UÁKIRY REDD+ AUDD GROUPED PROJECT

Document Prepared

by

BrCarbon Serviços Ambientais LTDA

Project Title	Uákiry REDD+ AUDD Grouped Project
Version	DRAFT Version
Date of Issue	*14-August-2023*
Prepared By	**BRCarbon Serviços Ambientais LTDA**
Contact	BrCarbon Serviços Ambientais LTDA | Mr. Bruno Melo da Matta - e-mail bruno.matta@brcarbon.com.br - Av. Cezira Giovanoni Moretti 655, sala 7, AgTech Garage Reserva Jequitibá - Piracicaba, SP - +55 (19) 3424-3583

CONTENTS

1 PROJECT DETAILS

1.1 Summary Description of the Project

The **Uákiry REDD+ Grouped Project** (hereafter called GPD), aims to avoid unplanned deforestation in private properties at Acre State. Recent data available in PrevisIA platform[1], accomplished by the Instituto do Homem e Meio Ambiente da Amazônia (Imazon) reveals that state has the fourth highest index of area under risk of deforestation in 2023[2] in the Legal Amazon, with 1,269.34 km², behind only of the three states with the largest territory, Pará, Amazonas and Mato Grosso.

The area of deforestation involving three states in the north of Brazil has increased significantly in recent years, where before it was well preserved, the region known by the acronym AMACRO (where the states of Amazonas, Acre and Rondônia are located) has literally become no man's land. The lack of control caused cases of land grabbing and other crimes linked to the expansion of the agricultural frontier to explode. The region came to be known as the new Deforestation Frontier.

Acre's state covers approximately 164.000 km², which accounts for about 1,92% of the Brazilian territory, and about 4,26% of its northern region. Its territory borders the states of Amazonas and Rondônia, to the east. It also borders two countries: Peru, across the western portion, and Bolivia, to the southeast. At last, two years the deforestation rates were greater than 800 km² per year, according to PRODES data[3].

Initially the first four project activity instance is composed by four properties with 84,220 ha of forest cover, located in the *Iaco* River margins, one of Purus River affluents, in the Amazon basin. The occupation of the region mainly occurred between 1860 to 1915 at the first rubber cycle, through the expeditions guided by Manoel Urbano and João Gabriel de Melo, when people from northeast of Brazil migrated to there. The rubber crisis caused the loss of the centrality of cutting the syringe in the daily life of the placements. In the article "*The contingent power of the Iaco River in the Federal Territory of Acre*", Vital (2019) cites that in 1915 occurred a historical flood that deepen the rubber crisis in the region, with the abandon of rubbers tappers trails.

---

[1] *https://previsia.org.br/*

[2] https://g1.globo.com/ac/acre/noticia/2023/03/22/amazonia-legal-desmatamento-no-acre-mais-que-dobra-em-fevereiro-e-atinge-sete-quilometros-quadrados.ghtml

[3] http://terrabrasilis.dpi.inpe.br/app/dashboard/deforestation/biomes/legal_amazon/rates

Through these projects, BrCarbon (hereafter known as BRC) and Yaco2 Gestão e Comércio de Carbono (Yaco2) seeks to promote integral forest conservation actions generating co-benefits not only for the climate (reduction and removal of emissions), but also communities and local biodiversity. At the validation, the climate benefits are directed related with the emission reduction of 215,021 tCO_2e in average per year.

By joining BRC forest program, landowners can access funds from the carbon voluntary market to develop conservation and monitoring efforts in their forests. A partnership between BRC and landowners will result in the legal protection of forests, forest monitoring using satellite images, biodiversity inventory (including fauna e flora species), and forest biomass inventory in a broad scale, using an upscaling approach based on field collection, drone-borne and satellite sensors such as LiDAR (light detection and ranging). In addition, we will involve property surveillance, wildfire monitoring, fire prevention and fighting, threatened species protection and long-term social activities with local communities.

The project's name was inspired in the historic versions of the Acre's name, that arose even before became a state. The first version is that would be a derivation of *Uwa'kürü, Uákiry, Aquiry*, which means "river of alligators" in the native language of the *Apurinã* Indians, the original inhabitants of the region.

1.2 Sectoral Scope and Project Type

The Uákiry REDD+ AUDD GPD is part of the Agriculture, Forestry and Other Land Use (AFOLU) sectoral scope 14 and consists in a Reduced Emissions from Deforestation and Degradation (REDD) project, under the category of Avoiding Unplanned Deforestation and/or Degradation (AUDD). This document refers to the grouped project description with initial 4 project activity instances (PAIs #1-4).

1.3 Project Eligibility

This project is designed as a Grouped Project, under a set of eligibility criteria for the new PAIs inclusion, that are described below. The project scope expansion is allowed by new project activity instances (PAIs) inclusion after its validation, which occurs on each verification event.

According to the VCS v4.4, grouped projects shall meet the following:

"3.6.10: Grouped projects shall specify one or more clearly defined geographic areas within which project activity instances may be developed.".

The Grouped Project assumes only one wide geographic area called the Acre region, that comprehends all the state of Acre, located in the Amazon "Deforestation Arc", as shown in section 1.1

– Summary Description of the Project. The areas of the properties initially included in this Project Description amount to 84,220 hectares and cover 2 municipalities: Sena Madureira e Rio Branco.

The project activity instances might encompass any private properties legally constituted, with forest cover. The Grouped Project considers all forest types located in the project zone.

“3.6.11: Determination of baseline scenario and demonstration of additionality are based upon the initial project activity instances. The initial project activity instances are those that are included in the project description at validation and shall include all project activity instances currently implemented on the issue date of the project description”.

Regarding additionality and baseline (that will be provided by VERRA as activity data), assumes that all private properties in the grouped project geographic area (project zone) are subject to the same legal framework and similar deforestation agents and drivers, as those identified for the project’s initial 4 PAIs. All landowners within the Legal Amazon have the right to convert up to 20% of the forest area in their private properties for economic purposes. In the other hand, the Legal Reserve (RL), that represents 80% of the property, and the permanent preservation area (river banksides, slopes higher than 45°, etc) are protected by law against deforestation. Notwithstanding, the business as usual in the private properties encompassed by the Grouped Project zone, does not comply with the law, where the common practices is forest logging and suppression, without any legal permit, followed by livestock, and soybean plantation. However, specific assessment on baseline scenario and additionality will be done for each new activity instance included in the project scope after the grouped project registration, to revalidate the initial assumptions.

“3.6.12: As with non-grouped projects, grouped projects may incorporate multiple project activities. Where a grouped project includes multiple project activities, the project description shall designate which project activities may occur in each geographic area”.

The only project activity considered in the project design for all project activity instances is Avoiding Unplanned Deforestation and/or Degradation (AUDD). To avoid unplanned deforestation and/or degradation, BRC will sign long-term conservation agreements with landowners. Complementary activities related to the reduction of unplanned deforestation, leakage mitigation, social and biodiversity related activities and monitoring, must also be undertaken.

“3.6.13: The baseline scenario for a project activity shall be determined for each designated geographic area, in accordance with the methodology applied to the project”.

Only one wide geographic area is considered for this grouped project, once the baseline scenario for the avoided unplanned deforestation activity must be defined by Verra and allocated to the project areas, according to the new methodology.

"3.6.14: The additionality of the initial project activity instances shall be demonstrated for each designated geographic area, in accordance with the methodology applied to the project".

Only one geographic area is considered for this grouped project, as presented in section 1.12 – Project Location. Thus, the additionality approach for avoided unplanned deforestation activity is the same for all private properties encompassed by the grouped project once they are subjected to similar drivers and agents of illegal deforestation.

"3.6.15: Where factors relevant to the determination of the baseline scenario or demonstration of additionality require assessment across a given area, the area shall be, at a minimum, the grouped project geographic area. Examples of such factors include, inter alia, common practice; laws, statutes, regulatory frameworks, or policies relevant to demonstration of regulatory surplus; determination of regional grid emission factors; and historical deforestation and degradation rates".

The relevant factors for the baseline scenario determination, that will be defined and provided by VERRA, and demonstration of additionality of a given project activity instance are the same for the entire geographic area. Any legally constituted private properties within the project zone adopted for this grouped project, with forest remnants of Legal Reserve and Permanent Preservation Area is eligible for this grouped project.

"3.6.9: Where a capacity limit applies to a project activity included in the project, no project activity instance shall exceed such limit. Further, no single cluster of project activity instances shall exceed the capacity limit".

