted stand of 1,000 trees/ha or more) and 600 m2 (for sparsely planted stand of multi-purpose trees) in area for even-sized stands".*

12. The project proponents attached the required file ("*Tabela_Sintese_parcelas_atualizado_mais_amostragem.xlsx"*).

Project participant response	Date: 16/05/2023

Given the many questions raised by the VVB but specially the problems with proving the materially of the field measurements, we decided to use secondary data to estimate carbon stocks for the PA and LB. The new version uses data from two peer-reviewed articles, published in a respected international journals (Salimon et al (2011) (**1**) and Nogueira et al, (2008) (**2**)). Salimon et al (2011) estimated aboveground tree biomass using multiple plots over the State of Acre (**3**), across multiple forest types. We used the data published in their article for forest types found in the PA and LB and calculated an area-weighted average based on the relative areas of each forest type in the PA and LB (**5** and **6** - Table 15). We used expansion factors from Nogueira et al (2008) for open forests to include the biomass of small trees, dead wood and non-tree components (**5** and **6** - Table 15). Conservativeness was insured by discounting 30% of each of these factors (**5** and **6** - Table 15). Belowground biomass was calculated by applying a conservative standard value of 0,22

CAR ID	43	Date: 04/11/2022

from IPCC LULC GPG, which is the low bound of the 95% confidence interval for that factor (**5**, **6 - Table 15** and **7**).

Table 3A.1.8 of IPCC LULC GPG with stock factors

TABLE 3A.1.8
AVERAGE BELOWGROUND TO ABOVEGROUND BIOMASS RATIO (ROOT-SHOOT RATIO, R) IN NATURAL REGENERATION BY BROAD CATEGORY (tonnes dry matter/tonne dry matter)
(To be used for R in Equation 3.2.5)

	Vegetation type	Aboveground biomass (t/ha)	Mean	SD	lower range	upper range	References
Tropical/sub-tropical forest	Secondary tropical/sub-tropical forest	<125	0.42	0.22	0.14	0.83	5, 7, 13, 25, 28, 31, 48, 71
	Primary tropical/sub-tropical moist forest	NS	0.24	0.03	0.22	0.33	33, 57, 63, 67, 69
	Tropical/sub-tropical dry forest	NS	0.27	0.01	0.27	0.28	65
Conifer forest/ plantation	Conifer forest/plantation	<50	0.46	0.21	0.21	1.06	2, 8, 43, 44, 54, 61, 75
	Conifer forest/plantation	50-150	0.32	0.08	0.24	0.50	6, 36, 54, 55, 58, 61
	Conifer forest/plantation	>150	0.23	0.09	0.12	0.49	1, 6, 20, 40, 53, 61, 67, 77, 79
roadleaf forest/ ntation	Oak forest	>70	0.35	0.25	0.20	1.16	15, 60, 64, 67
	Eucalypt plantation	<50	0.45	0.15	0.29	0.81	9, 51, 59
	Eucalypt plantation	50-150	0.35	0.23	0.15	0.81	4, 9, 59, 66, 76
	Eucalypt forest/plantation	>150	0.20	0.08	0.10	0.33	4, 9, 16, 66

Nogueira et al (2008) expansion factors

aboveground tree biomass in trees in the 5–9.9 cm dbh range as a percentage of the biomass of trees ≥10 cm dbh. In open forest this percentage is expected to be lower due to the smaller number of young trees as compared to dense forest. Based on 30 ha inventoried in the southwest Amazon (Pereira et al., 2005) there are 102.5 ± 24.5 trees/ha 5–10 cm dbh, while in central Amazonia there are around 715 trees/ha (de Castilho et al., 2006). A value of 4% was used as the mean for non-dense forest to add the aboveground biomass of all trees 1–10 cm dbh (Table 1). For the biomass of palms 1.9% was added in dense forests and 8.6% for non-dense forests, see Table 1. For vines 3.1% was used for both dense and open forest, based on several studies across in the Amazon (Table 1). For adding dead aboveground biomass a value of 13.7% is used for both dense and non-dense forests (Table 1). Also, 0.21% was added for other non-tree forest components, according to Fearnside (1997, 2000). Finally, for belowground biomass a value of 25.8% was used for all forest types (Table 1). In this study corrections were not included for trees 30–31.7 cm dbh because the VEF values reported here include this range. Corrections are also not included for bark in wood density values, because linear equations were used for radial variation correction of the disc, including the bark.

Salimon et al (2011) table with estimated aboveground tree biomass from multiple plots over the State of Acre.

CAR ID	43	Date: 04/11/2022

Table 2
Above-ground live biomass (AGB) and densities of trees > 10 cm dbh for all sample plots in Acre arranged by the forest types described in Table 1. The first column indicates the plot number and data source (E = EMBRAPA and U = UFAC).

Site	LAT	LONG	Forest type	Plot size (ha)	AGB (Mg C ha^{-1})	Trees (ha^{-1})
30E	−8.265	−73.234	FAB	6	97	475
5E	−9.455	−68.062	FAB + FAP	6	89	189
15E	−9.415	−68.062	FAB + FAP	6	86	199
17U	−10.077	−67.623	FAB + FAP	10	105	346
29E	−7.543	−73.279	FAP	6	183	582
31U	−8.565	−72.883	FAP	1	154	590
39U	−10.571	−68.316	FAP	1	88	295
42U	−9.048	−72.44	FAP	1	182	509
1E	−9.442	−68.091	FAP + FAB	6	124	235
2E	−9.422	−68.068	FAP + FAB	6	132	234
3E	−9.43	−68.065	FAP + FAB	6	102	309
4E	−9.437	−68.061	FAP + FAB	6	122	206
14E	−9.43	−68.065	FAP + FAB	6	108	333
16U	−9.415	−68.072	FAP + FAB	1	118	421

Carbon stock secondary data calculation added to “Table_15” tab – “Table 15. Carbon stocks per hectare of initial forest classes icl existing in the project area and leakage belt” of the validation emission spreadsheet

Forest carbon stock was estimated using publication from Salimon et al (2011) with Nogueira et al (2008) expansion factors and IPCC default factors

Class	Average	SD	n	Standard Error	IC90%	Uncertainty	f
FAB+FAP	93,33	10,21	3	5,90	17,22	0,18	46,12%
FAP + FAB + FD	117,67	10,98	6	4,48	9,04	0,08	22,40%
FAP + FD + FAB	126,57	53,05	23	11,06	18,99	0,15	31,36%
FAP Aluvial	109,50	27,58	2	19,50	123,12	1,12	0,13%
tree AGC density (tC/ha)	109,2		34	4,52	7,65	0,07	100,00%
tree AGC density (tCO2e/ha)	400,5						
tree AGC density 90% CI (tCO2e/ha)	28,1						
BGB expantion factor : IPCC low 95% IC value	0,22						

Forest Typology	Trees < 10 cm DBH	Palms	Lianas
Dense Forest	0,065	0,019	0,031
Open Forest	0,04	0,086	0,031
30% discount	0,028	0,0602	0,0217

Table 2 Salimon et al

Type	Size (ha)	AGB (t/ha)	trees	AGBT
FAB	6	97	475	582
FAB + FAP	6	89	189	534
FAB + FAP	6	86	199	516
FAB + FAP	10	105	346	1050
FAP	6	183	582	1098
FAP	1	154	590	154

Samples in Project area and Leakage Belt

Type	Size (ha)	AGB (t/ha)	trees	AGBT
FAB + FAP	6	89	189	534
FAB + FAP	6	86	199	516
FAB + FAP	10	105	346	1050
FAP + FAB	6	124	235	744
FAP + FAB	6	132	234	792
FAP + FAB	6	102	309	612

Samples assessment

Forest type	Present in the project area and leakage belt	Average Aboveground Carbon Density (tC/ha)
FAB	no	97,00
FAB + FAP	yes	93,30
FAP	no	151,80
FAP - A	yes	109,50
FAP + FAB	yes	117,70
FAP + FD	yes	126,00

Responses:

1a) As we are using a new data source, the tables area now the correct;

1b) Plots of Salimon et al (2011) were spread over different forest types of Acre State and we used data only for classes found in the PA and LB. Thus, our results are based on data that is representative of the forest types present in the PA and LB;

2) Because we now use secondary data, that finding is no longer valid

3) Because we now use secondary data, that finding is no longer valid

4) Because we now use secondary data, that finding is no longer valid

5) We used data from by Salimon et al (2011) for all forest classes present in the PA and LB. According to the article, the data is representative of the classes for which they were collected. Furthermore, our estimate is an area-weighted by the relative areas of each forest type in the PA and LB which increases the precision of our average ABG estimate. Finally, as explained above, the expansion factors applied were conservatively discounted in 30%, as is instructed by the VM0015, to avoid overestimation.

6) Although the sample plots of Salimon et al (2011) have different sizes and range of areas that differ from the VM0015 recommendations, this doesn’t invalidate our results. Appendix 3, page 134 of the VM0015 states: “**Usually**, the size of plots is between 100 m2 for dense stands and 1000 m2 for open stands64”, but it doesn’t prohibit the choice of other plot sizes. It also states that plot size simply impacts the calculated error variance and sampling efficiency. The VM0015 also recommend equal size plots but doesn’t prohibit It, and it is also a result of classic sampling theory that sampling units of different sizes also impact the resulting

CAR ID	43	Date: 04/11/2022

variance and sampling efficiency, without significantly increasing bias7. Thus, any random sampling design of sufficient size can be considered "correct", although the recommendations in the VM0015 may yield more efficient ones.

Documentation provided by project participant

(1) Salimon et al foreco 2011
(2) Nogueira, 2008
(3) tipologias_ACRE_ZEE
(4) Brown,1997
(5) VM0015_planilha de calculo_jurua-v6
(6) vcs-monitreport-jurua-2021-v6
(7) IPCC_GPG_LULUCF_FULLEN

DOE assessment **Date:** 31/05/2023

1. Data validity

VM0015 v1.1 section 6.1.1 "*Collect existing carbon-stock data for these classes from local published studies and existing forest and carbon inventories. Do additional field measurements for the classes for which there is insufficient information. Follow the guidance below:*

a) Assess the existing data collected and, where appropriate, use them. It is likely that some existing data could be used to quantify the carbon stocks of one or more classes. These data could be derived from a forest inventory or perhaps from scientific studies. Analyze these data and use them if the following criteria are fulfilled:
☐ *The data are less than 10 years old;* […]".

b) The use of carbon stock estimates in similar ecosystems derived from local studies, literature and IPCC defaults is permitted, provided the accuracy and conservativeness of the estimates are demonstrated.

The project proponent updated the joint PD/MR, clarifying in section 4.1 that it was used "*secondary data and expansion factors to estimate the average carbon density of each carbon pool for forests in the project area and leakage belt*". It is also stated that according VM0015 (page 62, item a) average carbon density "[…] *can be obtained from data of local studies, as long as the data satisfy the following criteria: 1. The data is from up to 10 years prior to the project start date* […]"

In this sense, the reference Nogueira et al, (2008) cited by the project proponent does not meet the above criteria since it is older than 10 years. Moreover, for the root-to-shoot ratio of the IPCC (2003) the accuracy and conservatism of the estimates have not been demonstrated.

