

MONITORING REPORT ABC NORTE REDD PROJECT



Ecológica

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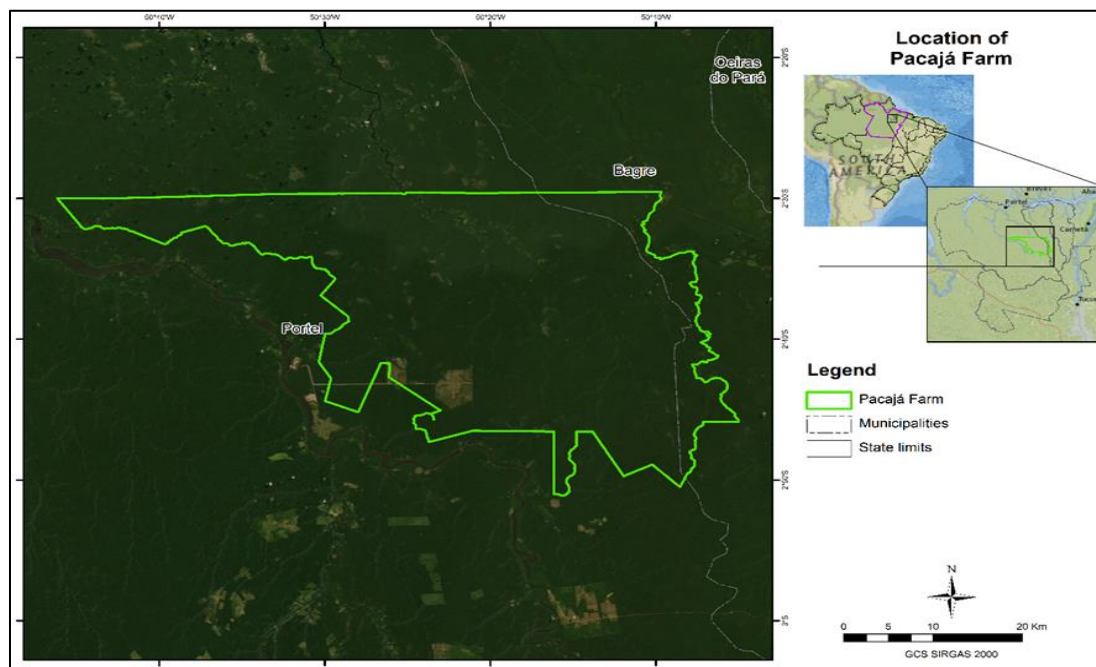
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1 SUMMARY OF PROJECT BENEFITS

In Brazil, 58.39% of its entire 851,029,591.4 ha territory¹ is covered by forests, representing almost 497 million hectares of forest area² and putting it in second place for nations with most forest area worldwide. Brazil has also been at times the country with the highest levels of deforestation in the world, having lost almost 15 million hectares of its forest area from 2010 to 2020³. The expansion of the agriculture frontier due to cattle ranching, soy farming, timber collection, infrastructure and colonization by subsistence agriculturalists has contributed to this historically high deforestation rate, which is concentrated in the northern portion of the country, where the Amazon Rainforest lies.

In this context, primary objective of the ABC Norte REDD Project is to avoid the unplanned deforestation (AUD) of the 140,432.27 ha project area⁴. The project area (Figure 1) is located within a private property named “Fazenda Pacajá”, which is located between the municipalities of Portel and Bagre, in the State of Pará, Northeast Amazon.

Figure 1 - ABC Norte REDD Project: Project area



Source: VCS Standard REDD ABC Norte Project⁵

¹ IBGE - Instituto Brasileiro de Geografia e Estatística. Brazil. 2021. Available at: <<https://www.ibge.gov.br/cidades-e-estados>>. Accessed on: 21 Oct. 2021.

² FAO and UNEP. 2020. The State of the World's Forests 2020. Forests, biodiversity and people. Rome. Available at: <<https://www.fao.org/3/ca8642en/ca8642en.pdf>>. Accessed on: 15 Dec. 2024.

³ FAO - Food and agriculture organization of the United Nations. 2020. Global Forest Resources Assessment 2020: Main report. Rome. Available at: <<https://doi.org/10.4060/ca9825en>>. Accessed on: 15 Dec. 2024.

⁴ As shown in Figure 1, the size of the areas that were considered “non-forest” (i.e. planned roads and non-forest vegetation or rock formations, as the area has never been deforested) within the project area was 5,247.73 ha. This was excluded from the initial area of 145,680 ha, resulting in 140,432.27 ha, which was then defined as project area.

⁵ Available at: <<https://registry.verra.org/app/projectDetail/VCS/2558>>. Accessed on: 04 Jun. 2023.

The project proponent, ABC Agropecuária Brasil Norte SA Produção e Exportação, leased the area to a forestry company that carried out the sustainable forest management activities during almost 20 years. On 13-September-2017, despite a recurrent negative balance over the last years and an increasing deforestation pressure from external agents, the project proponent decided to maintain the Sustainable Forest Management Plan (SFMP) in Fazenda Pacajá through ceasing the contract with the former forestry company, and the investment in a certified reduced impact logging SFMP with other company (Madeireira J&Y) combined with the expansion of social activities to local communities and enhanced surveillance in the project area. Carbon credits revenues are an important income source for making such activities feasible.

In addition, the company also opted to maintain an internal team to take over the management in case there is any problem with the tenant, with a team formed by forest engineers, besides to already having all the monitoring control and verification of compliance with the SFMP. This was initiated to ensure the forestry activity and the forest standing, as it is the company's main activity. ABC Norte, recently integrated by Algar Farming, encompasses Forest Management and the Carbon Market, which is directly related to the ABC Norte REDD Project. Thus, 13-September-2017 was defined as the project start date of the present project activity.

Furthermore, the project is located in the State of Pará, in priority areas for conservation, according to the Ministry of Environment⁶. The main agents of deforestation and degradation in the reference region during the historical period were: cattle ranching, primarily for beef production; and timber harvesters, operating both legally and illegally. Deforestation in the region involves spatially overlapping activities: firstly, the extraction of commercially valuable tree species for sale to timber companies. The final step is the slash-and-burn deforestation of the area for pasturelands and cattle ranching.

The increasing complexity and costs associated with the sustainable operation of the forest, along with other factors such as bureaucratic constraints and fluctuations in certified timber prices, make sustainable forest management less competitive than illegal logging. Therefore, revenue from the sales of Verified Carbon Units (VCUs) is essential for the project activity to compete with more lucrative alternative land use scenarios.

It will also contribute to the maintenance of biodiversity in native forest areas within the project area through periodic monitoring of fauna and flora, as well as assessing the impact of its activities on the remaining flora. Moreover, the ABC Norte Project REDD also contributes to the long-term conservation of the region

⁶ MMA - Ministério do Meio Ambiente. 2007. Áreas prioritárias para conservação, uso sustentável e repartição de benefícios da biodiversidade brasileira. Brazil. Available at: <<https://www.sema.rs.gov.br/upload/arquivos/201707/04142907-areas-proritarias-para-conservacao-da-biodiversidade-ministerio-do-meio-ambiente.pdf>>. Accessed on: 08 Jan. 2024.

by establishing a barrier against the advancement of deforestation, making it a significant contribution to biodiversity conservation in the Northeastern Amazon and to climate regulation in Brazil and South America.

It is also noteworthy that the first two monitoring periods assessing the benefits to the community and biodiversity of the ABC Norte REDD Project were formulated and verified under the SOCIALCARBON Standard methodology. However, in 2021, the Standard declared its transition from being solely a co-benefit standard to becoming a full standard. Commencing from 01-January-2024, projects that did not migrate to the SOCIALCARBON accounting methodology would lose their certification seal. Therefore, considering the methodological update of the SOCIALCARBON Standard and the need to continue monitoring the implemented actions of the ABC Norte REDD Project, from this verification onward the project's socio-environmental benefits will be conducted under the CCB Standard.

Finally, the present REDD project is estimated to avoid a predicted 82,994.27 ha of deforestation, equating to 30,138,794 tCO₂e in emission reductions over the 30 year of project lifetime (13-September-2017 to 12-September-2047), with an annual average of 1,004,626 tCO₂e.

1.1 Unique Project Benefits

Table 1 - Results or impacts achieved during the monitoring period and Project Lifetime

Outcome or Impact	Achievements during the Monitoring Period	Section Reference	Achievements during the Project Lifetime
1) Diversity in production, encompassing: quantitative increase per product already produced by the communities; expanded access to local markets and sales channels; improved logistics efficiency; improvement in product quality; reduction of waste in the production chain; diversification of products produced by communities; effective adoption of new cultivation techniques and	• Technical visit for guidance on poultry farming systems. • Technical visit for guidance on horticulture systems. • Technical visit for guidance on agroforestry systems. • Technical visit for guidance on fish farming systems.	4.1.1 and 4.3.1	• Technical visit for guidance on poultry farming systems. • Technical visit for guidance on horticulture systems. • Technical visit for guidance on agroforestry systems. • Technical visit for guidance on fish farming systems.

improvement in production efficiency.			
2) Structured and effective governance in communities, encompassing: strengthening physical structures for community use; effective participation of communities in collective activities; capacity building for community management; development of community-led community initiatives and projects; implementation of deliberations in a representative manner and strengthening community trust.	• Lecture on Mental and Emotional Health for leaders. • Collaborative construction of the schedule for socio-environmental activities. • Lecture on associativism. • Donation of painting materials and termite insecticide for library construction. • Donation of textbooks and some children's books for school and library. • Donation of school kits. • Construction of the community library. • Lecture on the 5 R's (rethink, refuse, recycle, reduce, and reuse). • Revitalization of the community school. • Lecture on Public Policies in the rural sector.	4.1.1 and 4.3.1	• Lecture on Mental and Emotional Health for leaders. • Collaborative construction of the schedule for socio-environmental activities. • Lecture on associativism. • Donation of painting materials and termite insecticide for library construction. • Donation of textbooks and some children's books for school and library. • Donation of school kits. • Construction of the community library. • Lecture on the 5 R's (rethink, refuse, recycle, reduce, and reuse). • Revitalization of the community school. • Lecture on Public Policies in the rural sector.
3) Generate income through alternative sources, encompassing: greater participation of people from the communities in the proposed activities; implementation of techniques that enable the processing of products and increase in the diversity of skills acquired by people in communities.	• Technical visit for guidance on poultry farming system. • Technical visit for guidance on horticulture system. • Technical visit for guidance on agroforestry systems. • Technical visit for guidance on fish farming system. • Promotion of product marketing. • Workshop on natural fiber craftsmanship. • Fabric painting workshop.	4.1.1 and 4.3.1	• Technical visit for guidance on poultry farming system. • Technical visit for guidance on horticulture system. • Technical visit for guidance on agroforestry systems. • Technical visit for guidance on fish farming system. • Promotion of product marketing. • Workshop on natural fiber craftsmanship. • Fabric painting workshop.