Not applicable. There is no capacity limit applicable to the project activity type (AUDD) considered in the grouped project, since the BRC team will be present in the Project Zone and can add as many human resources as necessary to implement the project activities.

1.4 Project Design

When completing a draft project description for the purpose of listing on the pipeline as under development, complete the following information;

☐ The project includes a single location or installation only

☐ The project includes multiple locations or project activity instances, but is not being developed as a grouped project

☒ The project is a grouped project

Eligibility Criteria

"3.6.16: Grouped projects shall include one or more sets of eligibility criteria for the inclusion of new project activity instances. At least one set of eligibility criteria for the inclusion of new project activity instances shall be provided for each combination of project activity and geographic area specified in the project description. A set of eligibility criteria shall ensure that new project activity instances":

Meet the applicability conditions set out in the methodology applied to the project: All PAIs under this Grouped Project must meet the applicability conditions set out in the new Methodology for reducing emissions from deforestation and forest degradation, v0.1. Regarding the four initial project activity instances, the applicability conditions are met as demonstrated:

- Where the land use transition in the baseline scenario is forest land to non-forest land, meeting the definition of unplanned deforestation.
- Where the project involves activities aimed at avoiding UDef.
- Where agents of deforestation in the baseline scenario clear the land for tree harvesting, settlements, roads, settlements, unsanctioned expansion of roads and other infrastructure, agricultural crop production, ranching, or aquaculture.

Use the technologies or measures specified in the project description: sections 3, 4 and 5 will define the technologies and measures available on the final version of the Project Description. The GHG emissions reductions will be caused by the signing of long-term forest conservation agreements with landowners in all PAIs. Complementary activities related to the reduction of unplanned deforestation, leakage mitigation, social and biodiversity related activities and monitoring activities are also described in the final Project Description and report.

Apply the technologies or measures in the same manner as specified in the project description: The current and future PAIs must apply the same technologies and measures specified in this document. Small adjustments area allowed to accommodate PAI specificities. Any adjustment will be reported, described, and must not overestimate the project climate benefits.

Are subject to the baseline scenario determined in the project description for the specified project activity and geographic area: The grouped project assumes the Project Zone for baseline projection as the unique geographic area, taking into consideration that all private properties within this biome are subject to the same legal framework. New PAIs must follow the same baseline approach.

Have characteristics with respect to additionality that are consistent with the initial instances for the specified project activity and geographic area: Considering that the grouped project refers to

avoidance unplanned deforestation and/or degradation (AUDD) in areas where the forest suppression is not permitted by law, all the subsequent project activity instances submitted under this GPD, must follow the same additionality approach for PAIs #1-4. It means that the plausible baseline scenarios will not differ from the four scenarios identified in the additionality analysis, as follow:

1. Forest cover maintenance in the legal reserve (80% of the property), i.e.: through conservation activities resulting from incentives other than the REDD project.
2. Areas where the land use conversion is allowed by law (that have native vegetation exceeding the Legal Reserve) but is not legally authorized and documented. i.e.: pasture (cattle raising) and agriculture.
3. Illegal deforestation in the property (deforestation without permits), for pasture (cattle raising) and agriculture purposes or simply for real estate speculation.

In the specific case of the first four instances of this grouped project, that are restricted to the legal reserve of the properties[4], only scenario 1 is in accordance with current laws and regulations. Notwithstanding, in some private instances, the entire property area can be accounted for the AUDD, including the area subject to legal suppression (20%) that is not legally authorized and documented, in this situation scenario 1 and 2 will be in accordance with applicable laws and regulations.

Scalability Limits for the Grouped Projects

According to section 3.6.9 of the VCS V4.4:

"Where a capacity limit applies to a project activity included in the project, no project activity instance shall exceed such limit. Further, no single cluster of project activity instances shall exceed the capacity limit", BRC technical team didn't identified capacity limit applicable to the project.

There is no capacity limit applicable to the project activity type (AUDD) considered in the grouped project, since the BRC team will be permanently present on Project Zone and can add as many human resources as necessary to meet the project activity demands. It is worth noting that BRC will establish a local office at Sena Madureira municipality, that can improve local engagement, create jobs, and provide faster responses to the project needs.

Risk Mitigation Approach for Grouped Projects

Not applicable. The project cannot be expanded beyond its scalability limit. The climate, community, and biodiversity benefits risk mitigation measures identified in this document are applicable to all current and future PAIs.

[4] The area subject to legal suppression is already registered in another REDD/APD project (ID 2551).

1.5 Project Proponent

Organization name	BRCARBON Serviços Ambientais LTDA
Contact person	Mr. Bruno Melo de Matta
Title	CEO
Address	Av. Cezira Giovanoni Moretti 655, sala7, AgTech Garage, Reserva Jequitibá – Piracicaba, São Paulo
Telephone	+55 19 3424 3583
Email	bruno.matta@brcarbon.com.br

Organization name	Yaco2 Gestão e Comércio de Carbono LTDA
Contact person	Rogério Oliveira
Title	Technical Director
Address	Av. Marechal Rondon, Número 7784, Lote 01, Quadra 65, Setor 03, Sala 6, Vilhena – RO. CEP 76987-832
Telephone	+55 (69) 9969 1707
Email	rogerio@yaco2.net

1.6 Other Entities Involved in the Project

Not applicable.

1.7 Ownership

According to the VCS definitions, Uákiry REDD+ AUDD Grouped Project ownership is defined by item 6, section 3.7.1 of the VCS standard v.4.4, as follows:

"An enforceable and irrevocable agreement with the holder of the statutory, property or contractual right in the land, vegetation or conservational or management process that generates GHG emission reductions or removals which vests project ownership in the project proponent."

As shown before, the project ownership is held by the land ownership documents and by the agreements between BRC, YACO2 and landowners, as presented on section 1.5 – Project Proponent and 1.6 – Other Entities Involved in the Project.

1.8 Project Start Date

The AUD grouped project agreement with the landowners was signed on **May 25th, 2023**, and includes PAIs #1- 4, on **August 2nd, 2021.** Even the first contract signed with the landowner has the scope to elaborate a REDD project to avoid planned deforestation, the agreement provided and started the forest conservation actions also in the legal reserve area of the properties.

So, these milestones represent the start of the protection plan and the date on which the activities that led to the generation of GHG emission reductions were implemented.

1.9 Project Crediting Period

The GPD project has different timeframes as it is described below:

Project start date: The GPD started on 02nd August 2021 with communities living the first long-term conservation agreement with PAIs #1-4 landowner. This milestone represents the beginning of the protection plan and the date on which activities that led to the generation of GHG emission reductions were implemented.

Project Crediting Period (GHG accounting period): The GPD will generate GHG emission reductions eligible for issuance as VCUs for 100 years. 02nd august 2021 and ends on 01st August 2121. This long-term approach is considered due to the group project, that allows the inclusion of new PAIs in the project scope over the project lifetime. PAIs #1-4 will generate GHG emission reductions eligible for issuance as VCUs for 30 years (from 02nd august 2021 until 01st August 2051).

Project Lifetime: A legal agreement (APPENDIX_I_-_LEGAL_AGREEMENTS) was signed with the landowner to continue the management practices that will lead to the project area conservation for at least 30 years, thus, the project activity instances lifetime is 30 years. So, the reduction in the GHG emissions, biodiversity and community well-being resulted by the project activities will be monitored along the PAI longevity (30yrs).

Future PAIs will have different crediting period starting dates, based on the date of the agreement signature between brCarbon and landowners and/or implementation of a protection/conservation plan.

1.10 Project Scale and Estimated GHG Emission Reductions or Removals

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

☐ <20,000 tCO_2e/year

☐ 20,000 – 100,000 tCO_2e/year

☒ 100,001 – 1,000,000 tCO_2e/year

☐ >1,000,000 tCO_2e/year

1.11 Description of the Project Activity

BRC defines the project activities jointly with the communities, based on the results of the socio-economic diagnosis, public meetings with communities and interviews with other stakeholders. The activities described below represent a range of possible activities, and any changes that may be necessary will be presented and approved by their respective beneficiaries.

The activities' relevance to the project objectives depends on the characteristics of each PAI. The outputs described represent verifiable targets for the first three years of the project, considering their current scope and may vary over time, with the inclusion of new PAIs.