The project proponent is requested to follow accurately the methodology to be used.

2. Forest typologies

7 Lohr, Sharon L. *Sampling: Design and Analysis*. 2 edition. Boston, Mass: Cengage Learning, 2009.

CAR ID	43	Date: 04/11/2022

1. For the following paragraph: "*Four forest typologies are identified in the Project Area: Open Forest with Palm and Open Forest with Bamboo (FAP+FAB), Open Forest with Palm, Open Forest with Bamboo and Dense Forest (FAP+FAB+FD), Open Forest with Palm, Dense Forest and Open Forest with Bamboo (FAP+FD+FAB), and Open Forest with Palm-Alluvial (FAP-Alluvial) (ACRE, 2010)"* it is not clear what is the difference between (FAP+FAB+FD) and (FAP+FD+ FAB), since the composition is the same, and why FAP+FD+ FAB: "Forest typology occurring in Assis Brasil, Feijó, Marechal Thaumaturgo, Jordão e Tarauacá municipalities." Is considered as "Forest typology".

The project proponent is requested to explain the used forest typologies used, since the composition of two of them is the same and which type of forest typology is FAP+FD+ FAB: "*Forest typology occurring in Assis Brasil, Feijó, Marechal Thaumaturgo, Jordão e Tarauacá municipalities*" described in the Project description document.

2. On the other hand, the spreadsheet named '*VM0015_planilha de calculo_jurua-v6.xlsx*' states in its sheet 'Table_15': "*Forest carbon stock was estimated using publication from Salimon et al (2011) with Nogueira et al (2008) expansion factors and IPCC default factors"* and presents a table with the forest classes and the average of forest carbon stock of each one. However, it is not clear whether the forest classes shown in the aforementioned sheet are the same as those described in Table 6 of the joint PD /MR, since the percentages do not match.

The project proponent is requested to provide clear and consistent information about the removal's quantification.

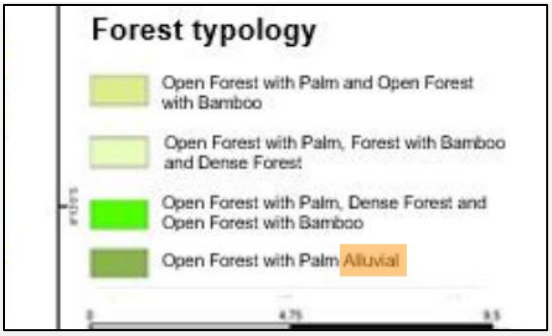
Table 6. Forest typologies and area distribution in Seringal Valparaíso (REDD+ Juruá Project), South-western Amazonia, Acre State, municipalities of Cruzeiro do Sul and Porto Walter, Brazil.

Forest typologies	%
Palm open forest and bamboo open forest	47.9
Open Forest with Palm Trees	4.9
Open Forest with Palm, Dense Forest and Open Forest with Bamboo	15.4
Open Forest with Palm, Open Forest with Bamboo and Dense Forest	28.0
Deforestation	3.8
TOTAL	**100.0**

Class	Average	SD	n	Standard Error	IC90%	Uncertainty	f
FAB+FAP	93,33	10,21	3	5,90	17,22	0,18	46,12%
FAP + FAB + FD	117,67	10,98	6	4,48	9,04	0,08	22,40%
FAP + FD + FAB	126,57	53,05	23	11,06	18,99	0,15	31,36%
FAP Aluvial	109,50	27,58	2	19,50	123,12	1,12	0,13%

3. Considering the description of the forest typologies, Figure 10 shows the map of the forest typologies of Seringal Valparaíso, but the typologies described do not coincide with those indicated in Table 6 (the *'Open forest with Palm Alluvial'* was not described in the table) and therefore it is not clear which areas are the forest typologies in the project area.

CAR ID	43	Date: 04/11/2022



4. In Table 33 of the Joint PD /MR, the project proponent indicates which forest types of the Salimon study are presented in the project area and in the leakage belt. However, some of them are not described in Section 1.13, where the project proponent indicates the forest typology of the project area (FAP – A neither included in Table 6). Furthermore, it is not clear why the typology '*Open Forest with Palm (FAP) + Open Forest with Bamboo (FAB)*' was considered twice as a different class.

Table 33. Average carbon density of each forest type in the Salimon et al (2011) study.

Forest type	Present in the project area and leakage belt	Average Aboveground Carbon Density (tC/ha)	Total sampled area (ha)	# of plots	Area of the class in the project area (PA) and leakage belt (LB)	% of the forest type in the PA and LB
FAB	no	97	6	1	0	0%
FAB + FAP	yes	93,3	22	3	16.253	46,1%
FAP	no	151,8	9	4	0	0%
FAP - A	yes	109,5	12	2	45	0,1%
FAP + FAB	yes	117,7	31	6	7.895	22,4%
FAP + FD	yes	126,6	109	24	11.051	31,4%
FD	no	164,5	2	2	0	0%
FD + FAZ	no	137	1	1	0	0%
FDS	no	43	1	1	0	0%
Total		109,2	193	44	35.244,9	100,0%

The project proponent is requested to provide clear and consistent information on the removal's quantification for all types of forest typologies identified in the project, consistent with the joint PD/MR, maps, calculations, and other information provided.

3. Significance assessment

In table 10, the project proponent states that the significance of the underground and deadwood stocks are 11.63% and 10.65%, respectively. However, the values in the spreadsheet named 'VM0015_planilha de calculo_jurua-v6.xlsx', sheet 'significance-assessment', do not correspond with those indicated in the joint PD/MR.

The project proponent is requested to provide provide consistent, verifiable and reliable information.

4. The project proponent states in section 3.3 of joint PD/MR "*The inclusion of the non-tree component carbon pool is also supported by the literature (Salimon et al 2018, Nogueira et al 2008 and IPCC), which report significant non-tree carbon stocks in this pool for open forests in the Amazon, which is the dominant forest type in Acre*"; however, it was not possible to verify the inclusion of non-tree components in the Salimon study, and it is not clear which IPCC document the proponent is citing in this assertin.

The proponent is requested to provide the cited IPCC document to support the inclusion of this pool and its consistency with the Salimon study.

5. Sampling error

CAR ID	43	Date: 04/11/2022

Regarding the estimation of average carbon stocks for each LU /LC class, the project proponent states, "From Table 2 of Salimon et al (2011), we retained only the data of sample plots for the forest types present in the project area and leakage belt (meeting criteria 4)", but it is not clear why it is explicitly stated that "retained only the data..." when there are no data other than those used.

If the sample plots used for the project calculations were selected from the complete data, the project proponent is requested to provide the sampling error of this procedure to demonstrate the maximum error acceptable for this type of project.

The proponent is requested to clarify what fraction of carbon is used in the Salimon study, as it was not possible to verify this parameter.

6. Source of data and parameters

In Table 3A.1.8 of IPCC LULC GPG with stock factors

TABLE 3A.1.8
AVERAGE BELOWGROUND TO ABOVEGROUND BIOMASS RATIO (ROOT-SHOOT RATIO, R) IN NATURAL REGENERATION BY BROAD CATEGORY (tonnes dry matter/tonne dry matter)
(To be used for R in Equation 3.2.5)

	Vegetation type	Aboveground biomass (t/ha)	Mean	SD	lower range	upper range	References
Tropical/sub-tropical forest	Secondary tropical/sub-tropical forest	<125	0.42	0.22	0.14	0.83	5, 7, 13, 25, 28, 31, 48, 71
	Primary tropical/sub-tropical moist forest	NS	0.24	0.03	0.22	0.33	33, 57, 63, 67, 69
	Tropical/sub-tropical dry forest	NS	0.27	0.01	0.27	0.28	65
Conifer forest/ plantation	Conifer forest/plantation	<50	0.46	0.21	0.21	1.06	2, 8, 43, 44, 54, 61, 75
	Conifer forest/plantation	50-150	0.32	0.08	0.24	0.50	6, 36, 54, 55, 58, 61
	Conifer forest/plantation	>150	0.23	0.09	0.12	0.49	1, 6, 20, 40, 53, 61, 67, 77, 79
roadleaf forest/ ntation	Oak forest	>70	0.35	0.25	0.20	1.16	15, 60, 64, 67
	Eucalypt plantation	<50	0.45	0.15	0.29	0.81	9, 51, 59
	Eucalypt plantation	50-150	0.35	0.23	0.15	0.81	4, 9, 59, 66, 76
	Eucalypt forest/plantation	>150	0.20	0.08	0.10	0.33	4, 9, 16, 66

It is not clear where the corresponding vegetation type "primary tropical/subtropical moist forest" is located in the project area and leakage belt. The proponent is requested to provide mapping and support on the classification of the corresponding "vegetation type" in the project area and leakage belt area.

7. Calculation of baseline activity data per forest class

The geographic supports (maps) that show for each class of forest the polygons that would be deforested each year in the absence of the AUD project activity are not evident. The project proponent is requested to attach the supports according to requirements of the step 5.1 and the zoning of the method 1 in the step 5.2 of the VM0015.

CAR ID	43	Date: 04/11/2022

8. General data

The units in Table 15 of the spreadsheet named '*VM0015_planilha de calculo_jurua-v6.xlsx*' do not correspond to those described in the Salimon study.

Table 2 Salimon et al

Type	Size (ha)	AGB (t/ha)	trees	AGBT
FAB	6	97	475	582
FAB + FAP	6	89	189	534
FAB + FAP	6	86	199	516

Samples in Project area and Leakage Belt

Type	Size (ha)	AGB (t/ha)	trees	AGBT
FAB + FAP	6	89	189	534
FAB + FAP	6	86	199	516
FAB + FAP	10	105	346	1050

The Project Proponent is requested to consistently fulfill the information throughout the report and other documents.

For the following table, the Project Proponent is requested to clarify the source of the value of 0.119 or 0.833 for the following parameter, which does not appear to be consistent with the spreadsheet or literature:

Data/Parameter	0.0833
Data Unit	dimensionless
Description	Expansion factor to include non-tree aboveground biomass (0.119) obtained from the literature, discounted by 30% for conservativeness.
Source of data	Nogueira, E.; Fearnside, P.; Nelson, B., et al., 2008. Estimativas de biomassa florestal na Amazônia Brasileira: Novas equações alométricas e ajustes da biomassa dos inventários de volume de madeira. Forest Ecology and Management, 256 (11), pp.1853-1857
Value applied	0.0833
Justification of choice of data or description of	Value found in scientific literature, developed for forests with the same characteristics as the Reference Region

Project participant response	Date: 22/06/2023

1. Data validity

Step 6 of VM0015 "Estimation of baseline carbon stock changes and non-CO2" in section 5.1 of the PD/MR_v5 was rewritten to explain how using the reference Nogueira et al (2008) (**8**) cited doesn't violate the 10 years old data (no carbon data used, only expansion factors) criteria and to demonstrate the accuracy and conservativeness of the estimates for the root-to-shoot ratio of the IPCC (2003) (**7**).