4) Conservation of local biodiversity, encompassing: greater knowledge about the species existing in the region; implementation of activities that reinforce the conservation of local fauna and flora; monitor the impact of the project on the remaining flora and implementation of actions with low impact on the remaining flora.	• Satellite imagery report • Patrolling • Application of good practices in sustainable forest management • Community involvement in biodiversity preservation activities • Sustainable use of natural resources • Fauna Monitoring Report	5.2.2 and 5.3.1	• Satellite imagery report • Patrolling • Application of good practices in sustainable forest management • Community involvement in biodiversity preservation activities • Sustainable use of natural resources • Fauna Monitoring Report
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Source: CCB Standard

1.2 Standardized Benefit Metrics

Table 2 - Standardized Benefit Metrics for the Monitoring Period and Project Lifetime

Category	Metric	Achievements during Monitoring Period	Section Reference	Achievements during the Project Lifetime
GHG emission reductions & removals	Net estimated emission removals in the project area, measured against the without-project scenario	Not applicable	-	Not applicable
	Net estimated emission reductions in the project area, measured against the without-project scenario	939,357 tCO ₂ e	1.1 - VCS+ SOCIALCARBON Standard ⁷	30,138,794 tCO ₂ e
Forest ⁸ cover	For REDD ⁹ projects: Number of hectares of reduced forest loss in the project area	2,300.83 ha	Stratification of the project area ¹⁰	82,994.27 ha

⁷ The document in question is not yet available on the VERRA website as the verification process has not yet been completed. However, it will be made available for analysis by VVB.

⁸ Land with woody vegetation that meets an internationally accepted definition (e.g., UNFCCC, FAO or IPCC) of what constitutes a forest, which includes threshold parameters, such as minimum forest area, tree height and level of crown cover, and may include mature, secondary, degraded and wetland forests (*VCS Program Definitions*).

⁹ Reduced emissions from deforestation and forest degradation (REDD) - Activities that reduce GHG emissions by slowing or stopping conversion of forests to non-forest land and/or reduce the degradation of forest land where forest biomass is lost (*VCS Program Definitions*).

¹⁰ The document containing the data regarding the number of hectares of forest loss reduction in the project area measured in relation to the no-project scenario will be presented to the VVB team.

Category	Metric	Achievements during Monitoring Period	Section Reference	Achievements during the Project Lifetime
	measured against the without-project scenario			
	For ARR ¹¹ projects: Number of hectares of forest cover increased in the project area measured against the without-project scenario	Not applicable	-	Not applicable
Improved land management	Number of hectares of existing production forest land in which IFM ¹² practices have occurred as a result of the project's activities, measured against the without-project scenario	Not applicable	-	Not applicable
	Number of hectares of non-forest land in which improved land management has occurred as a result of the project's activities, measured against the without-project scenario	Not applicable	-	Not applicable
Training	Total number of community members who have improved skills and/or knowledge resulting from training provided as part of project activities	01-January to 31-December (2021): 200 residents from the 5 communities 01-January to 31-December (2022): 813 residents from the 5 communities	4.1.1 and 4.3.1	Potentially 975 residents from the 5 communities

¹¹ Afforestation, reforestation and revegetation (ARR) - Activities that increase carbon stocks in woody biomass (and in some cases soils) by establishing, increasing and/or restoring vegetative cover through the planting, sowing and/or human-assisted natural regeneration of woody vegetation (VCS Program Definitions).

¹² Improved forest management (IFM) - Activities that change forest management practices and increase carbon stock on forest lands managed for wood products such as saw timber, pulpwood and fuelwood (VCS Program Definitions).

Category	Metric	Achievements during Monitoring Period	Section Reference	Achievements during the Project Lifetime
		01-January to 31-March (2023): 45 residents from the 5 communities ¹³		
	Number of female community members who have improved skills and/or knowledge resulting from training provided as part of project activities of project activities	Data not available	-	Potentially all adult women from the 5 communities
Employment	Total number of people employed in of project activities, ¹⁴ expressed as number of full time employees ¹⁵	Not applicable	-	Not applicable
	Number of women employed in project activities, expressed as number of full time employees	Not applicable	-	Not applicable
Livelihoods	Total number of people with improved livelihoods ¹⁶ or income generated as a result of project activities	8 families from the 5 communities ¹⁷	4.1.1 and 4.3.1	Potentially 195 families from the 5 communities

¹³ Due to the negative balance in the years preceding the start of SFMP operations by Madeireira J&Y, as detailed in section "1 - Summary of Project Benefits", and the complexity of the past relationships between the previous company and the communities of the Project Zone, local residents, in alignment with Uppio, refrain from formalizing their participation by signing documents related to the project's activities, including attendance records. Thus, the absence of a formal attendance list, compensated by photographic records, raises the possibility of an overestimation of the total number of community members participating in the project's activities, considering that it is possible that a person from the community participated in several different activities in the same monitoring period.

¹⁴ Employed in project activities means people directly working on project activities in return for compensation (financial or otherwise), including employees, contracted workers, sub-contracted workers and community members that are paid to carry out project-related work.

¹⁵ Full time equivalency is calculated as the total number of hours worked (by full-time, part-time, temporary and/or seasonal staff) divided by the average number of hours worked in full-time jobs within the country, region or economic territory (adapted from UN System of National Accounts (1993) paragraphs 17.14[15.102];[17.28]).

¹⁶ Livelihoods are the capabilities, assets (including material and social resources) and activities required for a means of living (Krantz, Lasse, 2001. *The Sustainable Livelihood Approach to Poverty Reduction*. SIDA). Livelihood benefits may include benefits reported in the Employment metrics of this table.

¹⁷ The number mentioned refers to the families consistently engaged in income generation, particularly through poultry farming, horticulture and fish farming. Other community residents also generate income through specific activities facilitated by the project, selling their products at events such as "Festejo Junino" and "Social Action" (see section "4.3.1 - Community Monitoring Plan"). However, there is no specific quantitative record for these individuals; only photographic documentation is available.

Category	Metric	Achievements during Monitoring Period	Section Reference	Achievements during the Project Lifetime
	Number of women with improved livelihoods or income generated as a result of project activities	Data not available	-	Potentially all adult women from the 5 communities
Health	Total number of people for whom health services were improved as a result of project activities, measured against the without-project scenario	Not applicable	-	Not applicable
	Number of women for whom health services were improved as a result of project activities, measured against the without-project scenario	Not applicable	-	Not applicable
Education	Total number of people for whom access to, or quality of, education was improved as a result of project activities, measured against the without-project scenario	Not applicable	-	Not applicable
	Number of women and girls for whom access to, or quality of, education was improved as a result of project activities, measured against the without-project scenario	Not applicable	-	Not applicable
Water	Total number of people who experienced increased water quality and/or improved access to drinking water as a result of project activities, measured against the without-project scenario	Not applicable	-	Not applicable
	Number of women who experienced increased water quality and/or improved	Not applicable	-	Not applicable

Category	Metric	Achievements during Monitoring Period	Section Reference	Achievements during the Project Lifetime
	access to drinking water as a result of project activities, measured against the without-project scenario			
Well-being	Total number of community members whose well-being ¹⁸ was improved as a result of project activities	8 families from the 5 communities	4.1.1 and 4.3.1	Potentially 195 families from the 5 communities
	Number of women whose well-being was improved as a result of project activities	Data not available	-	Potentially all adult women from the 5 communities
Biodiversity conservation	Change in the number of hectares significantly better managed by the project for biodiversity conservation ¹⁹ , measured against the without-project scenario	8,274.8417 ha ²⁰	SFMP and partial post-exploratory of UPA 18 and 19 of the "Fazenda Pacajá" ²¹	116,285.0,78 ha ²²
	Number of globally Critically Endangered or Endangered species ²³ benefiting from reduced threats as a result of project activities, ²⁴ measured against the without-project scenario	Not applicable	-	Not applicable

Source: CCB Standard

¹⁸ Well-being is people's experience of the quality of their lives. Well-being benefits may include benefits reported in other metrics of this table (e.g. Training, Employment, Health, Education, Water, etc.), but could also include other benefits such as empowerment of community groups, strengthened legal rights to resources, conservation of access to areas of cultural significance, etc.

¹⁹ Biodiversity conservation in this context means areas where specific management measures are being implemented as a part of project activities with an objective of enhancing biodiversity conservation.

²⁰ The data refers to the total effective management area of UPAs 18 and 19 (active in the current monitoring period) for sustainable forest management at "Fazenda Pacajá" in the years 2021 and 2022. By the end of December-2022, all forestry activities were halted due to non-conformities by the lessee company, Madeireira J&Y. Consequently, the months of 2023, encompassed in the monitoring period, were not taken into account. Specifically, in March-2023, the initiation of the embargo period in the project region is highlighted, aligning with the guidelines of the Department of the Environment concerning the significant increase in rainfall, a condition rendering the execution of forestry activities unfeasible.

²¹ Both referenced documents will be submitted by VVB.

²² Value referring to the total areas destined to the management of the Pacajá Farm.

²³ Per IUCN's Red List of Threatened Species.

²⁴ In the absence of direct population or occupancy measures, measurement of reduced threats may be used as evidence of benefit.

It is worth noting that actions related to health and education, for example, have been implemented since the beginning of the project, but under the perspective of the SOCIALCARBON Standard methodology. Thus, the absence of filling out these fields does not imply a lack of implementation of activities to improve these areas and provide benefits to the communities. On the contrary, the non-identification of these aspects as community demands during the development of the Theory of Change - which involved the participation of members from communities located in the project zone - may be evidence of the effectiveness of the project's actions developed so far. More detailed information on this matter can be found in sections "7 - Additional Project Impact Information".