The Outputs (short term) describe a period from 1 to 5 years. The Outcomes (medium term) describe the next 15 years of the project activities. The Impacts period (long term) describes the last 15 years until the end of the project instance lifetime (30 years). The Table 1, presents the activities description, Outputs, Outcomes, Impacts, and the relevance to project's objectives.

Table 1 - Theory of change

Activity description	Expected climate, community, and/or biodiversity			Relevance to project's objectives
	Outputs (short term)	Outcomes (medium term)	Impacts (long term)	
Training and partnerships to strengthen social organization	Training sessions on social organization and associativism	Encouragement and support for creating and development of an association to organize work and represent the community.	Livelihood and employment 	Very high. Organization in associations is essential for generating income and strengthening the identity of community groups.

Development of the Brazil nut value chain	Training sessions on good practices for the sustainable extractivism of Brazil nuts Articulations with 3 potential partners for value chain development	Structuring the Brazil nut value chain, contributing to forest conservation through sustainable extractivism and generate income to the community	Livelihood and employment  	Very high. Sociobiodiversity value chains are essential for forest conservation and income generation in the community. The Brazil nut value chain is one of the most promising products from biodiversity, in terms of potential for income generation.
Formation of fire brigades and provision of appropriate materials	Annual training/exercises executed. Forest fire prevention training. Firefighting equipment sets delivered.	Fostering good fire management and firefighting practices to communities to prevent the spread of wildfires in the project area.	Wildfire GHG Emission Reduction 	Very high. Fire is traditionally used in the Amazon as a management tool to clear lands of forests for pastures and agriculture. The creation of fire brigades would make a fundamental contribution to wildfires impacts mitigation. This activity, however, will be treated on a voluntary basis.

Carbon pedagogy lectures	Lectures about environment, forests, environmental services, biodiversity, environmental conservation, climate change, carbon cycle, environmental legislation, labor legislation, among others	Improving the quality of environmental education and including children and young people in debates on themes related to the project, generating appropriation, and belonging	Education and well-being 	High. Involving and engaging children and young people through educational processes is essential to ensure the effectiveness of the project, as it helps them to understand the project's themes and incorporate its importance for forest conservation for the communities' livelihoods.
Volunteer environmental monitor program	Training sessions on deforestation pressures and threats to territories	Monitoring to reduce deforestation pressures and threats to territories	Wildfire and deforestation GHG Emission Reduction Biodiversity loss reduction  	High. This program is very important to contribute to the reduction of deforestation, as the community members become monitors of threats and pressures in the territories.

Workshops on good pasture management practices to increase productivity	Workshops on good pasture management practices	Increase pasture productivity to reduce the necessity for deforestation of new areas	Wildfire GHG Emission Reduction  	High. Most people in the community have livestock as their main productive activity and source of income. In the Amazon, it is a common practice to open new areas in order to increase the livestock production and income. In this way, increasing pasture productivity contributes to reducing deforestation pressure.
Sensitization and awareness campaigns for disease prevention	Awareness campaigns about: -Tropical diseases - Sexual and reproductive health - Diseases related to the consumption of unsafe water and lack of basic sanitation	Prevention of tropical and other diseases. Reduction of women's health problems. Awareness of access to drinking water and basic sanitation	Health and education  	Very high. Many common diseases in the region happen due to lack of awareness and knowledge about forms of prevention. Awareness campaigns can contribute to improving the community health by reducing cases of tropical and sexual diseases.

Creation of a women's group for dialogues	Dialogue groups on topics related to female empowerment (women's rights, domestic violence, social division of labor, women's entrepreneurship)	Increased well-being and empowerment of women	Education, well-being, and livelihood 	High. Many spaces in society are predominantly occupied by men. This becomes even more common in rural communities, depending on their culture. Encouraging women's self-organized spaces is essential to increasing women's participation in project activities, focused in their financial autonomy and empowerment.
Biodiversity conservation	02 fauna (mammals, birds, reptiles, and amphibians) monitoring performed. Elaboration of 2 monitoring reports focusing on endemic and game species.	Maintenance of periodic species monitoring campaigns	Promotion of species conservation through monitoring, maintenance of forest habitats and avoidance of hunt pressure 	Very high. The project area is in HCV area, with the occurrence of rare, threatened, and endemic species and connected to a landscape with ecosystem functions of global relevance.

Forest surveillance: deforestation, forest degradation and burn scars monitoring. Leakage management	**84,220.09 ha** of forests annually monitored (PAI#1 to 4)	Maintenance of **84,220.09 ha** of forest cover. Reduction of GHG emission due to deforestation.	GHG emission reductions and biodiversity conservation 	Very high. The average GHG emission caused by land use change in Brazil is approximately 1 Gt CO2e, representing half of the national emission profile. Deforestation in the Amazon biome in Brazil surpassed 11,000 km2 in 2021 and shows an increasing trend.

All these activities from short to long term, as already mentioned, will be agreed with the population affected and BRC is aware that they can change during the project period for many reasons as cultural, political, social, or other reasons. Furthermore, as a grouped project, there might be different demands from different groups or communities. In this sense, the PP needs to be flexible to adjust previous accords or demands to build a robust relationship with the communitarians. Anyway, some activities will remain in a long term due to the needs to protect the forest and other project targets, among them can be listed the structuration of fire brigades and other activities related to environmental protection, which is the main target of BRC's work.

In addition, the activities proposed by this project aim to complement the activities that are already being developed by the APD Brazilian Amazon project in the territories. The two projects will develop activities with the same communities, but while the APD project is focusing on infrastructure issues (solar panels, basic sanitation, equipment, and school renovation), the AUD project will focus on training, workshops, associations, and value chains, all of them turned to strategies to avoid unplanned deforestation, helping the success of the project's targets. Accordingly, the projects will complement each other so that it is possible to generate more benefits and social impacts, in an assertive and strategic way.

1.12 Project Location

The Uákiri REDD+ is a grouped project, defined as opened to additional instances which may be included after the initial validation, when meet pre-established eligibility criteria (please refer to section 1.4). The whole territory of Acre state was defined as the project location, since this also covers potential areas where project activities may be implemented, including those related to the livelihood and development of communities.