2. Forest typologies (classes)

1. As described in page 52 to 69 of the study "*Zoneamento Ecológico-Econômico do Acre, Recursos Naturais e Meio Ambiente Vol. 1*" (ACRE, 2000) **(5)**, which also refers to the project RADAMBRASIL (1977), denominations of forest typologies shall be made by placing the dominant typology first and then the most significant typology. When small patches of other types may occur due to the heterogeneity of the tropical forest, a third typology may be associated. In this way, the forest typology FAP+FD+FAB description was changed from "Forest typology occurring in Assis Brasil, Feijó, Marechal Thaumaturgo, Jordão e Tarauacá municipalities" to "Open Forest with Palms is dominant in this forest, Dense Forest is significant and patches of Open Forest with Bamboos.". To assure proper clarification, FAP+FAB+FD typology description was adjusted to "Open Forest with Palms is dominant in this forest, Open Forest with Bamboos is significant and patches of Dense Forest.".
2. We matched the forest types in the project with the forest types of Salimon et al (2011) with the closest composition. The correspondence of typologies between the studies can be

CAR ID	43	Date: 04/11/2022

checked in the Table tittled *"Average carbon density of each forest typology in the Salimon et al (2011) study"*, and in tab "Table_15" of the 'VM0015_planilha de calculo_jurua-v7.xlsx) (**9** and **10**). Also, the percentages in Tables 6 match the percentages in the spreadsheet, as show in the pictures below. Note that **Table 6 in the PD shows typology areas and percentages for the Project Area only (1** and **4)**.

Forest carbon stock was estimated using publication from Salimon et al (2011) with Nogueira et al (2008) expans				
Forest Typologies Section 2.13 - Vegetation	**Forest Typologies Salimon et al (2011)**	**Average aboveground biomass (Mg C / ha)**	**Area of forest class in PA (ha)**	**% of forest class area in PA**
FAB + FAP	FAB + FAP	93,33	12932	53,7%
FAP + FD + FAB	FAP + FD	125,96	3527	14,7%
FAB + FAB + FD	FAP + FAB	117,67	7572	31,4%
FAP Alluvial	FAP Alluvial	109,50	45	0,2%
tree AGC density (Mg C/ha)		**107,2**	**24076**	**100,00%**

Table 6. Forest typologies and area distribution in Seringal Valparaíso (REDD+ Juruá Project), South-western Amazonia, Acre State, municipalities of Cruzeiro do Sul and Porto Walter, Brazil.

Typologies		Project Area (ha)	% of Project Area
FAB + FAP	Typology named for Open Forest with Palm Trees, in which several species of palm trees can be found with patches of Open Forest with Bamboo understory	12,932	53.7%
FAP + FD + FAB	Open Forest with Palms is dominant in this forest, Dense Forest is significant and patches of Open Forest with Bamboos	3,527	14.7%
FAB + FAB + FD	Open Forest with Palms is dominant in this forest, Open Forest with Bamboos is significant and patches of Dense Forest	7,572	31.4%
FAP Alluvial	The Open Forest with Palm Trees in alluvial areas occurs along the main rivers and some of their tributaries and is distributed throughout the State.	45	0.2%
TOTAL		**24,076**	**100.0**

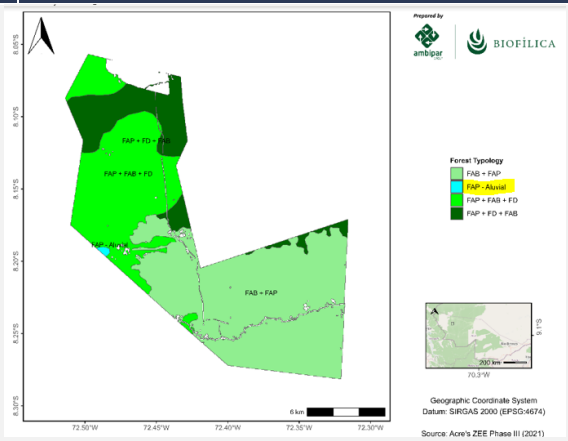
3. The description of alluvial areas as inserted in FAP-Alluvial class in Table 6 of the PD/MR_v5

Table 6. Forest typologies and area distribution in Seringal Valparaíso (REDD+ Juruá Project), South-western Amazonia, Acre State, municipalities of Cruzeiro do Sul and Porto Walter, Brazil.

Typologies		Project Area (ha)	% of Project Area
FAB + FAP	Typology named for Open Forest with Palm Trees, in which several species of palm trees can be found with patches of Open Forest with Bamboo understory	12,932	53.7%
FAP + FD + FAB	Open Forest with Palms is dominant in this forest, Dense Forest is significant and patches of Open Forest with Bamboos	3,527	14.7%
FAB + FAB + FD	Open Forest with Palms is dominant in this forest, Open Forest with Bamboos is significant and patches of Dense Forest	7,572	31.4%
FAP Alluvial	The Open Forest with Palm Trees in alluvial areas occurs along the main rivers and some of their tributaries and is distributed throughout the State.	45	0.2%
TOTAL		**24,076**	**100.0**

Figure 10 in the PD/MR_v5 was updated and contains FAP-Alluvial in the legend (**1**, **4** and **5**).

CAR ID	43	Date: 04/11/2022



4. All forest typologies are now properly described in section 1.13 of the PD/MR_v5. In Salimon et al study (**9**), FAP Alluvial was coded FAP – A, so they are the same. The description now allows to understand the difference between FAB+FAP and FAP+FAB typologies (the first is dominant and second significant). When there is a third typology associated (e.g FAP+FAB+FD), the third represent patches of this typology (patches of Dense Forest in this example). We have indicated throughout section 5.1 of the PD/MR_v5 and the emissions spreadsheets which forest typologies sampled in the Salimon et al study are present in the PA and LB and what is the correspondence between them for the calculations.

Forest class	Present in Project Area or Leakage Belt?	Sample Size (ha)	Number of trees
FAB	No	6	475
FAB + FAP	Yes	6	189
FAB + FAP	Yes	6	199
FAB + FAP	Yes	10	346
FAP	No	6	582
FAP	No	1	590
FAP	No	1	295
FAP	No	1	509
FAP	No	6	235
FAP + FAB	Yes	6	234
FAP + FAB	Yes	6	309

Forest typology in the Project Area (PA) and Leakage Belt (LB)	Forest typology in Salimon et al (2011)
FAB + FAP	FAB + FAP
FAP + FD + FAB	FAP + FD
FAB + FAB + FD	FAP + FAB
FAP Alluvial	FAP Alluvial

3. Significance assessment

1. The values in Table 10 of the PD/MR_v5 have been corrected and now are consistent with the 'VM0015_planilha de calculo_jurua-v7.xlsx' tab 'significance-assessment' (**10**).
2. Salimon et al (2011) citation was incorrect and has been removed. The adjusted sentence is "…The inclusion of the non-tree component carbon pool is also supported by the literature results (Nogueira et al, 2008)…" (**8**) in section 3.3 of the PD/MR_v5.
3. The publication IPCC GPG-LULUCF (2003) was shared with the VVB **(7)**.

4. Sampling error

CAR ID	43	Date: 04/11/2022

Step 6 of VM0015 "Estimation of baseline carbon stock changes and non-CO2" in section 5.1 of the PD/MR_v5 was rewritten to better explain the procedure used for estimation of average carbon stocks for each LU /LC class and to demonstrate that the sampling error is in under the maximum acceptable error of 10%.

It is now more clearly explained that we used the average plot carbon density from a selection of Salimon et al (2011) (**9**) study's samples (Table 2 of that article) to calculate an average carbon density for the forest class in the project area and leakage belt, improving its precision using the relative areas of each forest typology in these regions. Sampling errors for our estimates are based on variation in Salimon et al (2011) (**9**) selected sample plot carbon density values. All formulas are presented in the PD in that section 5.1 and calculations provided in the spreadsheet 'VM0015_planilha de calculo_jurua-v7.xlsx'(**10**).

Salimon et al's (2011) (**9**) article doesn't mention the source of the carbon fraction used to convert biomass to carbon. In personal communication with the authors, they informed us that a value of 0.5 was used. Once 0.5 is the same value as recommend by IPCC Tier 1 from IPCC Good Practice Guidance for LULUCF, 2003 (**7**), the topic "*Demonstration of accuracy and conservatism of the estimates"* in section 5.1 of the PD/MR_v5 now mentions that "*Salimon et al (2011) used a carbon fraction value of 0.5 to convert biomass to carbon. This value is conservative, as it is the recommended value of IPCC's Tier 1 for this parameter (IPCC Good Practice Guidance for LULUCF, 2003)".* This parameter can be found in topic 3.2 of the IPCC document.

5. Source of data and parameters

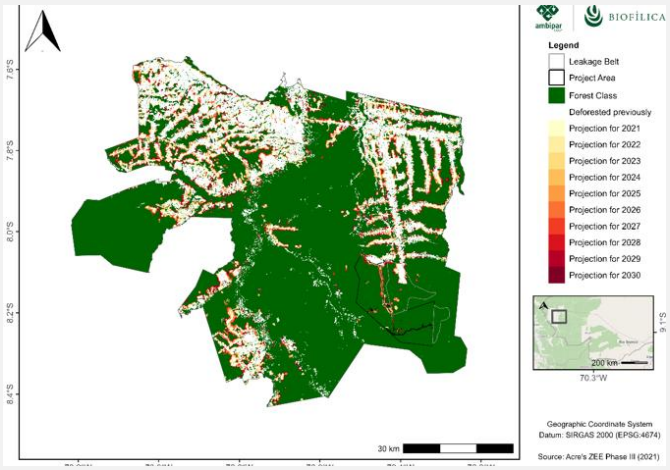
1. In section "Demonstration of accuracy and conservatism of the estimates" in the step 6 of VM0015 in section 5.1 of the PD/MR_v5, a description about the vegetation of the area is provided to assure the correspondence: "*As stated in section 1.13, The Project Area is located in regions of primary (never cleared) forest with abundant rainfall (thus called "Ombrophilous") of the Amazon Forest, which is a synonym to "tropical moist forest", with a factor 0.22 of the table. Because all forest typologies in the Project Area and Leakage Belt are subclasses of "Ombrophilous forests", this default value is appropriate"* (**5** and **6**). Since all forests in Acre are subclasses of "Ombrophilous Forests", we did not find it necessary to include a new map for that, after the above clarification.