2 GENERAL

2.1 Project Goals, Design and Long-Term Viability

2.1.1 Implementation Schedule (G1.9)

It is worth noting that the first two monitoring periods assessing the benefits to the community and biodiversity of the ABC Norte REDD Project were formulated and verified under the SOCIALCARBON Standard methodology. However, in 2021, the Standard declared its transition from being solely a co-benefit standard to becoming a full standard. Commencing from 01-January-2024, projects that did not migrate to the SOCIALCARBON accounting methodology would lose their certification seal. Therefore, considering the methodological update of the SOCIALCARBON Standard and the need to continue monitoring the implemented actions of the ABC Norte REDD Project, from this verification onward the project's socio-environmental benefits will be conducted under the CCB Standard. Due to this fact, the monitoring report in question has a retroactive nature.

Thus, the table below - which outlines the main milestones involving the development and implementation process of the ABC Norte REDD Project - encompasses some activities after the current monitoring period. However, for the purpose of counting the benefits, only the period between 01-January-2021 and 31-March-2023, will be considered.

Table 3 - SFMP and REDD Project activities

Year	SFMP	REDD Project
2017	23-January - Feasibility Report conducted by a Carbon Project Developer; 07-March - Board decision for the development of a Carbon Project together with the SFMP ²⁵ ;	23-January - Feasibility Report conducted by a Carbon Project Developer, which included an action plan for the development of the carbon project;

²⁵ In 2021, ABC Norte also elaborated an explanatory document to clarify about the decision made to initiate the carbon project in 2017, which also contains the preparatory measures that had to be carried out before the project start date and the confidentiality of the deliberations taken during the transition process in 2017.

	13-September - New Tenant Contract (Madeira J&Y); 14/September - Hiring of the new internal forest management team.	07-March - Board decision for the development of a Carbon Project together with the SFMP; 24-August - Community survey and first meetings with community leaders; 13-September - New Tenant Contract (Madeira J&Y), which included environmental and social restrictions and obligations to the new tenant, which increased the control and surveillance against illegal deforestation. 13-September-2017 to 31-December-2020 - First monitoring period (VCS and SOCIALCARBON).
2018	01-March - Hiring of a social environmental consultancy for conducting a better approach with the surrounding communities regarding the SFMP; May - The company starts to produce monthly environmental monitoring reports; 12-September - Rural activity license on behalf of J&Y to conduct the new Sustainable Forest Management Plan, which includes several activities to mitigate impacts in the forest, besides the development of internal quality.	Year of 2018 - The company followed the guidelines of the feasibility study, starting the necessary regularizations and updates, in addition to social responsibility actions; Year of 2018 - ABC Norte start building monitoring bases to expand the area's surveillance and control, together with the monitoring of the property boundaries; May - The company starts to produce monthly environmental monitoring reports; 01-March - Hiring of a social environmental consultancy (Upbio) to implement socioenvironmental activities for the surrounding communities, which maintained the services during the following years; 12-September - Rural activity license on behalf of J&Y to conduct the new Sustainable Forest Management Plan, which includes several activities to mitigate impacts in the forest, besides the development of internal quality.
2019	Year of 2019 - J&Y management activities begin at Fazenda Pacajá, under the new SFMP.	19-February - Presentation of the Socio-environmental Responsibility Program to the communities and state and municipal secretariats. 10-June - 1st proposal for the elaboration of the carbon project from another project developer. 21-August - Negotiation with the carbon project company and acceptance of the draft contract. 27-December - Completion of the update of the registrations in the responsible notary's office and SIGEF.

2020	15-May - CERFLOR certification for the SFMP.	January - Socioeconomic diagnosis of the communities. 26-March - Acceptance of the project's economic model from the other project developer proposal. 02-June - Contract renegotiation with the carbon project developer. 06-July - First negotiations with Ecológica Assessoria for the development of the REDD Project. 24-July - First fauna monitoring inventory in the "Fazenda Pacajá" region. 27-November - Contract signature with Ecológica Assessoria.
2021	-	January - The company starts to produce monthly reports regarding the activities of the Socio-environmental Responsibility Program in partnership with Upbio. This practice will be maintained in the following years of the project. 01-January-2021 to 31-March-2023 - Second monitoring period (VCS and SOCIALCARBON). 25/02 - Second fauna monitoring inventory in the "Fazenda Pacajá" region June - The company developed, in partnership with Upbio, a Solid Waste Management Plan for Fazenda Pacajá and Vila ABC. 25-June - The consultation with the "ribeirinha" community São Sebastião do Cipoal and Nossa Senhora do Carmo. The meeting had a simplified presentation about the project, exposing the risks and benefits resulting from the project activities for the riverside population. 26-June - The consultation with the "ribeirinha" community Divino Espírito Santo, Cristo Salvador and Vila ABC. The meeting had a simplified presentation about the project, exposing the risks and benefits resulting from the project activities for the riverside population. 27-June - The consultation with the "ribeirinha" community Monte Sião. The meeting had a simplified presentation about the project, exposing the risks and benefits resulting from the project activities for the riverside population. 13-July - Project is published in the VCS Pipeline.

2022	-	February - Mental and emotional health awareness in 5 communities (Cristo Salvador, Divino Espírito Santo, Monte Sião, Nossa Senhora do Carmo, and São Sebastião do Cipoal) for 42 residents. April - Lecture about domestic accident prevention held for 78 residents from Divino Espírito Santo community. May - Lecture to 12 residents from São Sebastião do Cipoal community about the 5 R's (refuse, reduce, reuse, repurpose and recycle). 22-June - Fazenda Pacajá was certified by the "Onça Pintada" Institute label. July - Carpentry workshop in "Fazenda Pacajá", mainly for the employee's wives. 28-July - Third fauna monitoring inventory in the "Fazenda Pacajá" region. September - Natural fiber craft workshop in 5 communities (Cristo Salvador, Divino Espírito Santo, Monte Sião, Nossa Senhora do Carmo, and São Sebastião do Cipoal) for 32 women. November - "Internal Week for the Prevention of Accidents at Rural Work": lectures regarding health and safety topics to ACB Norte employees. December - First fabric painting workshop during the 3rd Social Action conducted by "Fazenda Pacajá" and Portel City Hall.
2023	-	31-January - Articulation of thanks to the institutional partnership with the City Hall of Portel through the Municipal Secretariats of Health and Social Assistance to carry out the 3rd Social Action - 2022. February - Fabric painting workshop in 3 communities (Divino Espírito Santo, Nossa Senhora do Carmo and São Sebastião do Cipoal) with the participation of 25 residents. 22-February - Receipt of the final validation and first verification report by the audit. April - Application of the questionnaire in the Monte Sião community to update the socioeconomic diagnosis of the communities covered by Upbio's Socio-environmental Responsibility Program. 12 families participated in the process. May - Application of the questionnaire in the communities of Cristo Salvador, Divino Espírito Santo, Nossa Senhora do Carmo and São Sebastião do Cipoal to update the socioeconomic diagnosis of

	the communities covered by Upbio's Socio-environmental Responsibility Program. 14 families participated in the process. Biojewelry workshop in 4 communities (Cristo Salvador, Divino Espírito Santo, Nossa Senhora do Carmo and São Sebastião do Cipoal) with the participation of 83 residents, predominantly women. Environmental education action with the distribution of informative materials on the importance of wildlife to 4 communities (Cristo Salvador, Divino Espírito Santo, Nossa Senhora do Carmo and São Sebastião do Cipoal) with the participation of 87 residents. June - Flower arrangement workshop in 4 communities (Cristo Salvador, Divino Espírito Santo, Nossa Senhora do Carmo and São Sebastião do Cipoal) with the participation of 46 residents. 01-June - Second fauna monitoring inventory in the "Fazenda Pacajá" region. July - Fabric painting workshop in 4 communities (Cristo Salvador, Divino Espírito Santo, Nossa Senhora do Carmo and São Sebastião do Cipoal) with the participation of 44 residents. 11-July - Renewal of the Onça Pintada Institute certificate. August - Flower-making workshop in the 5 communities covered by Upbio's Socio-environmental Responsibility Program with the participation of 62 residents. September - Workshop for the production of handmade jams in the 5 communities covered by Upbio's Socio-environmental Responsibility Program with the participation of 36 residents. 22-November - Meeting to approach and present the Socio-environmental Responsibility Program for the Camarapi community. Invitation to communities via WhatsApp for the 4th Social Action conducted by "Fazenda Pacajá" and Portel City Hall. 07-December - Meeting with communities to present the CCB certification, apply the SBIA workshop and build the Theory of Change. Occurrence of the 4th Social Action conducted by "Fazenda Pacajá" and Portel City Hall with the participation of 282 people from more than 15 communities.
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Source: CCB Standard

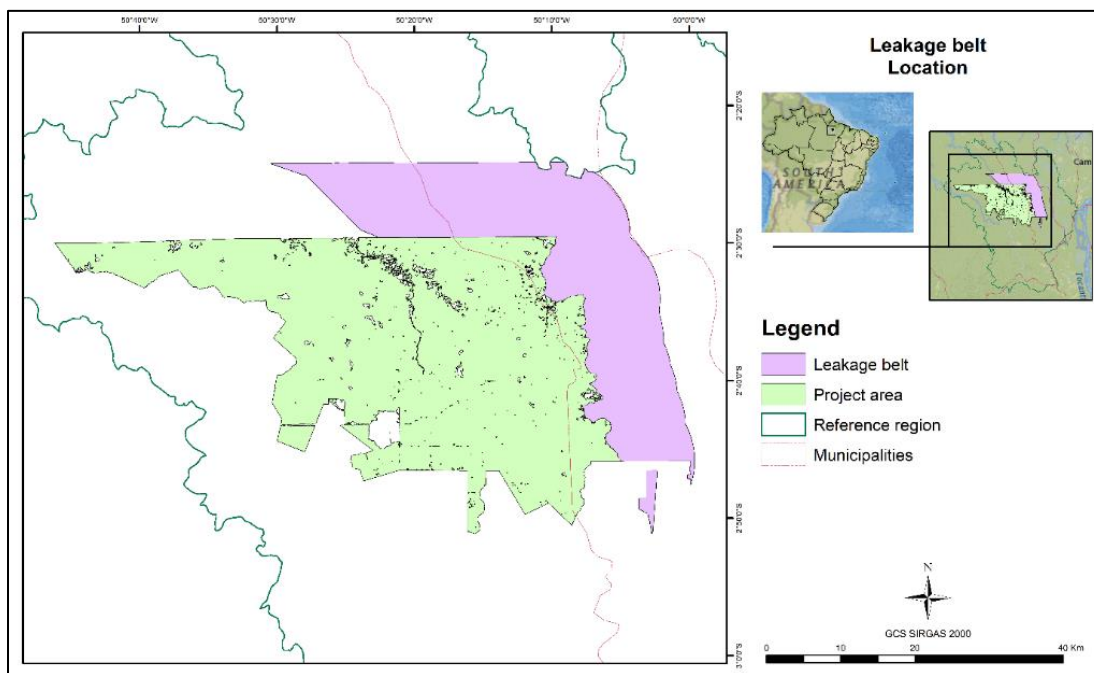
2.1.2 Minor Changes to Project Design (*Rules 3.5.6*)

Compared to the CCB's PD of the ABC Norte REDD Project, there have been alterations in the measurement approach for the “Livelihoods” and “Well-being” categories, as outlined in section “1.2 - Standardized Benefit Metrics” of this MR. While the PD utilized the “number of people” as the measurement metric, the current monitoring period has shifted to the “number of families”. This adjustment was prompted by the recording practices employed by Upbio through the Socio-environmental Responsibility Program of the “Fazenda Pacajá”, particularly in monitoring residents engaged in income generation (well-being) and subsistence activities. The benefits of these activities are now attributed not only to individual residents but also to their families (and, in some cases, to the community as a whole). This modification aimed to capture the impact of these activities on family units and the community in a more comprehensive manner.