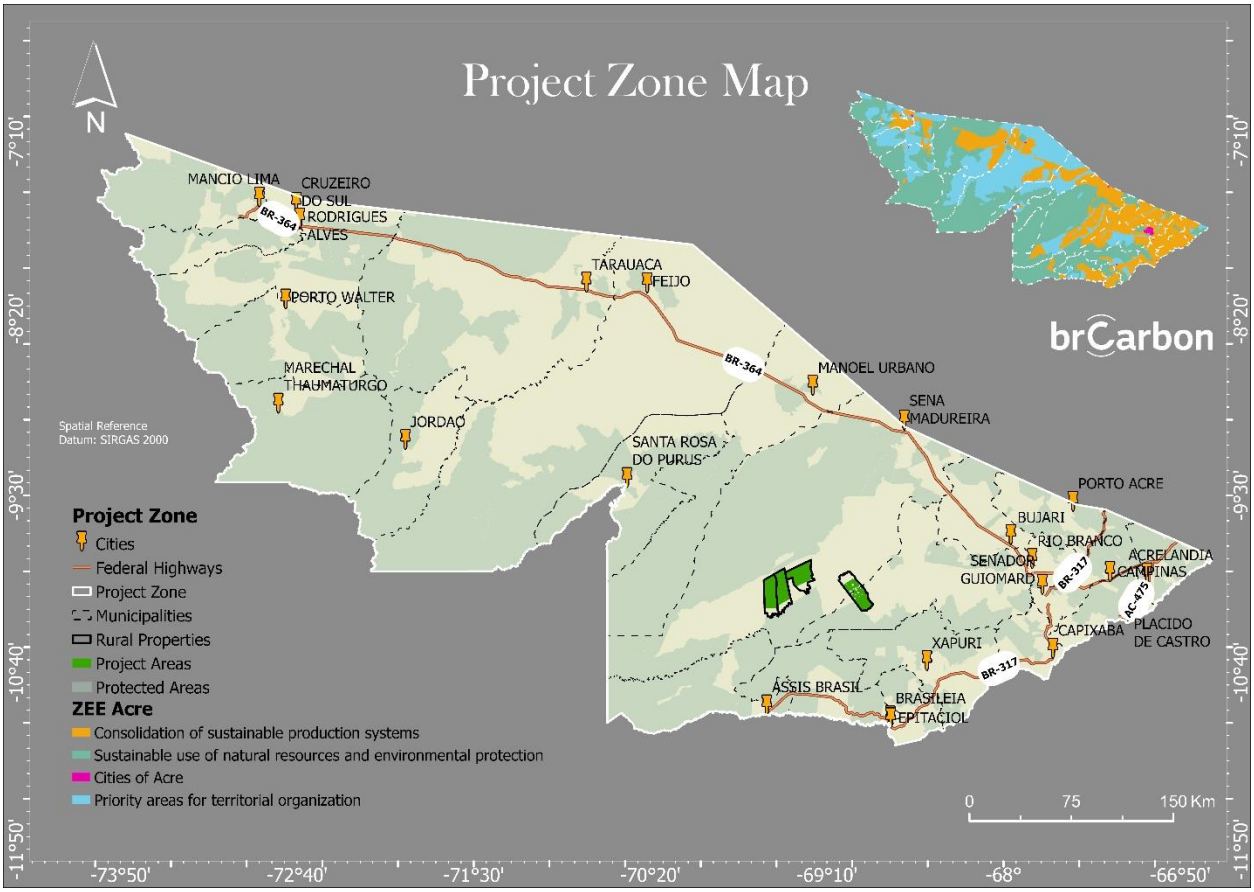


Figure 1 – Project Location Map

The Uákiry REDD+ AUDD grouped project has four project activity instances located southeast of Acre State, more specifically between Sena Madureira and Rio Branco municipalities, and between the Purus and Baixo Acre regional division.

The table below lists the first four properties included in this grouped project and a centroid geographical coordinate by each project activity instance (Table 2). Coordinates are also submitted separately as a KML file (APPENDIX_II_-_GIS_DATABASE).

Table 2 - Project Instance centroid coordinates and municipality.

PAI #number	Property Name	Municipality / UF	Geodetic coordinates	
			X (Long)	Y (Lat)
PAI #01	Seringal Porongaba	Sena Madureira e Rio Branco/AC	-10.274	-68.801
PAI #02	Seringal Palmares	Sena Madureira/AC	-10.017	-69.259
PAI #03	Seringal Potiguar	Sena Madureira/AC	-10.109	-69.461
PAI #04	Seringal Katianã	Sena Madureira/AC	-10.136	-69.532

The project zone, which is defined by the boundaries of the state, is in the expansion frontier of deforestation, between the new frontier and intermediate. The state is formed by two hydrographic basins, Juruá in the north and Acre/ Purus Valley in the south, which encompass the two existing mesoregion.

Next, to describe the physical parameters of the project, the location of the first instances of activities was considered, and the characterization of the region from the political limits of the municipalities in which they are located. The figure below (Figure 2) illustrates the spatial boundaries of the project and the initial instances at the time of validation, that are in the Purus basin, on the banks of Iaco's river.

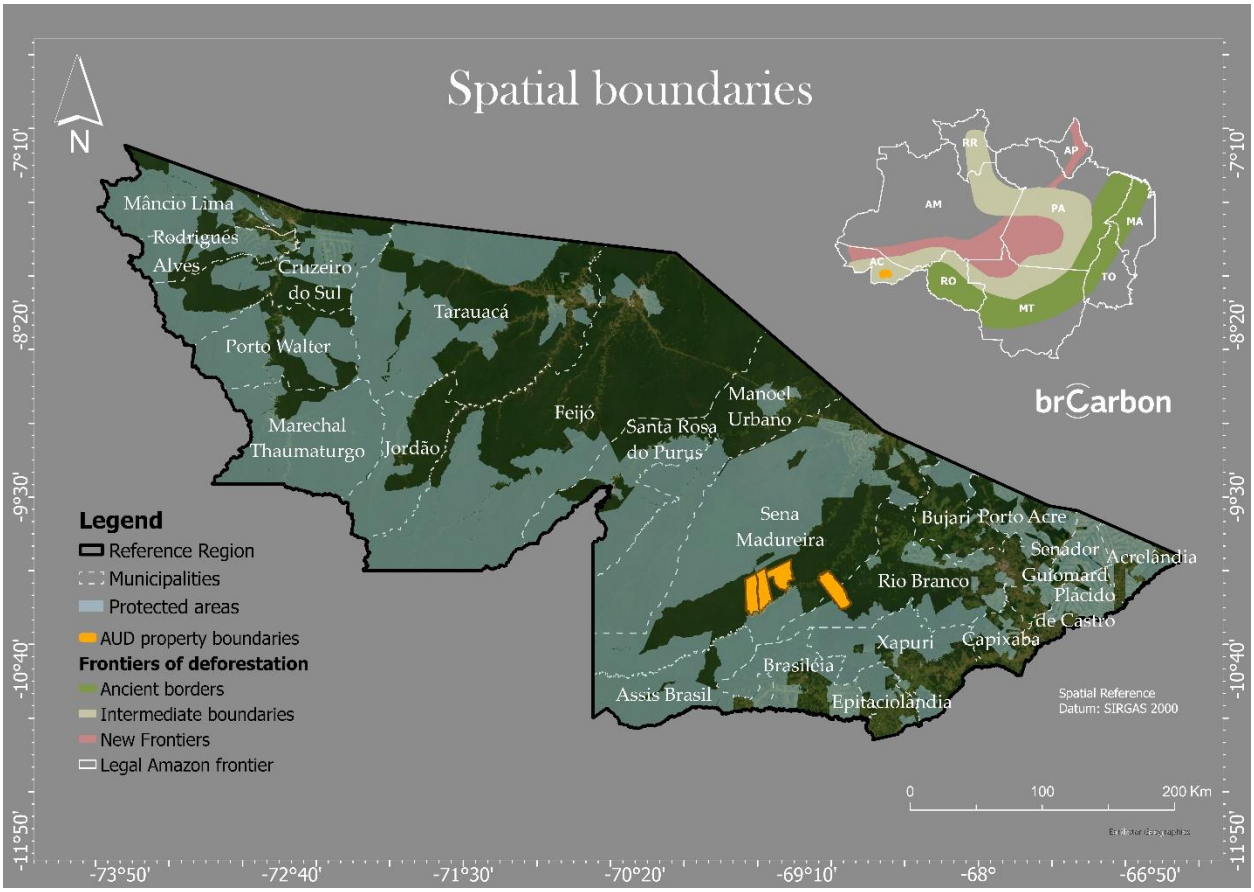


Figure 2 - Spatial Boundaries

1.13 Conditions Prior to Project Initiation

- **Ecosystem type:**

The ecosystem present on the project location can be described as a Terrestrial, or Forest, Ecosystem, more specifically a Tropical Rainforest with a predominance of Dense and Open Ombrophilous Forest with Dense Lowlands (Db) and Open Alluvial and Lowlands subtypes, and the soil types of Gleysols, Luvisols and Argisols. The project will be developed in the Amazon Forest, a region known for its high biodiversity and its high levels of biomass stockage, besides the historical lack of state action regarding sustainable production and the support for local communities.

- **Current and historical land-use:**

The Acre state fundamental importance, in the Amazonian context, can be summarized in its strategic geographic position, as an agricultural frontier, with edaphoclimatic conditions that present similarities to other regions of the Amazon. In Acre, as in a large portion of Amazon, mainly from the middle of 20th century, the occupation process accompanied the access roads, in the case, BR-364 and BR-317, where the implementation of large rural properties took place, which have pasture areas

with extensive livestock exploitation, as can be seen in the Figure 3: (DO AMARAL, E. F.; BROWN, I. F.; ARAÚJO, E. A., 1999).

According to the ZEE summary report (2021), the main productive activities carried out in the State are: permanent banana crops and temporary cassava and corn crops. In monetary terms, animal production adds significant value to the economy of Acre, with emphasis on livestock, poultry, fish, and pig farming. Between 2008 and 2016, the cattle herd grew by an average of 2.67 million. The municipalities of *Rio Branco* and *Sena Madureira* concentrate most of this herd, reaching, respectively, 17% and 10% of beef production in the state. Regarding to extractivism, the main products are wood, rubber, Brazil nuts and açaí.