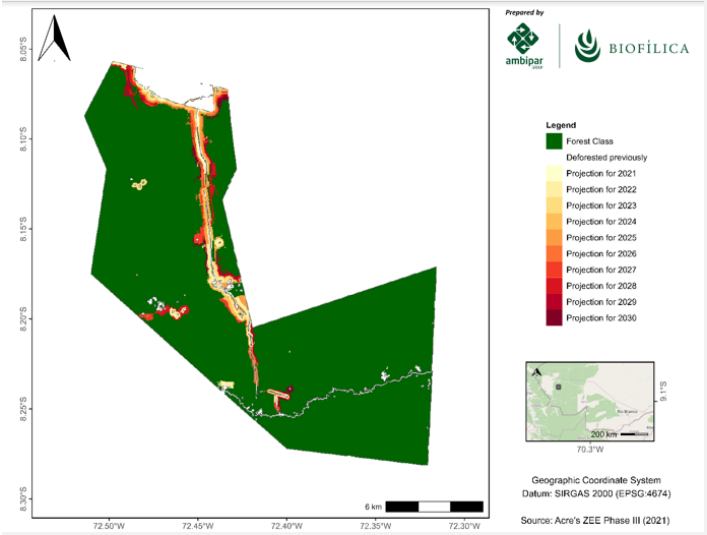
2. Calculation of baseline activity data per forest class

As explained in section 3.4, step 2 of the VM0015, the project adopts only one forest class as initial class and an anthropic vegetation as final class. Forest typologies were not considered as strata for the purpose of emission factor estimation, but only to calculate the overall average and we show in the PD/MR_v5 section 5.1, step 6 of the VM0015, as well as in the emissions spreadsheet shared with the VVB (**10**), that the carbon averages of the different forest typologies are not statistically different. This decision was cited in section 5.1, step 5 of the VM0015, to assure that all steps of the methodology are being applied properly. The geographic supports (maps) that show for the forest class the polygons that would be deforested each year in the absence of the AUD project activity were inserted in section 3.4 (step 4.2.4 of VM0015) of the PD/MR_v5 and are cited in section 5.1 (step 5.1 and 5.2 of VM0015) of the PD/MR_v5. We provide the shapefiles of the supports to the VVB (folder **3** 'suportes').

CAR ID	43	Date: 04/11/2022

We also inform (not included in the PD) that we performed an analysis to see if there were any significant differences in resulting avoided emissions estimates had we chosen to use an emission factor for each forest typology instead of a global average. Such analysis showed a median difference of only 3% between stratified and non-stratified emissions (stratified had slightly higher estimates and uncertainty), below the uncertainty of the calculated estimates (6%), in agreement with our conclusion based on the emission factors only. We therefore omitted this analysis from the PD for simplicity.





3. General Data

1. The units in Table 15 of the spreadsheet named 'VM0015_planilha de calculo_jurua-v7.xlsx' now correspond to those described in Salimon et al (2011) **(9)** (Mg C/ ha).
2. The description of the aforementioned table was revised in section 6.1 of the PD/MR_v5 and now clarifies the parameter available at validation. It describes that the value is the discounted sum of expansion factors and refers to the corresponding table:

CAR ID	43	Date: 04/11/2022

Data/Parameter	0.0833
Data Unit	dimensionless
Description	Sum of expansion factors for inclusion of non-tree aboveground biomass (lianas + palms + other non-tree components) obtained from the literature, discounted by 30% for conservativeness (Table "Application of 30% discount on the expansion factors of Open Forest class from Nogueira et al (2008) study").
Source of data	Nogueira, E., P. Fearnside, B. Nelson, R. Barbosa, e E. Keizer. "Estimates of forest biomass in the Brazilian Amazon: New allometric equations and adjustments to biomass from wood-volume inventories." *Forest Ecology and Management* 256, nº 11 (novembro de 2008): 1853–67. https://doi.org/10.1016/j.foreco.2008.07.022.
Value applied	0.0833
Justification of choice of data or description of measurement methods and procedures applied	Value found in scientific literature, developed for forests with the same characteristics as the Reference Region

Document provided by the participant

1. Folder "limites-do-projeto" containing project limits shapefiles.
2. Folder "projecao-desmatamento" containing baseline scenario rasters for all simulations.
3. Folder "projecao-suportes" containing the supports of projected deforestation increments for all simulations.
4. Folder "tipologias_ACRE_ZEE_Phase_III" containing forest typologies shapefiles presented in section 1.13, which are from State of Acre Ecological and Economical Zoning.
5. PDF file "ACRE-2000-Vol. 1_Recursos_Naturais_e_Meio_Ambiente-ZEE-tipologias-florestais" referenced in section 1.13 to clarify the association of typologies.
6. PDF file "ACRE-2021-ZEE-fase-3" of the third phase of the State of Acre Ecological and Economical Zoning
7. PDF file "IPCC_2003_GPG_LULUCF", Good Practice Guidance for Land Use, Land-Use Change and Forestry from IPCC that provides the root-to-shoot ratio for the carbon stock estimates.
8. PDF file "Nogueira, 2008", article that provides expansion factors for the carbon stock estimates.
9. PDF file "Salimon_et_al_2011", article that provides the aboveground biomass stock data for the carbon stock estimates.
10. Excel spreadsheet "VM0015_planilha de calculo_jurua-v7"
11. Excel spreadsheet "vcs-monitreport-jurua-2021-v7"

DOE assessment **Date:** 04/07/2023

1. Data Validity

The VVB evidenced that the collection of carbon stock data for forest classes meet the criteria of the methodology, including the validity of 10 years. Additionally, it was evidenced that the project proponent demonstrated that the values of factors, for which the 10-year criterion does not apply, are conservative by applying discounts and using the data below the confidence ranges.

2. Forest typologies

1. The VVB reviewed the zoning and understands the denominations of the forest typologies used according to the dominance and significance of the vegetation.
2. The VVB reviewed the settings and ensured the consistency of the typology data between the document VCS-Joint-Project-Description-Monitoring-Report-Template-v4.1_eng-V5.pdf and the spreadsheets VM0015_planilha de calculo_jurua-v7.xlsx and vcs-monitreport-jurua-2021-v7.xlsx.
3. The VVB reviewed the settings and ensured the definition of 4 forest types including FAP Alluvial.
4. The VVB reviewed the adjustments and ensured that section 1.3 of the joint PD&MR describes the vegetation that makes up the forest typologies and their correspondence with the sampling selection in the Salimon study and with the calculations.

3. Significance assessment

CAR ID	43	Date: 04/11/2022

4. The VVB reviewed the adjustments and made sure that the significance values of the carbon pools corresponded between the spreadsheet VM0015_planilha de calculo_jurua-v7.xlsx and the document VCS-Joint-Project-Description-Monitoring-Report-Template-v4.1_eng-V5.pdf.
5. The VVB reviewed the adjustments in section 3.3 of the document VCS-Joint-Project-Description-Monitoring-Report-Template-v4.1_eng-V5.pdf and confirms the literature that reports the significance of the carbon pool of the non-tree component.

6. Sampling error

Pending:

1. The VVB reviewed the calculations of the sampling error for the project estimates but there was no evidence of accuracy for the data of the FAP Alluvial typology or application of discounts.
2. The proponent did not response the requested about *clarify what fraction of carbon is used in the Salimon study*, as it was not possible to verify this parameter. The source of the value must be verifiable and meet the criteria of the methodology. Furthermore, it is not clear why a carbon fraction of 0.5 is quoted from the 2003 IPCC when the IPCC guidelines were updated in 2006 and a value of 0.47 is recorded for the carbon fraction.

7. Source of data and parameters

Pending:

The VVB reviewed the correspondence of the vegetation to select the relationship factor between aboveground and belowground biomass. However, it is not clear why IPCC 2003 is used if the guide was updated in 2006 and refined in 2019. IPCC 2006 presents aboveground and belowground biomass ratio values, which is not clear because the most recent was not used by the project proponent.

8. Calculation of baseline activity data per forest class

The VVB reviewed the geographic supports for projected deforestation in the absence of project activity.

9. General Data

The VVB reviewed the settings in the spreadsheet VM0015_planilha de calculo_jurua-v7.xlsx units and in the data and parameters available for validation in section 6.1 of the document VCS-Joint-Project-Description-Monitoring-Report-Template-v4.1_eng-V5.pdf.

Project participant response	Date: 26/07/2023

6. Sampling error

1. The typology *FAP-Alluvial* is in the last line of the table below in the *"VM0015_planilha de calculo_jurua-v8.xlsx"* spreadsheet. All statistics **had been** calculated for this typology in the same way they had been calculated for the others, including the uncertainty value (accuracy):

Forest carbon stock was estimated using publication from Salimon et al (2011) with Nogueira et al (2008) expansion factors and IPCC default factors

Forest Typologies Section 2.13 - Vegetation	Forest Typologies Salimon et al (2011)	Average aboveground biomass (Mg C / ha)	SD	n	Sampled Area (ha)	Standard Error	90% CI	Uncertainty	Area of forest class in PA (ha)	% of forest class area in PA	Area of forest class in LB (ha)	Area of forest class in PA and LB (ha)	% of forest class area in PA and LB	Lower CI Limit	Upper CI Limit
FAB + FAP	FAB + FAP	82.13	8.99	3	22	5.19	15.15	0.18	12932	53.7%	3021	15954	46.5%	66.98	97.29
FAP + FD + FAB	FAP + FD	110.84	45.73	24	109	9.34	16.00	0.14	3527	14.7%	188	3715	10.8%	94.84	126.84
FAP + FAB + FD	FAP + FAB	103.55	9.67	6	31	3.95	7.95	0.08	7572	31.4%	7022	14594	42.5%	95.59	111.50
FAP Alluvial	FAP Alluvial	96.36	24.27	2	12	17.16	108.34	1.12	45	0.2%	0	45	0.1%	0.00	204.70
tree AGC density (Mg C/ha)		94.4		35	174	3.11	5.26	0.06	24076	100.00%	10231	34308	100.00%	89.11	99.63
tree AGC density (Mg CO2e/ha)		346.0													
tree AGC density 90% CI (Mg CO2e/ha)		19.3													

Project Area (forest ha)	24076
Leakage Belt (forest ha)	10231
Total area (ha)	34307

1) (The table above is already corrected for the new carbon fraction as we'll explain next)

CAR ID	43	Date: 04/11/2022

2) There are only 2 plots for this forest typology in *Salimon et al (2011),* which resulted in a high uncertainty value for the average carbon density estimate for this forest type (112%). However, its uncertainty also had been propagated to the uncertainty of our overall average carbon density estimate. This can be verified by examination of the spreadsheet formulas. Furthermore, the impact of this class to the overall average and its uncertainty value is very minor, as it represents only 0.1% of the area of the PA and LB, as indicated in the last column of the table.