2.1.3 Project Description Deviations (*Rules 3.5.7 – 3.5.10*)

During the second monitoring period of the VCS Standard and SOCIALCARBON methodology (which also corresponds to the interval between 01-January-2021 to 31-March-2023), an overlap was found between the ABC Norte REDD Project leakage belt and the Jutaituba REDD+ Project project area. Following the requirements of the methodology, the opportunity was taken to remove such overlaps reformulating the leakage belt during this monitoring period. Thus, we defined the area of the leakage belt with an area of 74,552.76 ha, as Figure 2 illustrates below:

Figure 2 - Leakage belt location



Source: VCS Standard REDD ABC Norte Project²⁶

²⁶ Available at: <<https://registry.verra.org/app/projectDetail/VCS/2558>>. Accessed on: 04 Jun. 2023.

In addition, according to the VCS Standard v4, the six Kyoto Protocol greenhouse gases and ozone-depleting substances shall be converted using 100-year Global Warming Potentials derived from the current and most recent data available. During this second monitoring period, the Global Warming Potential (GWP) for CH₄ and N₂O were updated according to the IPCC Fifth assessment Report (AR5), where GWP for N₂O = 265 and GWP for CH₄ = 28. This requirement was established as a future obligation placed during the validation process for the other monitoring of the ABC Norte Redd Project, including the recalculation of the baseline values, since the previous values of the IPCC Fourth Assessment Report (AR4) were being used, where it was GWP CH₄= 25 and GWP N₂O= 298.

As mentioned, in addition to updating the GWP values for calculating emissions reductions from this monitoring period and subsequent ones, this update included the recalculation of estimated baseline emissions values and therefore the net GHG emission reductions and removals expected by the project activity of ABC Norte REDD project during the crediting period, which includes estimates of GHG emissions reduction (REDDt), calculations of buffer and leakage, and the calculation of tradable Verified Carbon Units (VCut).

More information about the mentioned deviation can be viewed in the Monitoring Report: VCS v4.0, SOCIALCARBON Standard of the second monitoring period of the ABC Norte REDD Project (01-January-2021 to 31-March-2023), including the tables with the updated values. The document in question is not yet available on the VERRA website as the verification process has not yet been completed. However, it will be made available for analysis by VVB.

2.1.4 Risks to the Project (G1.10)

The risk to the project analysis was carried out following the guidelines of the VCS AFOLU “Non-Permanence Risk Tool” v4.0, issued on 20-January-2023. The table below presents all identified risks, their potential impacts and the mitigation measures necessary to minimize risks related to the project's climate, community and biodiversity. The document in question will be made available for review by the VVB.

Table 4 - Main project risks, their impacts and mitigation measures

Risk Category	Identify Risk	Potential impact of risk on climate, community and/or biodiversity benefits	Actions needed and designed to mitigate the risk
Internal Risk	Financial Viability Project has secured less than 15% of funding needed to cover the total cash out before the project reaches breakeven.	The fact that the project currently does not have available callable financial resources to cover the total cash out before the project reaches breakeven, could impact in the maintenance of project activities, as well as the expected benefits for climate, community, and biodiversity.	The project proponent has sufficient private funds to conduct project activities, a practice that has occurred since the initial date of the REDD project, as the proponent carries out actions related to climate, community, and biodiversity despite the carbon project.
	Opportunity Cost NPV from the most profitable alternative land use activity is expected to be at least 100% more than that associated with project activities; or where baseline activities are subsistence driven, net positive community impacts are not demonstrated.	As described on the VCS Joint PD MR, the most likely alternative scenario is considered to be livestock production, as it is the most profitable one. The livestock production scenario has a higher NPV 374% higher than the REDD project scenario), as demonstrated in the cashflow spreadsheet.	Carbon credits will compose a significant income to the project activity to maintain its conservation operations and socio-economic benefits. The project is protected by legally binding commitment to continue management practices that protect carbon stocks, and they do cover the entire crediting period. ABC Norte has received permissions to manage forest resources based on a Sustainable Forest Management Plan that was made available to IBAMA, the Environmental Agency responsible for licensing these activities in the Project region. At the beginning of the project, in 2017, the project area was already with a management plan implemented, which got renewed in 2019, extending the sustainable forest management for more 35 years, i.e. management practices should be maintained until 2054. However, the ABC Norte, will certainly renew the SFMP after the end of the 35-year cycle. It is important to note that ABC Norte is allowed (and has the intention) to request the renewal of the sustainable forest

			management plan for more 35 years once this first period is over.
Natural Risk	Fire (F) Increase of fire outbreaks	The increase in fire outbreaks can negatively impact the climate and biodiversity in the project area, as it can cause the loss of biodiversity (reducing species of fauna and flora, as well as their habitats) and also cause a loss of carbon stock in the region.	The management team performs monthly monitoring of the heat spots detected by INPE's program, allowing them to identify the spots that are most susceptible to fire outbreaks in order to send a team to assess their possible occurrence and take the appropriate measures to contain the possible fire outbreak, if necessary.
	Extreme Weather (W)	The extreme increase in weather is directly related to negative impacts on the climate and, consequently, on biodiversity and local communities, which can be negatively affected by an increase in the level of seas and oceans (consequently rivers), a decrease in animals used as a source of food (fish for example), loss of fauna and flora, etc.	No extreme weather events damaging the project area were reported by the management team since the project start date. No measures are taken for addressing this matter, since it is a risk that does not depend on continuous monitoring neither will be mitigated through some action.

Source: created by authors based on Overall Non-Permanence Risk Rating and Buffer Determination for ABC Norte REDD Project

Table 17 - Overall Non-Permanence Risk Rating and Buffer Determination for ABC Norte REDD Project

Risk Category	Rating
Internal Risk	7.00
External Risk	0.00
Natural Risk	1.50
Overall Risk Rating (a+b+c)	10

Source: created by authors based on Overall Non-Permanence Risk Rating and Buffer Determination for ABC Norte REDD Project

2.1.5 Benefit Permanence (G1.11)

The entire project has been designed and is being implemented to ensure that benefits are maintained beyond the project lifetime. Thus, in order to sustain and enhance climate, community and biodiversity benefits beyond the useful project lifetime, the project has undertaken and will undertake a set of actions identified as a result of the demands raised by community members since the start date of the project (13-

September-2017), especially through Upbio. These actions include promoting the creation of cooperatives or associations to diversify production, increase sales, and organize logistics. Additionally, providing cost-effective home storage solutions, ongoing diversification of cultivation and production techniques considering the skills of community members, and defining a dedicated space for community use have been determined. Other initiatives include implementing community engagement strategies, establishing formal consultation and deliberation processes, providing ongoing technical training activities for processing products, and developing a schedule of activities based on the community's willingness to explore alternative sources of income, along with maintaining studies on local fauna.

Concerning financial support, the proponents had the necessary resources to sustain project activities until the first verification, which took place from 3-September-2017 to 31-December-2020. After this period, with the sale of part of the carbon credits generated by the project, the income was reinvested in socio-environmental actions for local communities and the conservation of local biodiversity.

Climate

The ABC Norte REDD Project aims to reduce and avoid deforestation, thus promoting the reduction of GHG emissions, benefiting the climate. To generate more climate benefits, constant and effective monitoring of the project area will be maintained during the project lifetime. Other activities, considering local vulnerabilities and characteristics, will be implemented to improve identified opportunities. Additionally, revenue from Sustainable Forest Management implemented within the project area collaborates with the proponent's actions to monitor the project area and prevent invasion, illegal deforestation, and other actions that may harm the forest conservation project beyond its useful life.

Community

Community activities aim to improve the quality of life and well-being of people in local communities in various aspects. Training, workshops, fairs, conversation circles, and support for sustainable practices can enhance the community's relationship with the project and the environment, promoting capacities and alternatives for generating income for residents beyond the useful life of the project.

Collaborating with local communities ensures that project activities are tailored to their specific needs, leading to sustainable development and long-term economic growth. With these permanent extra incomes, local communities will ensure the permanence of social benefits while reducing pressure on adjacent forests, resulting in positive impacts on climate and biodiversity.

Ongoing communication and participatory consultation will be maintained with local communities throughout the project's life to ensure that activities achieve goals, considering their recommendations, feedback, and complaints. If necessary, activities can be adapted, excluded, and rebuilt as they aim to

create environmental awareness that will benefit biodiversity, climate regulation, and the well-being of the community indirectly over generations.

Biodiversity

The project will conduct constant monitoring of biodiversity to observe impacts and changes in the population, behavior, and use of the area. This study is crucial to understanding the local fauna and flora and improving the conservation of priority species (threatened, threatened, endemic, etc.) by designing effective activities to protect them. Engaging local communities in biodiversity conservation is essential, emphasizing the importance of activities related to environmental conservation and education with these communities.

2.1.6 Grouped Projects

Not applicable. This is not a grouped project.

1) New Project Areas and Communities (G1.13)

Not applicable. This is not a grouped project.