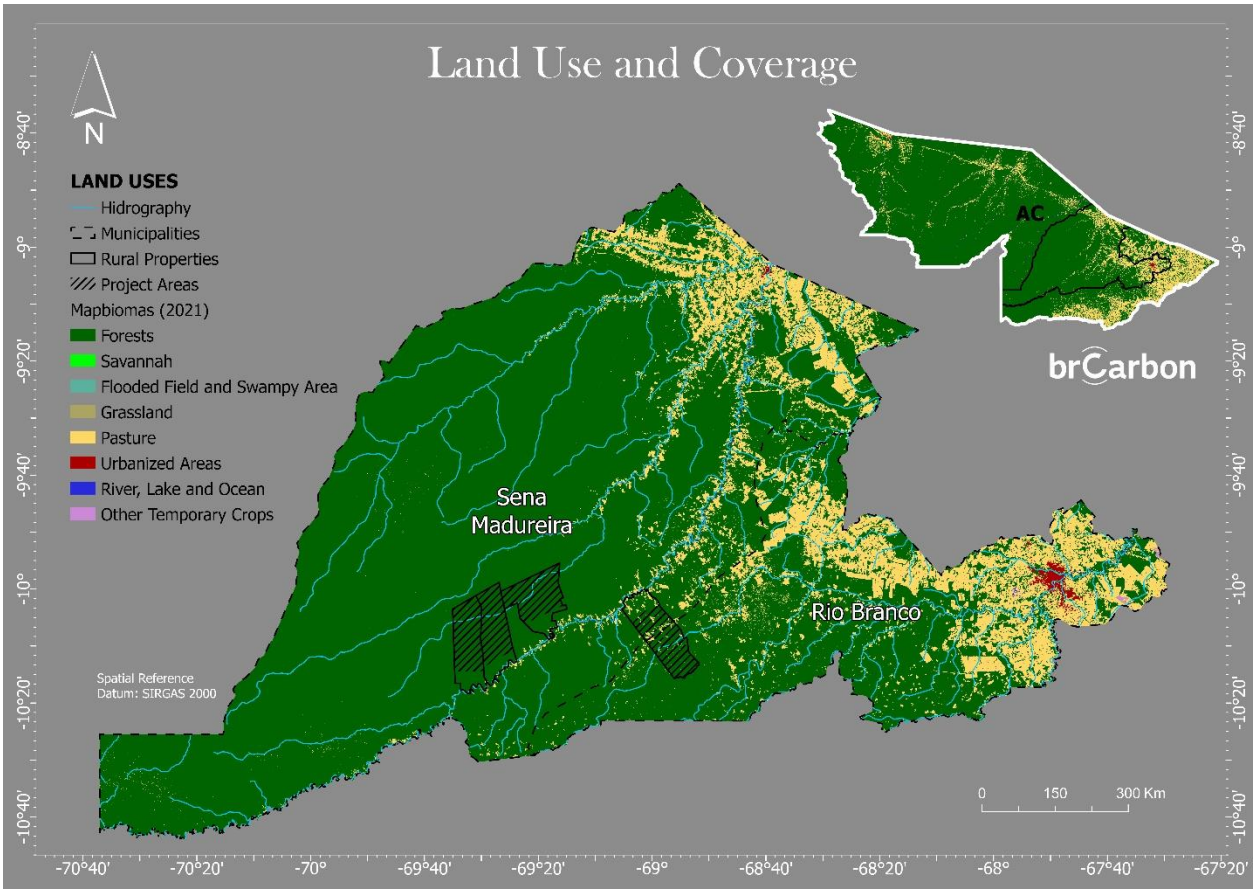


Figure 3 - Land Use at project location

The most part of the presented data was obtained through the survey of secondary sources and is in line with the information obtained from the socioeconomic questionnaires applied to the families residing in the properties in the context of the APD Brazilian Amazon project. For example, the results of the questionnaires also found an age structure with a younger population, few people with complete primary and secondary education and other conditions that are related to the IDHM found.

- **Has the land been cleared of native ecosystems within 10 years of the project start date?**

☐ Yes ☒ No

1.14 Compliance with Laws, Statutes and Other Regulatory Frameworks

The Project proponent is committed to meet all applicable Brazilian laws and applicable regulations. On this sense, BRC follow consultant lawyers to observe local laws and applicable regulations.

The following laws, statutes or regulatory frameworks are the most relevant to the project activities. The presentation order will follow the governance level, from national to municipality laws, other regulatory frameworks, and follow chronology.

Federal legal instruments

In a wide overview of legal aspects, applied to all PAIs included in this grouped project, the project observes the principles established in the Federal Constitution (1964), as per article 225, by contribution to ecologically well-balanced environment and article 224, paragraph 1, items (I) and (III) by contribution to conservation and restoration of essential ecological processes, while supporting the preservation of attributes beyond the legal environment requirements. Along with the previously presented articles, the Federal Law number 9,985 from 2000, regulates the Federal Constitution's art. 225, § 1, items I, II, III and VII, and institutes the National System of Nature Conservation Units (SNUC) and makes other provisions.

The GPD as whole is encompassed by principles established in the **National Environmental Policy** - law number 6,938 from August 31st, 1981, which declares the objectives of conservation, improvement and recovery of environmental quality that is conducive to life, having among its principles the protection of ecosystems with the conservation of relevant areas (article 2, IV) and the protection of areas threatened by degradation (item IX). Another important law for the development of the project is Federal Law number 12.305, from August 2nd of 2010, that institutes the National Policy of Solid Residue.

Regarding the land use national policy, the most important regulatory framework is the **Vegetation Code**, law number 12,651, from May 2012. This law states not only the forest category that must be conserved inside the private properties, but also the maximum area of native vegetation that can be converted in other land uses for economic purposes.

The project is also in straight line with the Federal Law no. 12,187, of December 29th, 2009, which instituted the National Climate Change Policy, the project is also in line with Law 14,119 / 2012,

which defines concepts, objectives, guidelines, actions, and criteria for the implementation of the National Policy for Payment for Environmental Services (PNPSA), institutes the National Register of Payment for Environmental Services (CNPSA) and the Federal Program for Payment for Environmental Services (PFPSA) and provides on payment contracts for environmental services. Furthermore, these laws go according to the National Environmental Council / Federal Environmental Ministry resolution number 237, from 2017, that provides for environmental licensing.

According to the Law 14,119/2021 carbon sequestration is considered an ecosystem service with relevant benefits to society in terms of maintenance, recovery, or improvement of environmental conditions (Art.2, § II) and the Federal Program for Payment for Environmental Services (PFPSA) will promote actions of maintenance of areas covered by native vegetation that would be subject to suppression authorization for alternative and economic use (Art. 7, § VII).

The project is also based on the Federal Laws number 5.197, from January 3rd of 1967, that regulates fauna protection and provides other provisions, and number 9.605, from February 12nd of 1998, that provides for criminal and administrative sanctions derived from the environment's harmful conduct and activities, and other provisions.

Finally, despite not encompassing indigenous areas, or natural areas used for these people, has applied to the project area residents, the consultation free, prior, and informed consent approach (FPIC), as per the Convention no. 169 of the ILO and the United Nations Declaration on the Rights of Indigenous People. This population participated from the project assembling since its beginning, as it will be presented in the community section.

Acre's State Legal Instruments

State Law number 2,308, from 22nd October 2010 - Creates the State System of Incentives for Environmental Services - SISA, the Incentive Program for Environmental Services - ISA Carbon, and other Environmental Services and Ecosystem Products Programs of the State of Acre and provides for other measures.

State Law number 3,496, from 2nd August 2019 - Establishes the Labor Fund and creates the Council State of Labor, Employment, and Income.

State Law number 4,076, from 28th December 2022 - Provides for the creation of the State Week for the Valorization of Health Workers.

State Law number 1,693, from 21st December 2005 - Creates the Agroforestry Poles and Agroforestry Backyards Programs (PQA) and authorizes the Executive Branch to grant, under resolutive condition, concession of real right to use rural public lands located in agroforestry poles, for the implementation of the Sustainable Development Policy of the State of Acre.

State Law number 2,841, from 8th January 2014 - Authorizes the Executive Power to dispose, through assignment or donation conditioned with charges, movable assets destined to the strengthening of family agriculture.

State Law number 1,373, from 2nd March 2001 - Creates the Land Institute of Acre – ITERACRE and take other measures.

State Law number 1,904. from June 5th, 2007, which instituted the Ecological Economic Zoning of the State of Acre - ZEE / AC and the guidelines of the State Policy for the Valorization of Forest Environmental Assets.

State Law number 2,308, from October 2010 which instituted the State System of Incentives for Environmental Services – SISA and the Incentive Program for Environmental Services - ISA Carbon.