3)

2. Although not stated in their paper, *Salimon et al (2011)* used a factor of 0.5. That can be confirmed by comparison of data in tables 2 and 3 of that paper. Table 2 contains plot data in tC/ha while Table 3 contains averages in t/ha. Comparison of the averages of plot data in Table 2 and the corresponding values in Table 3 show that they differ exactly by a factor of 0.5. We included these calculations in the *"VM0015_planilha de calculo_jurua-v8.xlsx"* spreadsheet:

4)

Obtaining the Carbon Factor used by Solimon et al

Forest Typology	Average of plot ABC density values in Table 2 of Salimon et al (2011) (tC/ha)	Averages in Table 3 of Salimon et al (2011) (t/ha)	Calculated Carbon fraction
FAB + FAP	93.33	186.5	0.50
FAP + FD + FAB	125.96	251.5	0.50
FAP + FAB + FD	117.67	234.3	0.50
FAP Alluvial	109.50	218.5	0.50
		Mean	**0.50**

5) Then, we adjusted *Salimon et al (2011)* data to reflect a Carbon Fraction factor of 0.44, which is the low end of the CI presented in the aforementioned updated "2006 IPCC Guidelines for National Greenhouse Gas Inventories. Volume 4: Agriculture, Forestry and Other Land Use. Chapter 4: Forest Land.":

CAR ID	43	Date: 04/11/2022

6) TABLE 4.3
CARBON FRACTION OF ABOVEGROUND FOREST BIOMASS

Domain	Part of tree	Carbon fraction, (CF) [tonne C (tonne d.m.)$^{-1}$]	References
Default value	All	0.47	McGroddy *et al.*, 2004
Tropical and Subtropical	All	0.47 (0.44 - 0.49)	Andreae and Merlet, 2001; Chambers *et al.*, 2001; McGroddy *et al.*, 2004; Lasco and Pulhin, 2003
	wood	0.49	Feldpausch *et al.*, 2004
	wood, tree d < 10 cm	0.46	Hughes *et al.*, 2000
	wood, tree d ≥ 10 cm	0.49	Hughes *et al.*, 2000
	foliage	0.47	Feldpausch *et al.*, 2004
	foliage, tree d < 10 cm	0.43	Hughes *et al.*, 2000
	foliage, tree d ≥ 10 cm	0.46	Hughes *et al.*, 2000
Temperate and Boreal	All	0.47 (0.47 - 0.49)	Andreae and Merlet, 2001; Gayoso *et al.*, 2002; Matthews, 1993; McGroddy *et al.*, 2004
	broad-leaved	0.48 (0.46 - 0.50)	Lamlom and Savidge, 2003
	conifers	0.51 (0.47 - 0.55)	Lamlom and Savidge, 2003

This was done by multiplying all plot carbon values by 0.44/0.5 in the file "VM0015_planilha de calculo_jurua-v8.xlsx" (the new version of the calculations spreadsheet).

7) Finally, text in section "Carbon stock calculation, sampling error and uncertainty assessment" of the joint PD/MR_v6 was changed to reflect that adjustment. The values in all Tables displaying emissions results have also been changed to reflect that adjustment.

7. Source of data and parameters

8) We consulted Table 4.4 in the *2006 IPCC Guidelines,* and we found out that the belowground to aboveground biomass ratio we used (0.22) is still appropriate. It is the lower CI bound for "tropical moist deciduous forests" (0.22), according to Table 4.1 of the 2006 IPCC Guideline. This value is appropriate as the **biomass density** of all forest types is greater than **125 t/ha (55 tC/ha)**, and the forests in the PA can be considered a tropical deciduous forest, as it has ≤ 5 months of dry season (see section 1.3 in the PDD).

9) We adjusted the corresponding text in the joint PD/MR_v6 with this fact and to update the reference to the 2006 IPCC Guideline.

CAR ID	43	Date: 04/11/2022

TABLE 4.1
CLIMATE DOMAINS (FAO, 2001), CLIMATE REGIONS (CHAPTER 3), AND ECOLOGICAL ZONES (FAO, 2001)

Climate domain		Climate region	Ecological zone		
Domain	Domain criteria		Zone	Code	Zone criteria
Tropical	all months without frost; in marine areas, temperature >18°C	Tropical wet	Tropical rain forest	TAr	wet: ≤ 3 months dry, during winter
		Tropical moist	Tropical moist deciduous forest	TAwa	mainly wet: 3-5 months dry, during winter
		Tropical dry	Tropical dry forest	TAWb	mainly dry: 5-8 months dry, during winter
			Tropical shrubland	TBSh	semi-arid: evaporation > precipitation
			Tropical desert	TBWh	arid: all months dry
		Tropical montane	Tropical mountain systems	TM	altitudes approximately >1000 m, with local variations
		Warm temperate moist	Subtropical humid forest	SCf	humid: no dry season
			Subtropical dry forest	SCs	seasonally dry: winter rains, dry

TABLE 4.4
RATIO OF BELOW-GROUND BIOMASS TO ABOVE-GROUND BIOMASS (R)

Domain	Ecological zone	Above-ground biomass	R [tonne root d.m. (tonne shoot d.m.)$^{-1}$]	References
Tropical	Tropical rainforest		0.37	Fittkau and Klinge, 1973
	Tropical moist deciduous forest	above-ground biomass <125 tonnes ha^{-1}	0.20 (0.09 - 0.25)	Mokany *et al.*, 2006
		above-ground biomass >125 tonnes ha^{-1}	0.24 (0.22 - 0.33)	Mokany *et al.*, 2006
	Tropical dry forest	above-ground biomass <20 tonnes ha^{-1}	0.56 (0.28 - 0.68)	Mokany *et al.*, 2006
		above-ground biomass >20 tonnes ha^{-1}	0.28 (0.27 - 0.28)	Mokany *et al.*, 2006
	Tropical shrubland		0.40	Poupon, 1980
	Tropical mountain systems		0.27 (0.27 - 0.28)	Singh *et al.*, 1994

Documentation provided by project participant

(6.1) and (6.2) **Salimon et al foreco 2011.pdf**: Salimon et al (2011) article

(6.2) and (7) **V4_04_Ch4_Forest_Land.pdf**: IPCC GPG Chapter 4

(6.1), (6.2) and (7) **VM0015_planilha de calculo_jurua-v8.xlsx**: new version of the calculation's spreadsheet for project validation

(6.1), (6.2) and (7) **vcs-monitreport-*jurua-2021-v8***: new version of the calculation's spreadsheet for project verification

DOE assessment **Date:** 28/07/2023

The VVB evidenced a high uncertainty for the alluvial FAP typology, for which reason the proponent of the project was asked to clarify if it was a precise data or in its effect discounts should be applied. In accordance with the above, the VVB reviewed the explanation of the project proponent and verified in the spreadsheet that indeed the impact of the typology on the general uncertainty is insignificant since it represents only 0.1% of the area of PA and LB . The VVB evidenced a high uncertainty for the alluvial FAP typology, for which reason the proponent of the project was asked to clarify if it was a precise data or in its effect discounts should be applied. In accordance with the above, the VVB reviewed the explanation of the project proponent and verified

CAR ID	43	Date: 04/11/2022

in the spreadsheet that indeed the impact of the typology on the general uncertainty is insignificant since it represents only 0.1% of the area of PA and LB .

The carbon fraction data supported by the study by Salimon et al (2011) and the IPCC value were verified, and the application of the most conservative value in the calculation sheets was verified.

It was verified that the relationship between biomass above ground and below ground is justified and adequate for the biomass obtained per hectare.

Finding closed successfully

CL ID	44	Date: 04/11/2022

Description of CL

The Project proponent states in PD&MR V2.0 MR that "*Wanderlli & Fearnside (2015) is a peer-reviewed scientific literature and represents one of the most current studies for the Brazilian Amazon on carbon stocks in deforested areas, satisfying the requirements of section 4.5.6 of the VCS Standard*", however, there is not section 4.5 in VCS Standard v4.3.

However, there is not support about the deadwood representation as significant, therefore the Project proponent is requested to clarify the process of significance of the dead wood pool and to provide a support of it.

Project participant response	Date: 12/01/2023

Section 4.1 of the PD&MR V2.0 was edited to adjust the statement, because it was related to a older version of VCS Standard.

The support about deadwood representation as significant is accessible at the validation emissions spreadsheet (1) at the "significance-assessment" sheet. As stated in section 4.4 of the PD&MR, the deadwood carbon pool represents 11% of the total carbon pool. According with VM0015 v.1.1, 1.3 carbon pool that represent >10% of the total carbon stock can be included.

Documentation provided by project participant

Evidence file:

1. VM0015_planilha de calculo_jurua-v4.xlsx

DOE assessment	Date: 25/01/2023

The project proponents updated the joint PD/MR, which section 4.1 does not have inconsistences with the VCS Standard references. Besides, the PPs clarified the process of significance of the dead wood pool and attached the calculation spreadsheet as a support.

Finding closed successfully

CL ID	45	Date: 04/11/2022

Description of CL

In section 5.3 of PD&MR V2.0 +MR: states "*The choice of methodology will be assessed in order to meet the requirements of data quality and accuracy*". However, it is not clear how the Project proponent will develop this assessment about "*The monitoring of the conversion of forest areas into non-forest areas through unplanned deforestation will be developed by mapping the forest cover of the Project Area, using qualified and scientifically*"

CL ID	45	Date: 04/11/2022

The Project proponent is requested to specify how is going to develop said assessment.

Project participant response	Date: 12/01/2023

The requested changes have been made in section 5.3 of PD&MR V2.0 +MR: d) Quality control and quality assurance procedures.

Together with the accuracy assessment an evaluation with independent imaging will be performed to ensure the accuracy of the data collected. As evidenced and verified by the field audit with the employee Veriton Viana da Costa - Amazônia Agroindústria EIRELI (Technical Advisor and Local Support).

Documentation provided by project participant

DOE assessment	Date: 15/01/2023

The project proponents updated the joint PD/MR, indicating in section 5.3 "*monitoring will use qualified and scientifically recognized sources such as PRODES and DETER, which will be evaluated in order to meet the requirements of data quality and accuracy. The evaluation of these analyses and datas will be performed through the accuracy process indicated by the methodology VM0015 version 1.1 (section 2.5), which will be the same regardless the type of data used in the monitoring. In addition, an evaluation with independent imaging will be performed*."

Finding closed successfully

CAR ID	46	Date: 04/11/2022

Description of CAR

The PROJECT PROPONENTs state for mitigation of the opportunity cost: "*The project area is protected by the Brazilian Forest Law (Law nº 12.651 of 2012/05/25) as legal reserve and it must be designed to sustainable use and exploitation of forest. According to the Brazilian Forest Law 80% of rural properties located at Amazon Biome, that were not deforested until 2008, should be designed as legal reserve and only sustainable use of its forest are allowed*", however, it is not clear how that support the project to continue management practices that protect the credited carbon stocks over at least 100 years.

Project participant response	Date: 12/01/2023

According with the AFOLU Non-Permanence Risk Tool, v.4.0, section 2.2.4, item 5, protected area law can be used to ensure the continuity of project management practices as a legal agreement. Most of the project area is considered protected, as 83% is considered Legal Reserve and 7% permanent preservation area (APP), which amount to 90% of the project area. Both APP and Legal Reserves are protected by the Brazilian Forest Law (Law nº 12.651 of 2012/05/25) and can only be explored in a sustainable and controlled way, with authorization of the proper environmental bodies. As the legislation is not expected to change, it supports the project to continue management practices that protect the credited carbon stocks over at least 100 years. The remaining 10% of the project area are also expected to be maintained, as the property owner intends to explore a non-timber product (cat's claw), and has the operating license, which depends on good conservation conditions of the forest.

The Jurua-VCS-Non-Permanence-Risk-Report-Template-v4.0 was edited to include further information.