2) Project Zone Map (G1.13)

Not applicable. This is not a grouped project.

3) Eligibility Criteria for Grouped Projects (G1.14)

Not applicable. This is not a grouped project.

4) Scalability Limits for Grouped Projects (G1.15)

Not applicable. This is not a grouped project.

5) Risk Mitigation for Grouped Projects (G1.15)

Not applicable. This is not a grouped project.

6) Changes to Management (G4.1)

Not applicable. This is not a grouped project.

2.2 Stakeholder Engagement

2.2.1 Stakeholder Access to Project Documents (G3.1)

The full REDD ABC Norte Project, including the project description, project summary and monitoring report, will be available on the VERRA website, along with other mandatory documents. Therefore, anyone interested in accessing it or obtaining more information can do so through the platform²⁷.

Additionally, since it is a validation and verification process, the project description, results of Theory of Change applied on 07-December-2023, project summary and results of the first monitoring period (01-January-2021 to 31-March-2023) will be presented to the communities and other stakeholders simultaneously (section “2.1.7 - Description of Stakeholders” of CCB’s PD²⁸). For the communities, this moment is scheduled to occur between 27-February-2024 and 29-February-2024, following the itinerary:

- 27-February-2024: Caminheiros do Bem²⁹ and Monte Sião Community.
- 28-February-2024: Divino Espírito Santo and Cristo Salvador Community.
- 29-February-2024: São Sebastião do Cipoal and Nossa Senhora do Carmo Community.

The Upbio team will arrange the community visit, notifying the leaders in advance about the scheduled date. When they arrive in the community, they will gather as many members as possible. The meeting will commence with a presentation, recalling the purpose of the visit and highlighting the activities conducted in the previous year (2023). Subsequently, the survey of the community's demands will begin, using materials such as cardboard to visually document the desires and future actions to be developed. In this process, the activities identified through the theory of change, developed with the leaders of four of the five communities covered by Upbio's Socio-environmental Responsibility Program, will be included (see to section “2.1.8 - Project Activities and Theory of Change” of CCB's PD³⁰). The meeting will conclude with the direction of the upcoming activities in the community, emphasizing the ongoing commitment to active listening and the implementation of collectively identified actions. This approach aims to enhance collaboration by ensuring that planned actions align with the needs and aspirations of the involved communities.

The Summary Project and the document containing the results of the first monitoring period (01-January-2021 to 31-March-2023) will be distributed in Portuguese, based on the local language, to the community

²⁷ Available at: <<https://verra.org/search/>>. Accessed on: 24 Jan. 2024.

²⁸ Available at: <<https://registry.verra.org/app/projectDetail/CCB/2558>>. Accessed on: 06 Feb. 2024.

²⁹ The Caminheiros do Bem community (also called Camarapi) is located in the project area. Upbio's actions for the recognition of the territory, approximation with community members and inclusion in its Socio-environmental Responsibility Program began in October-2023 from the income generated by the carbon project. Due to the incipient nature of the community approach, the first visit in 2024 will be focused on introducing the ABC Norte REDD Project.

³⁰ Available at: <<https://registry.verra.org/app/projectDetail/CCB/2558>>. Accessed on: 06 Feb. 2024.

leaders, who will sign a receipt of receipt of the documents. This initiative will be implemented to guarantee that all stakeholders have access to the information and the opportunity to address any issues that may arise.

Moreover, the digital version of the project documents and the summary of the monitoring report will be accessible for consultation at the “Fazenda Pacajá” headquarters. The printed document can be requested as needed. An email will also be sent by Algar Farming and/or Ecológica Assessoria to the other interested parties identified in section “2.1.6 - Identification of Stakeholders” of CCB's PD, providing the documents in question and outlining the subsequent steps related to the ABC Norte REDD Project, in accordance with the guidelines established in the PD and the MR.

In addition, any stakeholder may contact the Ecológica Assessoria team through the email: tecnica@ecologica.br. If you have any questions, the team will be available to answer them.

2.2.2 Dissemination of Summary Project Documents (G3.1)

As mentioned in section “2.2.1 - Stakeholder Access to Project Documents” As this is a concomitant validation and verification process, the results of the first monitoring period (01-January-2021 to 31-March-2023) will be presented to communities and other stakeholders together with the Project Summary. This moment is scheduled to take place between 27-February-2024 and 29-February-2024, following the itinerary:

- 27-February-2024: Caminheiros do Bem and Monte Sião Community.
- 28-February-2024: Divino Espírito Santo and Cristo Salvador Community.
- 29-February-2024: São Sebastião do Cipoal and Nossa Senhora do Carmo Community.

The Upbio team will arrange the community visit, notifying the leaders in advance about the scheduled date. Upon arrival in the community, they will once again gather all the members. The meeting will commence with a presentation, recalling the purpose of the visit and highlighting the activities conducted in the previous year. Subsequently, the survey of the community's demands will begin, using materials such as cardboard to visually document the desires and future actions to be developed. In this process, the activities identified through the theory of change, developed with the leaders of four of the five communities covered by Upbio's Socio-environmental Responsibility Program, will be included (see to section “2.1.8 - Project Activities and Theory of Change” of CCB's PD³¹). The meeting will conclude with the direction of the upcoming activities in the community, emphasizing the ongoing commitment to active listening and the

³¹ Available at: <<https://registry.verra.org/app/projectDetail/CCB/2558>>. Accessed on: 06 Feb. 2024.

implementation of collectively identified actions. This approach aims to enhance collaboration by ensuring that planned actions align with the needs and aspirations of the involved communities.

Additionally, the digital version of the project documents and the summary of the monitoring report will be made available for consultation at the headquarters of the “Fazenda Pacajá”. The printed document may be requested when necessary. An email will also be sent by Algar Farming and/or Ecológica Assessoria to the other interested parties identified in section “2.1.6 - Identification of Stakeholders” of CCB's PD, providing the documents in question and outlining the subsequent steps related to the ABC Norte REDD Project, in accordance with the guidelines established in the PD and the MR.

Furthermore, all documents and information regarding the results of the monitoring of the development of the ABC Norte REDD Project will be published in the VERRA Registry.

All relevant information and evidence on the dissemination of the project documents will be made available for analysis by the VVB.

2.2.3 Informational Meetings with Stakeholders (G3.1)

In January-2021, ABC Norte conducted meetings with the Portel City Council (Image 1) and the Municipal Departments of Health, Education, Economic Development, and Social Assistance. The discussions centered around the Socio-environmental Responsibility Program and its impact on specific communities within the project zone and the SFMP of “Fazenda Pacajá”.

In addition, all the communities served by the program (Cristo Salvador, Divino Espírito Santo, Monte Sião, Nossa Senhora do Carmo e São Sebastião do Cipoal) were presented, as well as the socioeconomic diagnosis, which shows the profile of each one, and the actions carried out since the beginning of the project. To further reinforce ABC's commitment and transparency, data from the monitoring of fauna (species found) and the Social Action³² carried out in partnership with the city of Portel at the end of 2019, resulting from the activities carried out in the first year of the project's execution, were presented.

Furthermore, in June-2021, a lecture was conducted with active participation from the community, ABC Norte representatives, and the Ecológica Assessoria team. The lecture focused on the importance of forest preservation and the trading of carbon credits in both national and international markets. Significant attention was given to highlighting the adverse effects of deforestation. This session not only increased awareness but also enhanced the overall comprehension of the potential for selling carbon credits. This, in

³² The event takes place annually within Vila ABC, in partnership with the Portel City Hall, health department, J&Y and Algar Farming. During the event, various basic services are provided to the attendees from the communities, including residents of Vila ABC, who are mostly employees or family members of the farm. These services include document issuance (ID, driver's license, student ID), vaccinations, dental consultations, hairdressing services, children's games and also allow community members to bring their crafts or products (food, sweets, and juices) for sale.

turn, laid the foundation for implementing social and environmental initiatives that bring benefits to the communities.

Image 1 - Lecture on Carbon Market in Cristo Salvador community



Source: project proponent's collection (June-2021)

In addition, in January-2023, an expression of gratitude for the institutional partnership with the Municipality of Portel was conveyed through the Municipal Secretariats of Health and Social Assistance to execute the 3rd Social Action (2022) at the “Fazenda Pacajá” for residents of riverside communities, providing health and citizenship services.

An email was dispatched, containing an extract of the data from the socio-environmental indicators of the activities conducted by Socio-environmental Responsibility Program in 2022. This was done to showcase results and fortify the existing partnership, marking the third edition of the social action in collaboration with the Municipality of Portel.

In the context of communities, activities are duly communicated in advance through the communication channel on Whatsapp (+55 91 98517 3832). This approach aims to ensure that members are aware and informed about the planned initiatives, enabling effective participation and better coordination among all those involved.

All pertinent information and evidence will be made accessible for analysis by the VVB.

2.2.4 Community Costs, Risks, and Benefits (G3.2)

Since its inception, the ABC Norte REDD Project has conducted participatory consultations with the communities to understand their real needs and potential activities to be developed based on the demands of the communities involved in the Socio-environmental Responsibility Program, which the project proponent has in partnership with Upbio. Additionally, the project has been designed to bear no costs for

the communities, as all project activities will be funded by the project proponents. On the contrary, activities are planned to enhance the well-being of people living in the project area, including income generation.

During the visit to implement the workshop for the elaboration of the Theory of Change with the community in 07-December-2023, the socio-environmental technical team of Ecológica Assessoria made a presentation reinforcing that the project will not negatively impact the community. The activities already developed in the communities and those that will continue to occur have the sole objective of positively impacting and offering improvements (according to the context and demands of the residents) for local well-being. During the visit, it was evident that the community members had a positive perception of the project, as they witnessed improvements in their way of life (such as fish and poultry farming) after the commencement of the visits and activities carried out by Upbio.

Thus, based on the Theory of Change outlined in section “2.1.8 - Project Activities and Theory of Change” of CCB’s PD and considering the concept of risk presented by SBIA³³ as “pre-existing conditions”, i.e., something that can prevent the success of the project’s outcome, possible risks were identified in the causal chain of the proposed activities for the communities. These risks include internal conflicts, unfair competition, weather fluctuations, low community participation, barriers to access to information, misalignment of objectives among community members and lack of adherence to formal consultation and deliberation processes (see section “2.3.4 - Community Costs, Risks and Benefits” of CCB’s PD)³⁴.