State Law number 2,693, from 17 th January 2013 which follows the federal definition for the CAR, with the purpose of integrating environmental information from rural properties and possessions, composing the database for control, monitoring, environmental planning and economic, in addition to combating deforestation and burned. In addition, amends Laws nos. 1904, of June 5, 2007, that "Institutes the Ecological Zoning Economic State of Acre – ZEE"; and 2025, from October 20, 2008," which creates the Program State Certification of Production Units Relatives of the State of Acre" and gives other providences.

Publication of **State Decree No. 7,734/2014** that regulates the CAR in the State of Acre and creates the CAR and PRA Technical Management Office, a body shared between the Secretary of State for the Environment - SEMA and the Institute of Environment of Acre – IMAC.

State Law number 3,278, from 20th July 2017 - Adds and amends provisions of state Laws nº 1,373, of March 2, 2001; 2,840 of January 8, 2014; and 1,693 of December 21, 2015.

State Law number 3,349 from 18th December 2017 Establishes the Environmental Regularization Program for rural properties and possessions within the State of Acre.

State Law number 3,973, from 25th July 2022 - Ratifies the Protocol of Intentions signed between the States of Acre, Alagoas, Amapá, Bahia, Distrito Federal, Espírito Santo, Goiás, Maranhão, Mato Grosso, Mato Grosso do Sul, Minas Gerais, Pará, Paraíba, Paraná, Pernambuco, Piauí, Rio Grande do Norte, Rio Grande do Sul, Roraima, Santa Catarina, São Paulo, Sergipe and Tocantins, for the constitution of the Interstate Consortium with the objective of promoting the confrontation with the adverse effects of climate changes in Brazil.

State Law number 3,963, from 8th July 2022 - Classifies the Institute of Agricultural and Forestry Defense (IDAF), as of public interest and essential service in the health area.

Sena Madureira Municipality Legal Instruments

Municipal Law number 133, from 23rd September 1999 - Provides for the Municipal Environmental Policy and establishes the Municipal Environmental System.

Municipal Law number 746, from 29th March 2023 - Provides for the Single System of Social and Political Assistance.

Municipal Law number 643, from 29th March 2019 - Establishes general rules for bidding and contracting public-private partnerships within the scope of public administration.

Rio Branco Municipality Legal Instruments

Municipal Law number 133 from 23th September 1999 - Provides for the Municipal Environmental Policy and establishes the Municipal Environmental System.

Municipal Law number 2300 from 1st August 2018 - Provides for the inclusion of content aimed at the Environment in the curriculum of public and private elementary and early childhood schools in the city of Rio Branco.

Municipal Law number 2233 from 16th June 2017 - Establishes the Public-Private Partnerships Program within the Public Administration of the Municipality of Rio Branco and other measures.

Municipal Law number 2190 from 24th June 2016 - Establishes the Municipal Environment Week within the Municipality of Rio Branco.

1.15 Participation under Other GHG Programs

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

This project isn't seeking registration under other GHG programs, aside from VCS and CCB. The project proponent is not interested in issuing another GHG related environmental credit. To date, the project has not sought or received another form of GHG-related environmental credit.

1.15.2 Projects Rejected by Other GHG Programs

Not applicable. This project has never been submitted to analysis by any GHG programs.

1.16 Other Forms of Credit

1.16.1 Emissions Trading Programs and Other Binding Limits

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

☐ Yes ☒ No

1.16.2 Other Forms of Environmental Credit

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

☐ Yes ☒ No

Supply Chain (Scope 3) Emissions

Have the owner(s) or retailer(s) of the impacted goods and services5 posted a public statement saying, "VCUs may be issued for the greenhouse gas emission reductions and removals associated with [organization name(s)] [name of good or service]" since the project's start date?

☐ Yes ☒ No

The proponent and owner of the project are diligently undertaking project activities and actions utilizing their own financial resources, with no intention of engaging in the pre-sale of carbon credits. Consequently, the available assets will only be traded subsequent to their monitoring, validation, and verification, in accordance with market demand and requirements.

Has the project proponent posted a public statement saying, "VCUs may be issued for the greenhouse gas emission reductions and removals associated with [name of good or service][describe the region or location, including organization name(s), where practicable]."

☐ Yes ☒ No

The proponent and the owner of the project are diligently undertaking project activities and actions utilizing their own financial resources, with no intention of engaging in the pre-sale of carbon credits. Consequently, the available assets will only be traded after their monitoring, validation, and verification, in accordance with market demand and requirements.

Have the producer(s) or retailer(s) of the impacted good or service been notified of the project and the potential risk of Scope 3 emissions double claiming via email?

☐ Yes ☒ No

Not applicable. The proponent and owner of the project are diligently undertaking project activities and actions utilizing their own financial resources, with no intention of engaging in the pre-sale of carbon credits. Consequently, ensuring that no third parties will be affected by the project activities.

[5] Impacted goods and services are all goods and services directly impacted by the technologies and measures specified as project activities in the project description. Please see the VCS Program document *VCS Program Definitions* for additional information.

1.17 Sustainable Development Contributions

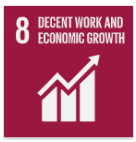
The project contributes to 11 (eleven) Sustainable Development Goals (SDG), considering 24 (twenty-four) specific objectives. For each one of them, activities provided by the project were listed, as well as their respective indicators. For the monitoring reports, impact and adherence analyses will be done for each of the activities and specific objectives proposed. In addition, each activity listed in the theory of change in the section above was related to the SDG.

Table 3 - Sustainable Development Goals and project activities

Sustainable Development Goals (SDG)	Specific objectives	Project activities	Project indicators
	1.1 - By 2030, end extreme poverty for all people everywhere, currently measured as people living on less than $1.25 a day	Increase in local income generation through incentives in socio-biodiversity value chains (e.g.: Brazil nut and copaiba extractivism).	Income of families encompassed by the project activities
	1.4 - By 2030, ensure that all men and women, particularly the poor and vulnerable, have equal rights to economic resources, as well as access to basic services, ownership and control over land and other forms of property, inheritance, natural resources, appropriate new technologies and financial services, including microfinance	Support for obtaining basic and essential services, such as electricity, water, and basic sanitation.	Number of people who benefited from basic services
	1.5 - By 2030, build the resilience of the poor and those in vulnerable situations, and reduce their exposure and vulnerability to extreme weather-related events and other economic, social, and environmental shocks and disasters	Development of a climate change adaptation program for the local reality, with special emphasis on women	Number of actions and families covered by the adaptation program

	2.3 - By 2030, double the agricultural productivity and income of small-scale food producers, particularly women, indigenous peoples, family farmers, pastoralists, and fishermen, including through secure and equal access to land, other productive resources and inputs, knowledge, financial services, markets and non-agricultural value-adding and employment opportunities	Training and supply of materials and inputs that contribute to increasing agricultural, NTFP and livestock productivity	Number of people who benefited from training and materials related to subsistence and food production
	3.3 - By 2030, end epidemics of AIDS, tuberculosis, malaria and neglected tropical diseases, and combat hepatitis, waterborne diseases, and other communicable diseases	Sensitization and awareness campaigns for the prevention of tropical and other diseases	Number of campaigns carried out and number of people who participated
	3.7 - By 2030, ensure universal access to sexual and reproductive health services, including family planning, information, and education, as well as the integration of reproductive health into national strategies and programs	Sensitization and awareness campaigns for the sexual and reproductive health	Number of campaigns carried out and number of participants engaged
	3.8 - Achieve universal health coverage, including financial risk protection, access to quality essential health services and access to safe, effective, quality, and affordable essential medicines and vaccines for all	Articulation with the public sector for itinerant health actions and vaccination campaigns	Number of people who participated
	4.1 - By 2030, ensure that all girls and boys complete free, equitable, quality primary and	Schools' maintenance and supply of	Number of children and young people