Documentation provided by project participant

DOE assessment	Date: 25/01/2023

CAR ID	46	Date: 04/11/2022

The project proponents clarified as the legislation is not expected to change, it supports the project to continue management practices that protect the credited carbon stocks over at least 100 years, however, is not clear how to ensure that the legislation in this case will be complied with, if the project seeks to stop the unplanned deforestation in the project area that has already governed by said law.
On the other hand, in order of compliance with the law:
L6.015 /1973, CAPÍTULO I - Das Atribuições, Art 167 - No Registro de Imóveis, além da matrícula, serão feitos..: 45) "*do contrato de pagamento por serviços ambientais, quando este estipular obrigações de natureza propter rem".*

L14.119 / 2021, CAPÍTULO V - DISPOSIÇÕES FINAIS, Art 22: "*As obrigações constantes de contratos de pagamento por serviços ambientais, quando se referirem à conservação ou restauração da vegetação nativa em imóveis particulares, ou mesmo à adoção ou manutenção de determinadas práticas agrícolas, agroflorestais ou agrossilvopastoris, têm natureza propter rem e devem ser cumpridas pelo adquirente do imóvel nas condições estabelecidas contratualmente*"

In accordance with Law 16015 of the year 1973, article 167, item 45 and Law 14119 of the year 2021, article 22, these restoration obligations must be specified in the property registration, for which the proponent is requested to clarify the temporality of the reforestation measure to make the legally binding valid for the 100 years reported.

Project participant response	Date: 03/03/2023

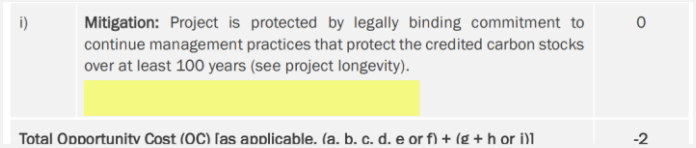
The Jurua-VCS-Non-Permanence-Risk-Report-Template-v4.0-V3 and the calculation tool were edited to exclude the mitigation section that includes management practices that protect the credited carbon stocks over at least 100 years, which resulted in a -2 opportunity cost.

Documentation provided by project participant

1. Jurua-VCS-Non-Permanence-Risk-Report-Template-v4.0-V3
2. Jurua-VCS-Risk-Report-Calculation-Tool-v4-V3

DOE assessment	Date: 13/03/2023

The project proponents updated the Non-Permanence Risk Report and the Risk Report Calculation Tool, which item (i) score of opportunity cost has been modified, now it is 0. However, in the NPR report the project proponents did not clarify that the aforementioned item is not applicable to the project and did not explain why it is not applicable, as the template required.

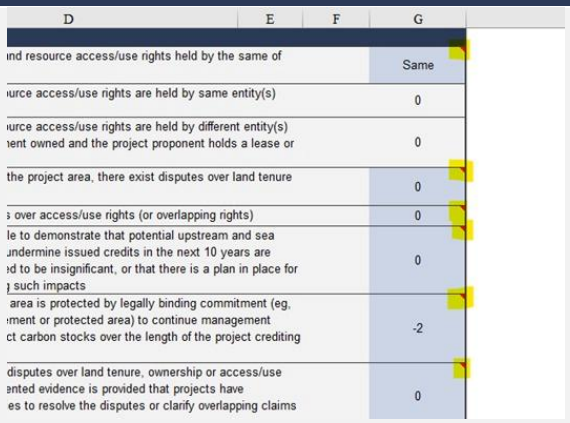


i)	**Mitigation:** Project is protected by legally binding commitment to continue management practices that protect the credited carbon stocks over at least 100 years (see project longevity).	0
Total Opportunity Cost (OC) [as applicable, (a, b, c, d, e or f) + (g + h or i)]		-2

Instructions for Completing the Non-Permanence Risk Report*...Where a section is not applicable, explain why the section is not applicable (i.e., do not delete the section from the final document and do not only write "not applicable")...*

On the other hand, the calculation tool file has some comments, the PPs are also requested to provide the final version of the documents.

CAR ID	46	Date: 04/11/2022



D	E	F	G
ınd resource access/use rights held by the same of			Same
ıurce access/use rights are held by same entity(s)			0
ıurce access/use rights are held by different entity(s) ıent owned and the project proponent holds a lease or			0
the project area, there exist disputes over land tenure			0
s over access/use rights (or overlapping rights)			0
le to demonstrate that potential upstream and sea undermine issued credits in the next 10 years are ıd to be insignificant, or that there is a plan in place for ı such impacts			0
area is protected by legally binding commitment (eg, ıment or protected area) to continue management ct carbon stocks over the length of the project crediting			-2
disputes over land tenure, ownership or access/use ented evidence is provided that projects have es to resolve the disputes or clarify overlapping claims			0

Project participant response	Date: 16/05/2023

The requested changes were made in item i) section Opportunity Cost of the Non-Permanence Risk Report_v4 to clarify why it is not applicable to the project.

The final version of the documents was shared with the VVB (**1** and **2**)

Documentation provided by project participant

(1) Jurua-VCS-Non-Permanence-Risk-Report-Template-v4

(2) Jurua-VCS-Risk-Report-Calculation-Tool-v4

DOE assessment	Date: 31/05/2023

The project proponent updated the Non-Permanence Risk Report and the Risk Report Calculation Tool, in which there are not any inconsistences related with non-applicable items and comments.

Finding closed successfully

CAR ID	47	Date: 04/11/2022

Description of CAR

AFOLU_Non-Permanence_Risk-Tool_v4.0; 1.1.3. *Project proponents shall clearly document and substantiate the risk analysis covering each risk factor applicable to the project. During the analysis, the validation/verification body shall evaluate the risk assessment undertaken by the Project proponent and assess all data, rationales, assumptions, justifications and documentation provided by the Project proponent to support the non-permanence risk rating*.

Instructions for Completing the Non-Permanence Risk Report*…Where a section is not applicable, explain why the section is not applicable (i.e., do not delete the section from the final document and do not only write "not applicable")…*

1. The Project proponent is requested to follow the instruction of each template and clearly document and substantiate the risk analysis covering each risk factor applicable to the project, to do not only write "not applicable" and provide all data, rationales, assumptions, justifications and documentation proponent to support the non-permanence risk rating.

The Project proponent determine the Project Management c) risk factor as cero, inconsistent with the response was "Not applicable". The project, in fact, has a "Management teams" *those responsible for day-to-*

CAR ID	47	Date: 04/11/2022

day project management and the implementation of project activities. Management teams may be made up of the Project proponent, the implementing partner (see the VCS Program document Program Definitions for definition of implementing partner) and/or carbon project development partners who have contractual commitments to support the activities of the project.

2. The Project proponent is requested to explain why the evaluated risk "*Project management" C)* is not a commendable risk for the project, given that it has a management team, and if the score is zero, the Project proponent is called to provide documentary evidence that it has extensive experience in all skills required to successfully perform all project activities and has at least 5 years of experience in the field.

3. The Project proponent is requested to clarify the score of Risk Factor and/or Mitigation Description b), as since it is not consistent with the justification described.

AFOLU_Non-Permanence_Risk-Tool_v4.0, 2.2.1 *Adaptive management plans are those that identify, assess and create a mitigation plan for potential risks to the project, including those identified in this document, and any other obstacles to project implementation. They include a process for monitoring progress and documenting lessons learned or corrections that may be needed, and incorporating them into project decision-making in future monitoring periods. The onus is on the Project proponent to demonstrate that such plans are in place, that such plans have considered the realm of potential risks and obstacles to the project, and that a system is in place for adapting to changing circumstances.*

4.Regarding the assessed risk "Project management" f), there is no support for the "Adaptive management plan" mentioned in the risk report. The Project proponent is requested to provide sufficient information and evidence on the existing Adaptive management plan.

Project participant response	Date: 12/01/2023

1. The changes requested, have already been made in the Jurua-VCS-Non-Permanence-Risk-Report-Template-v4.0, providing all data, rationales, assumptions, justifications and documentation proponent to support the non-permanence risk rating.

2. Jurua-VCS-Non-Permanence-Risk-Report-Template-v4.0 was adjusted according to the guidelines provided, and the necessary documents (1) to (19) were entered to prove the team's experience regarding the evaluated risk "Project management" c). The management team includes individuals with significant experience in all the skills required to successfully carry out all the project activities (i.e. any required area of experience is covered by at least one individual with at least 5 years of experience in the area)."

3. Jurua-VCS-Non-Permanence-Risk-Report-Template-v4.0 was updated to clarify the score of Risk Factor and/or Mitigation Description b). It is not applicable, because GHG credits have not previously been issued on the carbon stocks within the Project.

4. The adjustments were made in Jurua-VCS-Non-Permanence-Risk-Report-Template-v4.0 regarding the assessed risk "Project management" f). It was not considered this mitigation as the adaptive management plan is under construction.

CAR ID	47	Date: 04/11/2022

Documentation provided by project participant

Evidence files contemplated:

1. Plínio Ribeiro: linkedin-plinio-ribeiro
2. Cláudio Pádua: linkedin-claudio-padua
3. Paula Conde: linkedin-paula-conde
4. Caio Gallego: linkedin-caio-gallego
5. Rafael Costa: linkedin-rafael-costa
6. Márcio Sales: cv-marcio-sales
7. Susane Rasera: linkedin-susane-rasera
8. Luana Cordeiro: linkedin-luana-cordeiro
9. Aline Ribeiro: linkedin-aline-ribeiro
10. Shaxamary de M. C. dos Santos: linkedin-shaxahmary-de-mori
11. Amanda Rocha Fiallos: linkedin-amanda-fiallos
12. Taísi Sorrini: linkedin-taisi-sorrini
13. Nathanael Campos: linkedin-nathanael-de-campos
14. Marco Antônio: linkedin-marco-antonio
15. Franciane Almeida: linkedin-franciane-almeida
16. James Cameli: currículo-james-cameli
17. Gilberto Siqueira: curriculo-lattes-gilberto-do-carmo-lopes-siqueira
18. Scarlett Siqueira do Vale: curriculo-juridico-scarlett-siqueira-do-valle
19. Veriton Viana da Costa: cv-veriton-viana-da-costa

DOE assessment	Date: 25/01/2023

1. The project proponents updated the NPR-report, including providing all data, rationales, assumptions, justifications and documentation proponent to support the non-permanence risk rating.
2. The project proponents provided documentary evidence to support the extensive experience in all skills required to successfully perform all project activities and therefore, the score selected in "Project management" risk.
3. The project proponents updated the NPR-report, which does not have inconsistences with the score of Risk Factor and/or Mitigation Description b) and its justification (Project Management risk).
4. The project proponents updated the NPR-report, which does not have inconsistences with the assessment of the "Project management" risk, item f.

Finding closed successfully

CL ID	48	Date: 04/11/2022

Description of CL

Jurua-VCS-Non-Permanence-Risk-Report-Template-v4.0; Financial Viability; the response "Project cash flow breakeven point is less than 4 years from the current risk assessment" and "*The project has secured more than 80% of the found needed to cover the total cash out before the project reaches breakeven"* is not clear.