On the other hand, it is observed that the strategies for mitigating the identified risks are, to a certain extent, integrated with the causality developed in the aforementioned section. For example, the mitigating measure related to the implementation of robust communication strategies to elucidate community members about the importance of the procedures and their benefits is encompassed in the activity “establish formal processes of consultation and deliberation”. This activity, among other expected results, seeks the implementation of deliberations in a representative manner.

It is also important to highlight that continuous communication between the project team and the local communities through Upbio’s monthly field visits ensures not only the dissemination of information but also the prompt identification and mitigation of any complaints related to risks in the communities.

The communication of risks and mitigation measures will coincide with Upbio’s scheduled visit to the communities covered by the Socio-environmental Responsibility Program, set to occur between 27-February-2024 and 29-February-2024 (see section “2.2.1 - Stakeholder Access to Project Documents”). It

³³ Page 79. Available at: <<https://verra.org/wp-content/uploads/social-and-biodiversity-impact-assessment-sbia-manual-for-redd-projects-part-1.pdf>>. Accessed on: 23 Dec. 2023.

³⁴ Available at: <<https://registry.verra.org/app/projectDetail/CCB/2558>>. Accessed on: 06 Feb. 2024.

is noteworthy that the visit to the Caminheiros do Bem community, given its preliminary nature, will primarily focus on presenting the ABC Norte REDD Project.

Finally, all communities have an online message group with the Upbios team (+55 91 98517 3832), responsible for socio-environmental activities. This channel is used to facilitate communication and the management of information on local activities and actions, including potential risks.

2.2.5 Information to Stakeholder on Verification Process (G3.3)

As the project has already been validated and has gone through two verification periods, VCS and SOCIALCARBON, communication with stakeholders about the audit process has been ongoing since the beginning of the project through Upbio. Currently, as it is a process of validation and verification of CCB Standards, the results of the first monitoring period (01-January-2021 to 31-March-2023) will be presented to the communities and other stakeholders along with the Project Summary. For the communities, this moment is scheduled to take place between 27-February-2024 and 29-February-2024, following the itinerary:

- 27-February-2024: Caminheiros do Bem and Monte Sião Community.
- 28-February-2024: Divino Espírito Santo and Cristo Salvador Community.
- 29-February-2024: São Sebastião do Cipoal and Nossa Senhora do Carmo Community.

The Upbio team will arrange the community visit, notifying the leaders in advance about the scheduled date. When they arrive in the community, they will gather as many members as possible. The meeting will commence with a presentation, recalling the purpose of the visit and highlighting the activities conducted in the previous year (2023). Subsequently, the survey of the community's demands will begin, using materials such as cardboard to visually document the desires and future actions to be developed. In this process, the activities identified through the theory of change, developed with the leaders of four of the five communities covered by Upbio's Socio-environmental Responsibility Program, will be included (see to section "2.1.8 - Project Activities and Theory of Change" of CCB's PD³⁵). The meeting will conclude with the direction of the upcoming activities in the community, emphasizing the ongoing commitment to active listening and the implementation of collectively identified actions. This approach aims to enhance collaboration by ensuring that planned actions align with the needs and aspirations of the involved communities.

The Summary Project and the document containing the results of the first monitoring period (01-January-2021 to 31-March-2023) will be distributed in Portuguese, based on the local language, to the community

³⁵ Available at: <<https://registry.verra.org/app/projectDetail/CCB/2558>>. Accessed on: 06 Feb. 2024.

leaders, who will sign a receipt of receipt of the documents. This initiative will be implemented to guarantee that all stakeholders have access to the information and the opportunity to address any issues that may arise.

In terms of other stakeholders, at the project's outset, a permanent communication channel was established with local stakeholders to receive any comments or suggestions regarding this REDD project. Thus, an e-mail will also be sent by Algar Agropecuária and/or Ecológica Assessoria to the other interested parties identified in section "2.1.6 - Identification of Stakeholders" of CCB's PD, providing the information in question and outlining the subsequent steps related to the ABC Norte REDD Project, in accordance with the guidelines established in the PD and the MR.

2.2.6 Site Visit Information and Opportunities to Communicate with Auditor (G3.3)

It should be noted that since the project has already been validated and has gone through two verification periods, VCS and SOCIALCARBON, communication with stakeholders about the audit process has been ongoing since the beginning of the project through Upbio. Currently, as it is a process of validation and verification of the CCB Standards, communication to stakeholders will involve both processes.

So, for the communities, the information related to the audit visits will also be carried out between 27-February-2024 and 29-February-2024, following the itinerary:

- 27-February-2024: Caminheiros do Bem and Monte Sião Community.
- 28-February-2024: Divino Espírito Santo and Cristo Salvador Community.
- 29-February-2024: São Sebastião do Cipoal and Nossa Senhora do Carmo Community.

All communities have an online message group with the Upbios team (+55 91 98517 3832), responsible for socio-environmental activities. The visit will also be notified through this communication channel.

The conduct of this process will be facilitated by the Ecológica Assessoria and Upbio team, who will be available throughout the audit process. These teams will be responsible for traveling to the communities covered by Upbio's Socio-environmental Responsibility Program, clarifying doubts raised by the VVB team and translating the information from the auditor(s) to the representatives of the communities participating in this process. The aim is to ensure an effective and transparent conduct of the audit, fully meeting the requirements and expectations of all stakeholders.

For the other interested parties identified in section "2.1.6 - Identification of Stakeholders" of the CCB's PD³⁶, Algar Agropecuária and/or Ecológica Assessoria will send an e-mail containing detailed information

³⁶ Available at: <<https://registry.verra.org/app/projectDetail/CCB/2558>>. Accessed on: 08 Feb. 2024.

about the validation and verification audit process. In addition, the communiqué will outline the subsequent steps related to the ABC Norte REDD Project, following the guidelines set out in the PD and the MR. This communication aims to keep all parties informed and aligned with the audit activities and the next phases of the project, promoting transparency and collaboration among those involved.

2.2.7 Stakeholder Consultation (G3.4)

Local Stakeholder Consultation - Online consultation

For the VCS validation of the ABC Norte REDD Project, the online consultation with local stakeholders was held on 13-July-2021, at 4 pm (Brasília time), on a Virtual Conference Platform.

The presentation detailed a summary of the proposed activities for the implementation and monitoring of the project. The VVB auditor (RINA Services S.p.A.), who conducted the validation of this project, was also invited to this meeting.

The online meeting was attended by several actors, including: Upbio, Sustainable Carbon, Palmas Ecológico Institute, Chico Mendes Institute for Biodiversity Conservation (ICMBio) and National Institute of Colonization and Agrarian Reform (Incra). Stakeholders were interested in the project. No negative comments have been made on the project. The presentation described the main actions carried out by ABC Norte to formulate the carbon project, such as certified forest management and socio-environmental activities. In addition to the introduction of the company's activities, the carbon project development process, deforestation monitoring and projection methods, project area, reference region, leak belt, etc., were also explained. The SOCIALCARBON Standard (methodology used until the second verification), its co-benefits, monitoring methods and methodology, as well as the relationship with the UN Sustainable Development Goals were also explained. The comments received are summarized in the table below:

Table 5 - Summary of comments made during the remote stakeholder consultation

Interested	Comments
Environmental Analyst at DIMAN/ICMBio - Directorate of Creation and Management of Conservation Units	The environmental analyst explained his opinion on the importance of REDD projects and the voluntary carbon market. He pointed out that he only knew how the cutting cycle works, in which an exploited area can only be managed again after the cycle is completed (in the case of the “Fazenda Pacajá”, 30-years). He asked about the calculation of the volume of emissions from avoided deforestation and the sale of credits. It was explained that the Project is categorized as AUD (Unplanned Deforestation Avoided), and that this category includes projects with or without a sustainable forest management plan. The carbon calculation is carried out based on the reduction of deforestation. Deforestation is projected for the entire duration of the project and compared to actual deforestation during project monitoring. Emissions from forest management are discounted from emissions reductions and are referred to as project emissions. Ecológica Assessoria also added that there are about 20 REDD projects in Brazil, 4 of which are with forest management. Due to the higher valuation of carbon credits, there is a tendency to value standing forests instead of areas with forest management, with carbon credits now having a valuation close to that of certified legal wood. The presentation material, with information about the project, was sent to ICMBio.

Source: created by authors

Contact information for Ecológica Assessoria and ABC Norte was made available at the end of the meeting. Communication can be made via letter, e-mail or telephone.

Local Stakeholder Consultation - Community consultation

Project stakeholders range from government agencies to the community residing inside and outside the project area. Thus, by applying different forms of consultation, it is considered that the project encompasses the social, economic and cultural diversity of the different actors.

In order to communicate the project to the traditional communities located in the region and area of reference of the project, a consultation was carried out considering their particularities for the planning of the future of the project.

The riverside community consultation took place from 25-June-2021 to 27-June-2021, visiting the 5 communities reached through the Socio-environmental Responsibility Program. The meeting included a simplified presentation of the project, exposing the risks and benefits arising from the project's activities for the riverside population. The location of the project, the context of climate change and the threat of deforestation were discussed with the communities in an informal conversation, with the riverside dwellers sharing their perceptions and experiences on the topic.