	secondary education that leads to relevant and effective learning outcomes	teaching materials and equipment	enrolled in community schools
	4.4 - By 2030, substantially increase the number of young people and adults who have relevant skills, including technical and professional skills, for employment, decent work and entrepreneurship	Entrepreneurship and leadership development training for young people	Number of young people who participated
	4.c - By 2030, substantially increase the pool of qualified teachers, including through international cooperation for teacher training, in developing countries, especially least developed countries and small island developing States	Training of schoolteachers on climate change and sustainable development	Number of teachers who received qualifications and training
	5.1 - End all forms of discrimination against all women and girls everywhere	Creation of a women's group for dialogues on women's rights, domestic violence, social division of labor and women's empowerment	Number of women who participated
	5.5 - Ensure the full and effective participation of women and equal opportunities for leadership at all levels of decision-making in political, economic, and public life	Women's leadership and entrepreneurship workshops	Number of women who participated
	5.6 - Ensure universal access to sexual and reproductive health and reproductive rights, as agreed in accordance with the Program of Action of the International Conference on Population and Development and the Beijing Platform for Action and documents	Sensitization and awareness campaigns for the sexual and reproductive health, focusing on women	Number of campaigns carried out and number of women who participated

	resulting from their review conferences		
	8.3 - Promote development-oriented policies that support productive activities, decent employment generation, entrepreneurship, creativity, and innovation, and encourage the formalization and growth of micro, small and medium-sized enterprises, including through access to financial services	Incentive to associativism through trainings and workshops on associativism, cooperativism and entrepreneurship, focusing on young people	Number of people who participated
	8.6 - By 2020, substantially reduce the proportion of young people without employment, education or training		
	13.2 - Integrate climate change measures into national policies, strategies and planning	Fostering good fire management and firefighting practices to communities to prevent the spread of wildfires in the project area	Number of trainings carried out and number of people who participated
	13.3 - Improve education, raise awareness and human and institutional capacity on mitigation, adaptation, impact reduction and early warning of climate change	Carbon pedagogy lectures about climate change, carbon cycle and others	Quantity of materials produced
	15.1 - By 2020, ensure the conservation, recovery and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains, and arid lands, in accordance with obligations	Avoided deforestation and reduced emissions	Amount of carbon emission avoided

	arising from international agreements		
	15.2 - By 2020, promote the implementation of sustainable management of all types of forests, halt deforestation, restore degraded forests and substantially increase afforestation and reforestation globally	Encourage the sustainable extractivism of non-timber forest products, through training and supply of materials and equipment	Increased production and marketing of non-timber forest products
	15.5 - Take urgent and significant measures to reduce the degradation of natural habitats, halt the loss of biodiversity and, by 2020, protect and prevent the extinction of threatened species	Fauna (mammals, birds, reptiles, and amphibians) periodic monitoring for biodiversity conservation	Number of species monitored and assessment of population dynamics
	17.17 - Encourage and promote effective public, public-private and civil society partnerships, based on the experience of the resource mobilization strategies of these partnerships	Networking and partnerships with the state and municipal public sector, NGOs, and other private companies	Number of stakeholders involved

1.18 Additional Information Relevant to the Project

Leakage Management

This section is still under development and will be presented in the final version of the Project Description.

Commercially Sensitive Information

It is to be considered as commercially sensitive information any trade, financial, commercial, scientific, technical, or other information, whose disclosure could reasonably be expected to result in

a material financial loss or gain, compromising the contractual terms, deals or other negotiations stated by the project proponent.

It is also a sensitive information any information relates or internal policy decisions, financial, commercial, scientific, technical that the public disclosure could reasonably be expected to undermine or negatively affect the development and/or implementation of any project activity. Information related to project social activity, the determination of the baseline scenario, demonstration of additionality, and estimation and monitoring of GHG emission reductions (including operational and capital expenditures) are not considered to be commercially sensitive and are provided in the public versions of the project documents.

Further Information

This section is still under development and will be presented in the final version of the Project Description.

2 SAFEGUARDS

2.1 No Net Harm

This section is still under development and will be presented in the final version of the Project Description.

2.2 Local Stakeholder Consultation

This section is still under development and will be presented in the final version of the Project Description.

2.3 Environmental Impact

This section is still under development and will be presented in the final version of the Project Description.

2.4 Public Comments

This section is still under development and will be presented in the final version of the Project Description.

2.5 AFOLU-Specific Safeguards

This section is still under development and will be presented in the final version of the Project Description.

3 APPLICATION OF METHODOLOGY

3.1 Title and Reference of Methodology

The project is based on the following methodology and tools:

VCS Methodology VM0015 – Methodology for Avoided Unplanned Deforestation, version 1.1, December 3rd, 2012.

VCS draft AUD – Reducing emissions from deforestation and forest degradation, version 0.1, April 12th, 2023.

VCS VT0001 – Tool for the Demonstration and Assessment of Additionality in VCS AFOLU Project Activities, version 3.1, February 2012.

Social and Biodiversity Impact Assessment (SBIA) Manual for REDD+ Projects – Part 1 – Core Guidance for Project Proponents, September 2011.

AFOLU Non-Permanence Risk Tool, version 3, October 19th, 2016.

3.2 Applicability of Methodology

The VCS draft AUD will be used for this Grouped Project, notwithstanding, considering it is still under development by VERRA, the VM0015 methodology was employed as a point of reference for project description. In the forthcoming project description version, once the final version of the methodology is made available, this PD will be adjusted.

According to the applicability conditions stated in VM0015 v.1.1. the methodology has no geographic restrictions and is applicable globally under the following conditions:

a) Baseline activities may include planned or unplanned logging for timber. fuel-wood collection. charcoal production. agricultural and grazing activities if the category is unplanned deforestation according to the most recent VCS AFOLU requirements.

Uákiry REDD+ AUDD GDP baseline scenario encompasses unplanned deforestation for cattle and agriculture purposes. as well as timber and fuelwood.

b) Project activities may include one or a combination of the eligible categories defined in the description of the scope of the methodology (table 1 and figure 2 of the VM0015).

According to table 1 of the VM0015. the project activities fit in scenario “D” as follow (Figure 4):

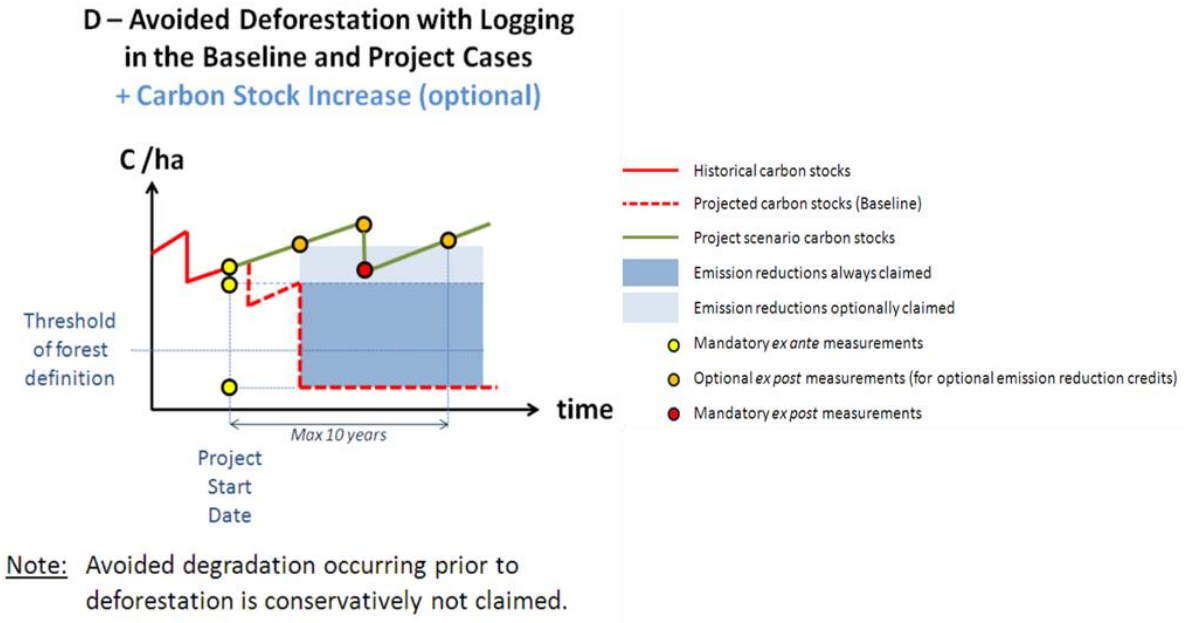


Figure 4 – Project category according to the applied methodology.

c) The project area can include different types of forest, such as, but not limited to, old growth forest, degraded forest, secondary forests, planted forests and agro-forestry systems meeting the definition of “forest”.