The Project proponent is requested to provide all data, rationales, assumptions, justifications, and documentation proponent to support the financial viability risk assessment and to include in the risk folder the file "*Adicionalidade Juruá_v18.xlsx"* n the risk folder to meet the Financial Viability compliance.

Project participant response	Date: 12/01/2023

Information regarding the project's break-even point can be found in the "Additionality Juruá_v19" (1) spreadsheet in the "Scenario II-b - REDD+ Revenues" tab and in cell "D71". Demonstrating that the time

CL ID	48	Date: 04/11/2022

required to reach the project break-even point is 2.21 years. Also, Jurua-VCS-Non-Permanence-Risk-Report-Template-v4.0; was updated to include this information.

Regarding the ability of the developer to guarantee more than 80% of the amount necessary to reach the break-even point, we are sending the file "Financial Statements 4Q21_Grupo Ambipar" (2) proving that the developer has the amounts in cash to guarantee the project expenses until it reaches the break-even point, the company's cash information is on page 32 in the "cash and cash equivalents" line. The financial data presented in the aforementioned report were audited by BDO, one of the five largest independent accounting auditors in the world. Also, Jurua-VCS-Non-Permanence-Risk-Report-Template-v4.0; was updated to include this information.

Documentation provided by project participant

Evidence files contemplated:

1. Adicionalidade Juruá_v19.xlsx
2. 4Q21 Financial Statements_Ambipar Group (1).pdf

DOE assessment	Date: 25/01/2023

The project proponents provided documentary evidence to support project cash flow breakeven point and the ability of the developer to guarantee more than 80% of the amount necessary to reach the break-even point.

The PP is requested to updated texts are not in the correct format, as per the Template Instructions VCS-Non-Permanence-Risk-Report-Template-v4.0: "*Unless applying a merited deviation, please complete all sections using Arial or Franklin Gothic Book 10.5 point, black, regular (non-italic) font*."

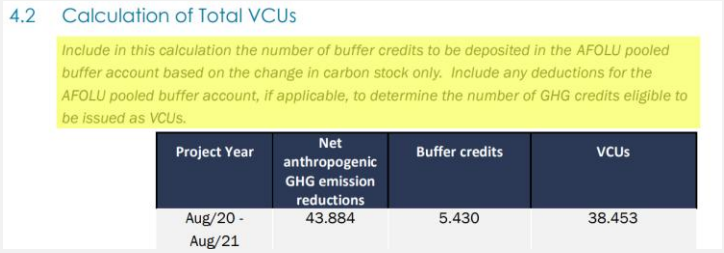
Project participant response	Date:

NA

DOE assessment	Date: 13/03/2023

The project proponents updated the Non-Permanence Risk Report. The Project Proponent did not adjust the texts of items h) and i) in the format required by the Template Instructions.

In section 4.2 of the NPR report the PPs did not delete the template instructions.



4.2 Calculation of Total VCUs

Include in this calculation the number of buffer credits to be deposited in the AFOLU pooled buffer account based on the change in carbon stock only. Include any deductions for the AFOLU pooled buffer account, if applicable, to determine the number of GHG credits eligible to be issued as VCUs.

Project Year	Net anthropogenic GHG emission reductions	Buffer credits	VCUs
Aug/20 - Aug/21	43.884	5.430	38.453

The PP is requested to updated texts are not in the correct format, as per the Template Instructions VCS-Non-Permanence-Risk-Report-Template-v4.0: "*Unless applying a merited deviation, please complete all sections using Arial or Franklin Gothic Book 10.5 point, black, regular (non-italic) font*."

VCS-Non-Permanence-Risk-Report-Template-v4.0: "*[…] Delete all instructions, including this introductory test, from the final document*."

Project participant response	Date: 16/05/2023

The text has been adjusted to the correct format (Franklin Gothic Book 10.5 point, black, regular font) in the Jurua-VCS-Non-Permanence-Risk-Report-v4 (1).

CL ID	48	Date: 04/11/2022
Documentation provided by project participant		
(1) Jurua-VCS-Non-Permanence-Risk-Report-Template-v4		
DOE assessment		**Date:** 31/05/2023
The project proponent updated the Non-Permanence Risk Report.		
Finding closed successfully		

CL ID	49	Date: 04/11/2022
Description of CL		
Jurua-VCS-Non-Permanence-Risk-Report-Template-v4.0; The affirmation "*There are no indigenous people or traditional communities in the Project Area, only around the Fazenda Seringal Valparaíso, and they do not depend directly on the area for their subsistence or for any other activity."* Does no corresponds with the Risk factor "*NPV from the most profitable alternative land use activity is expected to be between 20% more than and up to 20% less than from project activities; or where baseline activities are subsistence-driven, net positive community impacts are demonstrated"* The Project proponent is requested to provide consistent information to demonstrate the NPV the most profitable alternative land use activity compared to the project activities, or if the baseline activities are subsistence-driven, to demonstrate the net positive impact on the community.		
Project participant response		**Date:** 12/01/2023
The changes requested, have already been made in the Jurua-VCS-Non-Permanence-Risk-Report-Template-v4.0, in the section "Opportunity Cost - Risk Factor and/or Mitigation Description". They can be gauged in the financial additionality worksheet (1).		
Documentation provided by project participant		
Evidence files: 1. Adicionalidade Juruá_v19		
DOE assessment		**Date:** 25/01/2023
The project proponents attached documentary evidence to support the NPV the most profitable alternative land use activity compared to the project activities.		
Finding closed successfully		

CAR ID	50	Date: 04/11/2022
Description of CAR		
Jurua-VCS-Non-Permanence-Risk-Report-Template-v4.0; The Project proponent is requested to clarify how comply the Brazilian Forest Law (Law no 12.651 of 2012/05/25) and is an acceptable support for legally binding commitment to continue management practices that protect the credited carbon stocks over at least 100 years and to support the project longevity as evaluated internal risk but also as an external risk (Land Tenure and Resource Access/Impacts).		
Project participant response		**Date:** 12/01/2023
Project proponents considered that the AFOLU Non-Permanence Risk tool v.4.0 doesn't specify that a law used to support commitment to continue management practices that protect the credited carbon stocks over		

CAR ID	50	Date: 04/11/2022

at least 100 years and to support the project longevity can only be used as mitigation for internal or external risk, and not both (see section 2.2.4 of AFOLU Non-Permanence
Risk Tool). The Brazilian Forest Law has internal and external effects on the project longevity, as it regulates the property owner forest use and enforces the prohibition of logging in those areas, which is explicit in the "Certidão de Inteiro Teor" document (1), page 2, as it states:
"(...)cuja cópia fica arquivada em cartório, para constar que 80% da área do imóvel constante da matrícula supra fica preservada com Reserva Legal de utilização limitada, não podendo nela ser feito qualquer tipo de exploração sem autorização do IBAMA."

Translated as: (...) a copy of which is filed with a notary, to state that 80% of the property area listed above is preserved as a Legal Reserve of limited use, and no type of exploitation can be carried out in it without authorization from IBAMA.

Adding up the Legal Reserve and the permanent preservation area (APP), which corresponds to 7% of the Project Area, both protected by the Brazilian Forest Law, corresponds to 90% of the project area. The remaining 10% are also expected to be preserved, as the property owner intends, and has the operating license, to explore a non-timber product (cat's claw) that depends on good conservation conditions of the forest.

Jurua-VCS-Non-Permanence-Risk-Report-Template-v4.0 was updated to better contextualize the applicability of Brazilian Forest Law (Law no 12.651 of 2012/05/25) to address these aspects.

Documentation provided by project participant

Evidence files:

1. 14092022-certidao-inteiro-teor

DOE assessment	Date: 26/01/2023

The project proponents attached the "Certidão de Inteiro Teor" file, which has an explicit relation with Brazilian Forest Law, however, as is aborded on CAR ID 46, it is not clear how to ensure that the legislation in this case will be complied with, if the project seeks to stop the unplanned deforestation in the project area that has already governed by said law.

L6.015 /1973, CAPÍTULO I - Das Atribuições, Art 167 - No Registro de Imóveis, além da matrícula, serão feitos..: 45) *"do contrato de pagamento por serviços ambientais, quando este estipular obrigações de natureza propter rem"*.

L14.119 / 2021, CAPÍTULO V - DISPOSIÇÕES FINAIS, Art 22: "*As obrigações constantes de contratos de pagamento por serviços ambientais, quando se referirem à conservação ou restauração da vegetação nativa em imóveis particulares, ou mesmo à adoção ou manutenção de determinadas práticas agrícolas, agroflorestais ou agrossilvopastoris, têm natureza propter rem e devem ser cumpridas pelo adquirente do imóvel nas condições estabelecidas contratualmente*"

In accordance with Law 16015 of the year 1973, article 167, item 45 and Law 14119 of the year 2021, article 22, these restoration obligations must be specified in the property registration, for which the proponent

CAR ID	50	Date: 04/11/2022

is requested to clarify the temporality of the reforestation measure to make the legally binding valid for the 100 years reported and to support the project longevity.

Project participant response	Date: 03/03/2023

The Jurua-VCS-Non-Permanence-Risk-Report-Template-v4.0-V3 and the calculation tool were edited and now state that the project doesn't have a legally binding agreement that covers at least a 100 year period from the project start date.

The contract between Biofílica Ampibar Environmental Investments S.A and Amazônia Agroindústria Eireli (1) supports the project longevity as it is valid for 30 years and includes the necessity of the forest conservation during this period:

"*CLÁUSULA SÉTIMA – DO PRAZO 7.1.- O presente Contrato entrará em vigor na data de sua assinatura e permanecerá válido pelo prazo de 30 (trinta) anos ("Prazo"). As Partes, neste ato, confirmam expressamente o entendimento de que o prazo do presente Contrato considera o período necessário para a consecução de seu objeto em vista do ciclo de preservação e conservação da floresta contida na Área do Projeto*."

Documentation provided by project participant

Evidence files:

1. 2022.03.23-contrato-amazonia-agroindustria-final-v2-Clicksign

DOE assessment	Date: 13/03/2023

The project proponents updated the Non-Permanence Risk Report, which mentions in project longevity risk that " […] *The contract between Biofílica Ampibar Environmental Investments S.A and Amazônia Agroindústria Eireli, […], supports the forest protection for the project longevity"*. The PPs attached as evidence the aforementioned contract, whose clause 7.1 establishes the validity of preservation and conservation activities in the project area for 30 years (lifetime of the project).

Finding closed successfully

CL ID	51	Date: 04/11/2022

Description of CL

Jurua-VCS-Non-Permanence-Risk-Report-Template-v4.0; There in no clear why in the responses of the risk "Natural Risk – Fire" is not developed the natural fires subject and it was not justified the score assigned to this risk.

The Project proponent is requested to develop appropriately the risk and justify the assigned score.