Table 6 - Summary of meetings and contributions to the ABC Norte REDD Project

Date	Relationship Audiences	Comments
25-June-2021	São Sebastião do Cipoal Community	The meeting was attended by 18 members of this community. They showed interest in knowing what has been done in other projects, in having examples of actions that this type of project can carry out with the communities. The community already has a fish farming project, which is being very positive for income generation and community training. Their main demand is the renovation of the school and the resumption of classes (ABC Norte has already committed to donating construction material). There were no comments against the project, they thought it was a good initiative by ABC Norte and they hope that the socio-environmental work with Upbio will grow even more.
25-June-2021	Nossa Senhora do Carmo Community	The meeting was attended by 9 adults and 5 children. Community members have shown interest in the project and highlighted that the success of the project will be positive in bringing new activities to the community. They asked about what other projects can be developed to generate carbon credits, such as reforestation, agroforestry systems, etc.
26-June-2021	Divino Espírito Santo Community	After the presentation of the project, 8 participants of the meeting asked how credit can help communities and how they can help secure this resource for them. It was answered that part of the sales of credits will be directed to improvements in activities that are already developed with the communities, which can help in the work and maintenance of the forest, which will generate even more credits. The possibility of the community providing seedlings for the ABC Norte to carry out the reforestation of the areas, chocolate production, courses and training aimed at other productions, etc., was discussed. As the main demand, they commented on the lack of opportunities for young people and children, who need to leave the community to study and have better living conditions. They would like to be more organized as a community and expand the opportunities for these young people to come back and apply the knowledge in the communities.
26-June-2021	Cristo Salvador Community	Participants reported having previous knowledge about the greenhouse effect and global warming. They observed changes in heat conditions and working hours due to solar intensity. They emphasized that deforestation in communities is a

		practice of subsistence and survival, acknowledging, however, that this activity involves aggressions and environmental impacts. They thanked the initiative of the project and the opportunity to expand the company's actions with the communities. They expressed the desire for the resources to contribute to mitigating the impacts caused by communities by providing employment opportunities and increased security.
26-June-2021	ABC Norte Collaborators - Vila ABC	The officials asked about what benefits it could provide to the village. They commented on the need for electricity and improvements in the health center, especially. They were very interested in the project and looked for more brochures to get in touch with the companies and find out more details.
27-June-2021	Monte Sião Community	The community confirmed that they feel the difference in the climate and the need to minimize impacts on nature. Currently, the community carries out poultry farming activities. With the carbon resource, they hope to be able to start fish farming. As their main need, they asked for the generation of jobs in the ABC itself for management.

Source: created by authors based on Upbio's Socio-environmental Responsibility Program

In addition, a permanent communication channel has been created with local stakeholders to receive any comments or suggestions regarding this REDD project. During the visit, an information folder was distributed, containing the address, e-mail and telephone number of Ecológica Assessoria and Algar Farming. Thus, the channel is available for any comment, suggestion or criticism. These will be registered and forwarded to the person in charge. In addition, the communities also have contact with the Responsibility Program team through WhatsApp (+55 91 98517 3832), in addition to the monthly visits carried out by the program.

Moreover, the consultation with CCB stakeholders took place during the on-site visit of Ecológica's socio-environmental technical team, in December-2023. The application of the SBIA workshop, which supported the development of the Theory of Change, is detailed in section "2.1.8 - Project Activities and Theory of Change" to the CCB's PD³⁷. During these meetings, the Upbio team collects perceptions and possible adjustments and demands to develop future actions within the communities.

³⁷ Available at: <<https://registry.verra.org/app/projectDetail/CCB/2558>>. Accessed on: 06 Feb. 2024.

Figure 3 - Folder distributed to community members (front)

O que são os Projetos REDD+?

Os Projetos de REDD+ (**Redução de Emissões provenientes do Desmatamento e da Degradação Florestal**) visam evitar o desmatamento ilegal em determinada região por meio da conservação de uma área de floresta nativa, além de promover seu uso sustentável, proporciona a conservação da biodiversidade local.

O que são Créditos de Carbono?

A partir dessa conservação florestal são desenvolvidos os Créditos de Carbono, que são **moedas verdes**, geradas por diversos tipos de projetos, como o REDD+, que visam diminuir as emissões tão prejudiciais para a saúde do planeta e das populações.

1 tonelada de CO₂e
= 1 Crédito de Carbono

Contatos

Algar: comunicacao@algarfarming.com.br
UpBio: comercial@upbiosolucoesambientais.com
Ecológica Earth: info@ecologica.earth

Projeto ABC Norte REDD+

Construindo um legado positivo para todas as pessoas!

Source: project proponent's collection

Figure 4 - Folder distributed to community members (back)

INÍCIO DO PROJETO
13 de Setembro de 2017

ÁREA TOTAL PROTEGIDA
140.432 hectares de floresta

VERIFICADOR
Verified Carbon Número de Registro: 2558
A MIRA CONSULTING

CO-BENEFÍCIOS
SOCIAL CARBON® Climate, Community & Biodiversity Standards
sem desmatamento

CERTIFICADORES FLORESTAIS
SysFlo® CERFAR

Socioambiental

O Projeto tem como pilar fundamental o seu programa de responsabilidade socioambiental, que impacta diretamente cinco comunidades nas proximidades da propriedade. Uma equipe dedicada visita cada uma dessas comunidades mensalmente, envolvendo-se em atividades culturais, educacionais e de geração de renda.

Sobre o Projeto

O Projeto de REDD+ ABC Norte, além da conservação florestal, visa promover o uso sustentável da floresta por meio do **Manejo Florestal Sustentável** uma área privada da Fazenda Pacajá, administrada pela empresa Algar Farming.

O Projeto se compromete com a conservação florestal e com a manutenção de um Plano de Manejo Florestal Sustentável (**PMFS**) ao utilizar técnicas de exploração de madeira de baixo impacto ambiental, seguindo o ciclo natural da floresta, o que permite a extração sustentável e certificada da madeira, **minimizando o impacto na floresta** e contribuindo para a geração de emprego e renda na região.

Source: project proponent's collection

Furthermore, Ecológica's technical team, with the support of Upbio and proponent of the project, carried out a visit between 04-December-2023 and 10-December-2023 to apply the activities proposed by the SBIA methodology to the communities aimed at building the Theory of Change. The objective of the activity was to survey demands from the communities to support the planning and construction of the activities planned for the CCB, in addition to those that already occur from the SOCIALCARBON Standard methodology (co-benefit methodology used until the second monitoring period of the project).

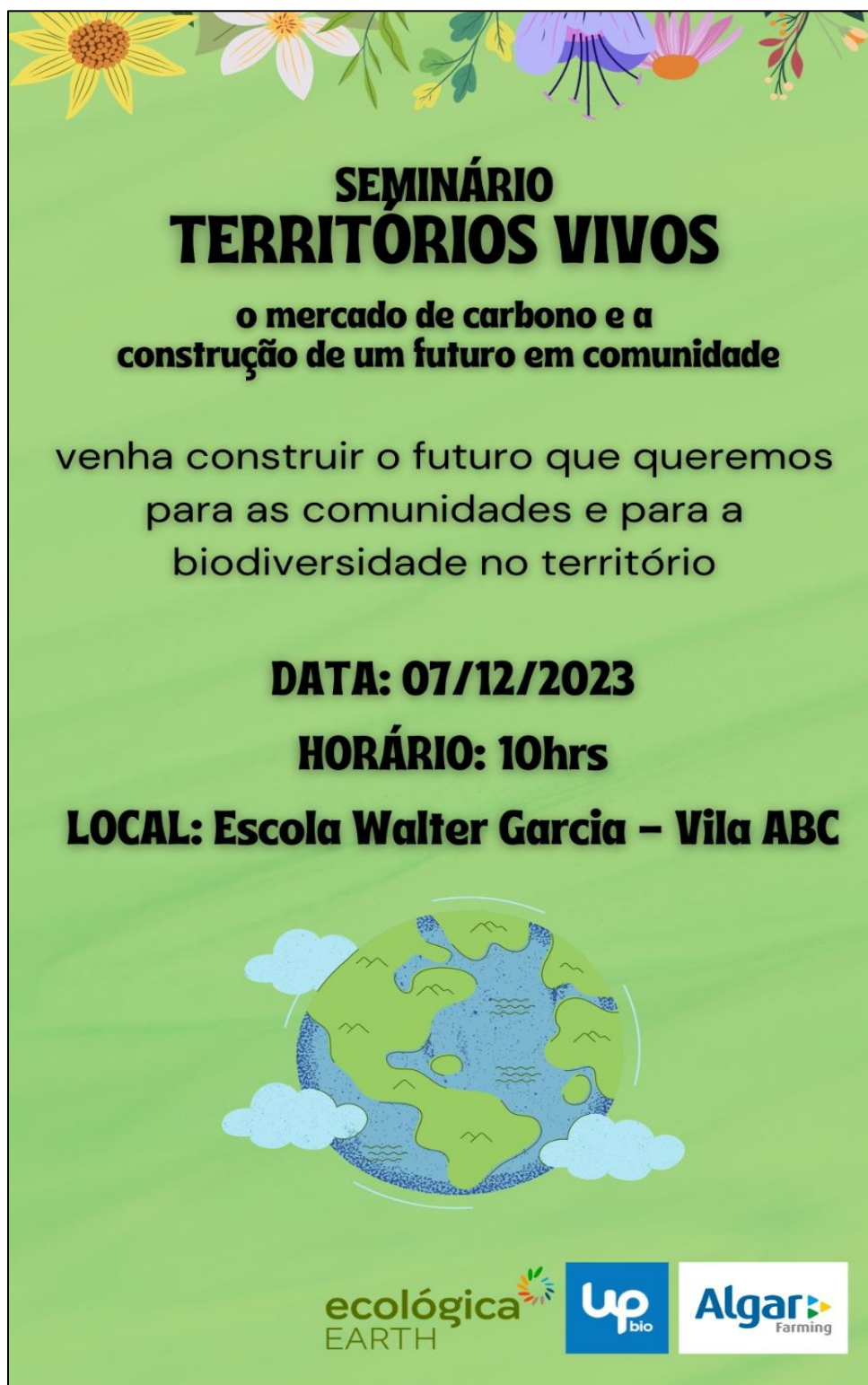
The dynamic took place during the end-of-year social action promoted by Fazenda Pacajá and Upbio within Vila ABC for all communities in the project zone, including those not covered by Upbio's Socio-environmental Responsibility Program (see section "2.1.6 - Identification of Stakeholders" of CCB's PD³⁸), on 07-December-2023, from 8 am to 3 pm. in partnership with the city of Portel, the health department, J&Y and Algar Farming. During the action, different basic services are offered to the people present (including the residents of Vila ABC who are, for the most part, employees/or family members of the farm), such as the issuance of documents (ID, driver's license, student ID), vaccinations, dental consultations, hairdressing services, games for children and even allows members of the community to bring their handicrafts or products (food, sweets and juices) on sale.

In view of this scenario, one of the activities carried out during the social action with some representatives of the local communities was carried out by the socio-environmental team of Ecológica Assessoria inside a classroom of the Vila ABC school, called Walter Garcia, with the presence of six representatives of four of the five communities involved in the Socio-environmental Responsibility Program, on 07-December-2023. In addition to the community members, the workshop was guided by two members of the socio-environmental technical team of Ecológica Assessoria, Júlia Batista and Lucas Freitas, and had the support of Algar Farming's forestry supervisor, Pamela Bahia.