The first project activities instances area encompasses mainly two types of representative forest (1) Dense Ombrophilous Forest: Lowland (Db) and 2) Open Ombrophilous Forests: Alluvial (Aa) and Lowlands (Ab).), as shown on section 1.12, the monsoon climate is also occasionally known as humid tropical climate, tropical monsoon, and trade wind climate. According to Alvares (2013), the Acre state has two climate types following proportions (km²): 70.5% is Af (equatorial climate) and 29.5% is Am (monsoon), rainfall between 2,200-2,500 mm. His climate has average monthly temperatures above 22°C in all months of the year. In essence, the monsoon climate tends to have more rainfall than the tropical savanna climate or less pronounced dry seasons, which includes the project area. Furthermore, a characteristic of these climates tends to have less variation in temperatures leading to low annual temperature range.

Types of vegetation:

- Ombrophilus Dense Alluvial - 17.2% of the area
- Open Lowlands – 78.2% of the area
- Open Alluvial – 4.6% of the area

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.

For baseline modelling and climate benefits (VCUs) it is considered land categorized as “forest” for a minimum of 10 years prior to the project start date.

e) The project area can include forested wetlands (such as bottomland forests, floodplain forests, mangrove forests) if they do not grow on peat. Peat shall be defined as organic soils with at least 65% organic matter and a minimum thickness of 50 cm. If the project area includes a forested wetlands growing on peat (e.g., peat swamp forests), this methodology is not applicable.

The project does not include peat forest in its baseline, nor in the project activities, only the Ombrophilous Dense Alluvial Forest, that is a floodplain forests.

According to the applicability conditions stated in the VT0001 v.3, the tool is applicable under the following conditions:

I) AFOLU activities the same or like the proposed project activity on the land within the 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.

The project activities are based in conservation of the Legal Reserve[6] that include monitoring against forest degradation and deforestation, promote training and capacitation focus in sustainable activities in the communities in the project zone. Neither of these activities will lead to violation of any applicable law.

II) 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 Uákiry REDD+ AUDD Grouped Project made use of the approved VCS Methodology VM0015, - Methodology for Avoided Unplanned Deforestation, version 1.1, aware with the draft methodology of reducing emissions from deforestation and forest degradation, version 0.1, April 12nd 2023, and the module Estimation of Emissions Reductions from Avoiding Unplanned Deforestation (AUDef), version 0.2, April 12nd 2023. The applied methodology includes all the steps to define the most plausible baseline scenario, that will be provided by VERRA.

[6] Law 12.651/2012 available at https://www.planalto.gov.br/ccivil_03/_ato2011-2014/2012/lei/l12651.htm

3.3 Project Boundary

This section is still under development and will be presented in the final version of the Project Description.

3.4 Baseline Scenario

This section is still under development and will be presented in the final version of the Project Description.

3.5 Additionality

This section is still under development and will be presented in the final version of the Project Description.

3.6 Methodology Deviations

This section is still under development and will be presented in the final version of the Project Description.

4 QUANTIFICATION OF GHG EMISSION REDUCTIONS AND REMOVALS

4.1 Baseline Emissions

This section is still under development and will be presented in the final version of the Project Description.

4.2 Project Emissions

This section is still under development and will be presented in the final version of the Project Description.

4.3 Leakage

This section is still under development and will be presented in the final version of the Project Description.

4.4 Net GHG Emission Reductions and Removals

This section is still under development and will be presented in the final version of the Project Description.

5 MONITORING

5.1 Data and Parameters Available at Validation

This section is still under development and will be presented in the final version of the Project Description.

5.2 Data and Parameters Monitored

This section is still under development and will be presented in the final version of the Project Description.

5.3 Monitoring Plan

This section is still under development and will be presented in the final version of the Project Description.

6 REFERENCES

ACRE - Governo do Estado do Acre. 2006. Programa Estadual de Zoneamento Ecológico Econômico do Estado do Acre. Zoneamento Ecológico-Econômico do Acre Fase II: Documento Síntese – Escala 1:250.000. Rio Branco: SEMA. 356p.

ACRE, Governo do Estado Zoneamento ecológico-econômico do Acre: fase III: escala 1:250.000: documento-síntese / Secretária de Estado do Meio Ambiente. – Rio Branco: Semapi, 2021

ALMEIDA, L. História social do trabalho no Brasil e trabalhadores extrativistas no Acre: alguns apontamentos. UÁQUIRI - Revista Do Programa De Pós-graduação Em Geografia Da Universidade Federal Do Acre, 2019. https://doi.org/10.47418/uaquiri.v1i1.3128

ALVARES, Clayton Alcarde et al. Köppen's climate classification map for Brazil. Meteorologische zeitschrift, v. 22, n. 6, p. 711-728, 2013.

ATLAS BRASIL. Acre, Norte. Available at: http://www.atlasbrasil.org.br/ . Access on: May 16, 2023.

ATLAS BRASIL. Rio Branco, AC. Available at: http://www.atlasbrasil.org.br/ . Access on: May 15, 2023.

ATLAS BRASIL. Sena Madureira, AC. Available at: http://www.atlasbrasil.org.br/ Access on: May 15, 2023.

BORGES, M.; SILVA, I.; KOIFMAN, R. Histórico social, demográfico e de saúde dos povos indígenas do estado do Acre, Brasil. Ciência & Saúde Coletiva, 2022. https://doi.org/10.1590/1413-81232020256.12082018

DE SOUSA, Jorge Washington. Características climáticas do município de Rio Branco, Acre, período de 1990-2019. **Scientia Naturalis**, v. 2, n. 2, 2020.

DO ACRE, BIODIVERSIDADE E. AMBIENTES. Livro Temático| Vol. 3. 2010.

DO AMARAL, E. F.; BROWN, I. F.; ARAÚJO, E. A. Uso atual da terra no estado do Acre: estado atual do conhecimento e estudos de caso utilizando geoprocessamento. 1999. Acesso em : https://www.embrapa.br/en/busca-de-publicacoes/-/publicacao/495007/uso-atual-da-terra-no-estado-do-acre-estado-atual-do-conhecimento-e-estudos-de-caso-utilizando-geoprocessamento

FEDERAL, GOVERNO; AMBIENTAL–DISAM, DIRETORIA DE DESENVOLVIMENTO SÓCIO. Plano de Manejo Reserva Extrativista Chico Mendes. 2006.

IBGE, R. Manual técnico da vegetação brasileira. 2012.

IBGE, Províncias estruturais, compartimentos de relevo, tipos de solos e regiões fito ecológicas - Coordenação de Recursos Naturais e Estudos Ambientais. - Rio de Janeiro, 2019.

IBGE, Coordenação de Recursos Naturais e Estudos Ambientais. - Bacias e divisões hidrográficas do Brasil / Rio de Janeiro: Relatórios Metodológicos, ISSN 0101-2843 v. 48, 2021

IMAZON, Previsia- Principais resultados, 2023.

MITTERMEIER, Russell A. et al. Wilderness and biodiversity conservation. **Proceedings of the National Academy of Sciences**, v. 100, n. 18, p. 10309-10313, 2003.

NARAHARA, K. L. Entre a margem e o centro: agroextrativismo, troca e reciprocidade em um seringal acreano. 173 f.: Dissertação (Mestrado em Sociologia) – Universidade Federal do Rio de Janeiro. Instituto de Filosofia e Ciências Sociais, Rio de Janeiro, 2011

NARAHARA, Karine Lopes. O quebrar castanha e o criar gado em um seringal acreano. Campos-Revista de Antropologia, v. 13, n. 1, p. 61-79, 2012.

NARAHARA, Karine. O SERINGAL PORONGABA: MEMÓRIAS DE UM PASSADO CONSTRUÍDO. Amazônica-Revista de Antropologia, v. 7, n. 2, p. 455-483, 2015.

VITAL, André Vasques. O poder contingente do rio Iaco no Território Federal do Acre (1904-1920). Revista Brasileira de História, v. 39, p. 25-46, 2019.

SANTOS, D.; VERÍSSIMO, A.; SEIFER P.; MOSANER, M. Índice de progresso social na Amazônia brasileira. Belém - PA, 2021.

SILVEIRA, Marcos. A floresta aberta com bambu no sudoeste da Amazônia: padrões e processos em múltiplas escalas. 2001.

SOUZA, MB de et al. A biodiversidade no Estado do Acre: conhecimento atual, conservação e perspectivas. Revista T&C Amazônia, v. 1, p. 45-56, 2003.