Project participant response	Date: 12/01/2023

No occurrence of natural fire (i.e., caused by lightning) has been recorded in the project area. Scientific research suggests that the occurrence of natural fires is rare in the Amazon (SANFOR et al., 2022; ARAÚJO, 2015). Also, regarding these events, through the activities of "Monitoring deforestation using satellite imagery" and "Improved surveillance of properties", the REDD+ Project will be able to identify fire outbreaks and natural or man-made forest fires in the region.

The information has been adjusted in the Jurua-VCS-Non-Permanence-Risk-Report-Template-v4.0 document; in the "Natural Risk - Fire" section. In addition to the references cited, in the satellite-images folder (5) there

CL ID	51	Date: 04/11/2022

is a sequence of images that can prove the existence of anthropic fires. These images are part of the monitoring done recurrently on the property.

Documentation provided by project participant

Evidence files:
(1) SANFORD, R.L_2013.pdf
(2) ARAUJO, H.J.B_2015.pdf
(3) Schroeder_2009.pdf
(4) Araujo_2013.pdf
(5) imagens-satelite

DOE assessment	Date: 26/01/2023

The project proponents updated the NPR report, which includes appropriate information and justification for the assessment of the "Natural Risk - Fire" section. However, supports were not provided: SANFOR et al., 2022 and SOUZA et al., 2019.

Project participant response	Date: 03/03/2023

A correction has been made to the reference SANFOR et al., 2022, the correct citation would be SANFOR et al.,1985.
The references indicated have been included as evidence in the folders CL 51: (1) SOUZA et al., 2019 and (2) SANFOR et al.,1985 that were shared with the VVB.

Documentation provided by project participant

1. SOUZA et al., 2019
2. SANFOR et al., 1985

DOE assessment	Date: 13/03/2023

The project proponents updated the NPR report, which includes several references to justify the natural risk; all these sources of information were attached as evidence by the PPs as evidence.

Finding closed successfully

CL ID	52	Date: 04/11/2022

Description of CL

There is no clear where comes the support to assume the value In File *Adicionale jurua_ v18;* Premissas;9E.

The Project proponent is requested to provide the support from UNICAMP/Ministry of Health to corroborate the assumption about the "*Crescimento do Mercado a.a (Unha-de-gato)"*

Project participant response	Date: 12/01/2023

The support to assume the value in the file Adicionale jurua_ v18; Premisses;9E comes from the file (1) "A Fitoterapia no SUS e o Programa de Pesquisas de Plantas Medicinais da Central de Medicamentos" where it mentions a 10% growth of the sector, inserted in the financial additionality spreadsheet:
"It is also considered that sales in this sector grow 10% per year, estimated to have reached the figure of US$ 550 million in the year 2001 (KNAPP,2001)."

Documentation provided by project participant

Evidence files:

1. fitoterapia-sus.pdf

DOE assessment	Date: 26/01/2023

CL ID	52	Date: 04/11/2022
The project proponents attached evidence from the Ministry of Health of Brazil to support assumption about the "*Crescimento do Mercado a.a (Unha-de-gato)*".		
Finding closed successfully		

CAR ID	53	Date: 04/11/2022
Description of CAR		
1. The value of the buffer applied in the spreadsheet "VM0015_planilha de calculo_jurua-v3" table 36 do not corresponds with the one calculated in "vcs-monitreport-jurua-2021-v3" 2. The Project proponents state in section 6.2 of Joint PD&MR V2.0 +MR "*The calculated carbon estimate for the above and below ground stocks considering the averages of calculated values for managed forest and primary forest was 114.5 tC/ha (± 13.6 t.C/ha) for the above ground reservoir, 17.1 tC/ha (± 2.0 t.C/ha) for the below ground reservoir and 15.7 tC/ha (± 1.9 t.C/ha) for dead wood"*. However, the values presented in Table 50 do not match those in the statement. 3. Data in Table 51 *Annual areas of unplanned deforestation from baseline in the Project Area for the monitored period 2021"* of the Joint PD&MR V2.0 +MR section 6.2 do not match those in file "vcs-monitreport-jurua-2021-v3.xlsx". 4. Data in Table 52 *Annual areas of unplanned deforestation from baseline in the Leakage Belt for the monitored period 2021* of the Joint PD&MR V2.0 +MR section 6.2 do not match those in file "vcs-monitreport-jurua-2021-v3.xlsx". The Project proponent is requested to consistently clarify all data throughout the project documents.		
Project participant response		**Date:** 12/01/2023
1. The value of the buffer applied in the spreadsheet "VM0015_planilha de calculo_jurua-v3 and "vcs-monitreport-jurua-2021-v3", considered the equation of VM0015 – Methodology for Unplanned Avoided Deforestation, version 1.1, which is the Sum of baseline carbon stock changes in the project area at year t minus the sum of ex ante estimated actual carbon stock changes in the project area at year t, multiplied by the risk factor. 2. *The* state in section 6.2 of Joint PD&MR V2.0 +MR has been adjusted to match the values presented in Table 50. 3. Data in Table "*Annual areas of unplanned deforestation from baseline in the Project Area for the monitored period 2021"* of the Joint PD&MR V2.0 +MR section 6.2 has been adjusted to match the values presented in file "vcs-monitreport-jurua-2021-v3.xlsx". 4. Data in Table "*Annual areas of unplanned deforestation from baseline in the Leakage Belt for the monitored period 2021"* of the Joint PD&MR V2.0 +MR section 6.2 has been adjusted to match the values presented in file "vcs-monitreport-jurua-2021-v3.xlsx".		
Documentation provided by project participant		

DOE assessment	Date: 26/01/2023

CAR ID	53	Date: 04/11/2022

1. The project proponents clarified the value of the buffer applied in the spreadsheet "VM0015_planilha de calculo_jurua-v3 and "vcs-monitreport-jurua-2021-v3", which does not have inconsistences with the one obtained in the NPR-tool.
2. The project proponents updated the joint PD/MR, which section 6.2 does not have inconsistences with values presented in table 56.
3. The project proponents updated the joint PD/MR, which table "*Annual areas of unplanned deforestation from baseline in the Project Area for the monitored period 2021"* does not have inconsistencies with the file "vcs-monitreport-jurua-2021-v3.xlsx".
4. The project proponents updated the joint PD/MR, which table "*Annual areas of unplanned deforestation from baseline in the Leakage Belt for the monitored period 2021"* does not have inconsistencies with the file "vcs-monitreport-jurua-2021-v3.xlsx". However, the values of project year t and ABSLLK accumulative do not have consistence. PENDING

Table 58. Annual areas of unplanned deforestation from baseline in the Leakage Belt for the monitored period 2021.

Established area after deforestation by Zone within the Leak Belt		Total deforestation from baseline in the Leak Belt	
IDz>	1		
Name>	Zone 1	$ABSLLK_t$	ABSLLK
Project year *t*	ha	ha	ha
82	82	82	82
114	114	114	195

Established area after deforestation by Zone within the Leak Belt		Total deforestation from baseline in the Leak Belt	
IDz>	1		
Name>	Zone 1	$ABSLLK_t$	ABSLLK
Project year *t*	ha	ha	ha
82	82	82	82
114	114	114	195

Project participant response	Date: 03/03/2023

As requested in the table " *Annual areas of unplanned deforestation from baseline in the Leakage Belt for the monitored period 2021*", corrections were made in section 6.2 of the PD&MR V3.0.

Documentation provided by project participant

DOE assessment	Date: 13/03/2022

The project proponents updated the joint PD/MR, in which table called "Annual areas of unplanned deforestation from baseline in the Leakage Belt for the monitored period (first and second project years)" does not have inconsistences with the project year values. However, the accumulative column has an error since 82 + 114 is 196, therefore, the PPs are requested to provide consistent values since the accumulated value is still inconsistent.

CAR ID	53	Date: 04/11/2022

Table 54. Annual areas of unplanned deforestation from baseline in the Leakage Belt for the monitored period (first and second project years).

Established area after deforestation by Zone within the Leak Belt		Total deforestation from baseline in the Leak Belt	
IDz>	1		
Name>	Zone 1	$ABSLLK_t$	ABSLLK
Project year *t*	ha	ha	ha
Aug/20 – Aug/21	82	82	82
Aug/21 – Aug22	114	114	195

Project participant response — **Date:** 16/05/2023

The values in the table " *Annual areas of unplanned deforestation from baseline in the Leakage Belt for the monitored period 2021*" were revised and are now consistent in section 6.2 of the PD&MR-v4.

Documentation provided by project participant

DOE assessment — **Date:** 31/05/2023

The project proponent updated the joint PD/MR, which table called "*Annual areas of unplanned deforestation from baseline in the Leakage Belt for the monitored period (first and second project years)*" does not have inconsistences with its accumulated value.

Finding closed successfully

CAR ID	54	Date: 04/11/2022

Description of CAR

The Project proponents submitted a letter to Verra regarding the situation of the other VCS project that overlapped with part of the project area ('letter-verra-v2-en.pdf'). However, they did not attach Verra's response to this letter.

The Project proponent is requested to attach Verra's response and clarify the situation regarding the risk of double counting.

Project participant response — **Date:** 12/01/2023

The Project proponents attached Verra's response (1) to this letter. Regarding the risk of double counting, this will be resolved once the other project deletes the 1,514 ha overlap from their project area, as states in Verra's response, preventing them from rechecking credits for that area which is currently overlapped.

Documentation provided by project participant

Evidence files:

1. reply-email-Verra.pdf

DOE assessment — **Date:** 26/01/2023

The project proponents have attached the Verra's response to the aforementioned letter in an attempt to clarify the risk of double counting once the Valparaiso project removes the overlap area. However, the overlap area issue has not yet been resolved.

Project participant response — **Date:** 03/03/2023

A Verra's response (1) to this letter as shared with the VVB. According to Verra, Carbon Co LLC will exclude the overlap from the Valparaiso (1113) project. This includes the previous VCUs that were issued for this area.

CAR ID	54	Date: 04/11/2022
Therefore, from Verra's side, the overlap is not an obstacle to the validation of the Jurua REDD+ project by the VVB.		
Documentation provided by project participant		
1. reply-email-Verra.final.pdf		
DOE assessment		**Date:** 13/03/2023
The project proponents attached the final response from Verra, which indicates the overlap is not an obstacle to the validation of the Jurua REDD+ project since the Valparaiso project will exclude the overlap.		
Finding closed successfully		

APPENDIX 3: SAMPLING

Sampling_BSAbs	
Population (# Plots)	192
T-student ©	1,653
Sampling	20
Sampling statistician	
Average	35,77
standard deviation	7,96
Coefficient of variation (%)	22%
Standard error	0,57
Absolute sampling error	0,95
Confidence limit Upper	36,72
Confidence limit Lower	34,82
SAMPLING ERROR (%)	3%

Sampling_BST	
Population (# Plots)	192
T-student ©	1,653
Sampling	20
Sampling statistician	
Average	275,22
standard deviation	61,06
Coefficient of variation (%)	22%
Standard error	4,41
Absolute sampling error	7,28
Confidence limit Upper	282,50
Confidence limit Lower	267,94
SAMPLING ERROR (%)	3%