The invitation was sent through the WhatsApp channel (+55 91 98517 3832), a means of communication used by Upbio to engage communities. The company also took on the responsibility of reinforcing the invitation to community leaders, recognizing their representative role in favor of local members.

³⁸ Available at: <<https://registry.terra.org/app/projectDetail/CCB/2558>>. Accessed on: 06 Feb. 2024.

Figure 5 - Invitation to the activity in the ABC Norte REDD Project



Source: project proponent's collection

Below is a list of those present at the workshop, the community to which they belong and the position they represent within it.

Table 7 - List of attendances at the workshops

Name	Community	Position
Jobison Terra Preto	São Sebastião do Cipoal	President of the Association of Quilombola Remnants of São Sebastião do Cipoal
Raimunda Alves	Cristo Salvador	Member of the Local Evangelical Church
Elson do Socorro de Oliveira Chaves	Cristo Salvador	Member of the Local Evangelical Church
Dilma Valente Ribeiro	Cristo Salvador	Member of the Local Evangelical Church
Jaqueline da Silva Araújo	Nossa Senhora do Carmo	Member of the Catholic Church of the Nossa Senhora do Carmo Community
Creusa da Conceição Loureiro	Divino Espírito Santo	School community worker at Escola do Divino Espírito Santo

Source: created by authors

In order to achieve the main objective proposed by the SBIA methodology, some adjustments were made based on the official methodology, considering the reality of the community members, the availability and the short time available to carry out the dynamics. The following are the activities that were carried out with six representatives of the communities:

1. Presentation of the ABC Norte REDD Project and contextualization about the climate change, carbon credits and REDD projects;
2. Participative timeline;
3. Raising problem questions - understanding of the demands;
4. Elaboration of "Scenario in case the actions currently carried out ceased to occur"³⁹;
5. Elaboration of "What future do we want?";
6. Understanding of how will we achieve it - problem issue in a positive form;
7. Elaboration of scenario with project continuity - strategies to be carried out by the project, aiming to impact positively on the communities well-being;
8. Collective validation;
9. Identification of risks and impacts: "What might we face along the way?".

³⁹ The initiatives aimed at promoting the improvement of well-being in the communities identified in section "2.1.6 - Stakeholder Identification" of CCB's PD (<https://registry.terra.org/app/projectDetail/CCB/2558>) have been planned and developed since 2017, the start date of the project, by the Socio-environmental Responsibility Program of Upbio. Thus, instead of using the expression "scenario without the project" with the communities, as recommended by the SBIA, it was decided to use "scenario in case the actions currently carried out ceased to occur".

Image 2 - Recognition of the project area by the leaders participating in the Theory of Change



Source: project proponent's collection

To elucidate and clarify what the ABC Norte REDD Project is, the technical team began the activity by explaining climate change, the importance of forest conservation, how carbon credits are generated, and clarifying the ABC Norte REDD Project, including the Sustainable Forest Management Plan that is implemented within the farm. The technical team also explained SBIA's methodology, how it would be carried out, its importance for the project, as well as its benefits for the communities.

Figure 6 - Explanatory banner 1 presented to the representatives of the communities present during the workshop



Source: project proponent's collection

Figure 7 - Explanatory banner 2 presented to the representatives of the communities present during the workshop

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Clima, Comunidade e Biodiversidade CCB

O padrão CCB é uma certificação adicional ao VCS (programa de crédito de gases de efeito estufa) que evidencia que um projeto tem como objetivo não apenas a mitigação das mudanças climáticas, mas também o **apoio às comunidades e a conservação da biodiversidade**.

A participação da população é crucial na criação de atividades que assegurem o alcance desses objetivos. E isso pode ser desenvolvido por meio da **Avaliação de Impacto Social e de Biodiversidade (SBIA)**, que mostrará os caminhos para conquistas de metas e também o que poderá acontecer caso essas ações planejadas não sejam realizadas.

Verified Carbon Standard + **Climate, Community & Biodiversity Standards**

Etapas da SBIA com as Comunidades

- 1 Estudo das condições iniciais e identificação das partes interessadas
- 2 Projeções sociais e de biodiversidade "sem o projeto" (Linha de Base)
- 3 Desenho do projeto e Teoria da Mudança
- 4 Impactos negativos, riscos e medidas de mitigação

Teoria da Mudança

A Teoria da Mudança (TdM) é uma ferramenta que auxilia no desenho das estratégias de como o projeto pretende atingir os objetivos/metasp sociais e de biodiversidade levantados pelas comunidades.

```

    graph LR
      A[ATIVIDADES geram] --> B[PRODUTOS permitem alcançar]
      B --> C[RESULTADOS geram]
      C --> D[IMPACTOS POSITIVOS]
  
```

Benefícios para a Comunidade e Biodiversidade

- Melhoria da fiscalização ao desmatamento
- Oportunidades de renda alternativas para a população local
- Melhoria na infraestrutura da região
- Promoção da educação ambiental

VAMOS CONSTRUIR EM COLETIVO O FUTURO QUE QUEREMOS?

CONTATO Algar up (91) 9 8517.3832

Source: project proponent's collection

It is worth mentioning that the entire construction was based on the report of the leaders present at the workshop, as well as on the information made available in Upbio's Socio-environmental Responsibility Program. Namely:

- A significant portion of what is produced in the communities is used for subsistence.
- Production techniques are limited, meaning that the resource is not used for the production of a variety of products. For example, there is chocolate production in the Nossa Senhora do Carmo community; However, producers would like to learn how to generate value for this chocolate through chocolate production (processing techniques).
- Not all communities have organized collectives/associations, such as the Divino Espírito Santo association - Agroextractivist Farmers of the Middle Pacajá and the Rural Producers of Divino Espírito Santo association - and the São Sebastião do Cipoal association - Quilombola Remnants of São Sebastião do Cipoal (ARQSSC). Still, even if organized, some don't have an adequate physical space to hold meetings. According to participant Jaqueline da Silva Araújo, for example, the meetings in the Nossa Senhora do Carmo community are itinerant, which means that people do not participate, either due to space limitations or internal disagreements.
- Currently, the main place of sale of what is produced in the communities is Algar itself and the Portel Municipal Fair. In the case of the Municipal Fair, due to transportation difficulties and distance, only a few products are sold there.
- Technical improvement emerges as a possibility to reduce the impact that the oscillation in the harvest affects the communities (for example, there are times when cocoa is discarded due to the exacerbated quantity and others when there is no harvest of the fruit). In addition, it should not only involve the production process itself, but the entire chain of flow to the consumer market (e.g., product storage techniques aimed at increasing their shelf life).
- Technical improvement to expand the variety of products produced in the communities should not impact the cultural aspects involved in this production.
- The dissemination and continuity of technical improvement could be carried out by the people of the communities themselves. In this way, such people would act as multipliers and facilitators.

Also, in January-2021, the company ABC Norte held meetings with the Portel City Council (28-January, see

Image 3) and the Municipal Departments of Health, Education, Economic Development and Social Assistance (29-January) to discuss the Socio-environmental Responsibility Program and its impact on some of the communities present in the project zone and the Sustainable Forest Management of the "Fazenda Pacajá".

The meeting began with a brief presentation on what Sustainable Forest Management is, how it is carried out and what its aspects are. Then, it was presented what ABC Norte represents, where it is located and how it carries out sustainable forest management in its area, certified with the CEFLOR/INMETRO seal of well-managed forests, demonstrating its commitment and social and environmental responsibility.

In addition, all the communities served by the program (Cristo Salvador, Divino Espírito Santo, Monte Sião, Nossa Senhora do Carmo e São Sebastião do Cipoal) were presented, as well as the socioeconomic diagnosis, which shows the profile of each one, and the actions carried out since the beginning of the project. To further reinforce ABC's commitment and transparency, data from the monitoring of fauna (species found) and the Social Action⁴⁰ carried out in partnership with the city of Portel at the end of 2019, resulting from the activities carried out in the first year of the project's execution, were presented. It is worth mentioning that there was an update of both the socioeconomic diagnosis of the communities covered by the Program (2023) and the fauna monitoring also carried out by Upbio. These documents were used for the development of sections "4 - Community" and "5 - Biodiversity" of the CCB's PD⁴¹.

**Image 3 - Record of the meeting that took place on 28-February-2021
between Upbio and Portel City Hall**



Source: project proponent's collection

⁴⁰ The event takes place annually within Vila ABC, in partnership with the Portel City Hall, health department, J&Y and Algar Farming. During the event, various basic services are provided to the attendees from the communities, including residents of Vila ABC, who are mostly employees or family members of the farm. These services include document issuance (ID, driver's license, student ID), vaccinations, dental consultations, hairdressing services, children's games and also allow community members to bring their crafts or products (food, sweets, and juices) for sale.

⁴¹ Available at: <<https://registry.verra.org/app/projectDetail/CCB/2558>>. Accessed on: 06 Feb. 2024.

Not only that, in June-2021, a joint team from Ecológica Assessoria and the ABC Norte project visited the communities covered by Upbio's Socio-environmental Responsibility Program with the main objective of promoting a presentation on the importance of forest preservation, in addition to discussing the possibility of selling carbon credits in the national and international markets.

During the event, a lecture was held at the community center with the theme “The Importance of Forest Preservation and Carbon Sale in the National and International Markets”. During the presentation, it was emphasized that the non-preservation of the forest by 2030 could result in the loss of approximately 22 thousand hectares due to disorderly deforestation in the region of the Farm.

To illustrate this information, historical maps were presented that depicted the advance of deforestation over 15 years (see

Image 4). In addition, it was pointed out that proof of forest preservation could enable the sale of carbon credits, which could be converted into more socio-environmental actions in local communities. The visits were carried out on different dates, with the following participation:

- São Sebastião do Cipoal Community (25-June): 12 participants.
- Nossa Senhora do Carmo Community (25-June): 11 participants.
- Divino Espírito Santo Community (26-June): 9 participants.
- Christ the Saviour Community (26-June): 7 participants.
- Monte Sião Community (27-June): 4 participants.

The active presence of the communities demonstrated the interest and relevance of the theme, highlighting the importance of future actions in this area. The Ecológica Assessoria team, represented by Lyara and Marcelo, contributed significantly to facilitating the content of the activities carried out.

Image 4 - Records of the activity on “The Importance of Forest Preservation and Carbon Sale in the National and International Markets” in the São Sebastião do Cipoal community



Source: project proponent's collection

The continuous collaboration and active participation of these communities is essential to ensure that the future stages of the project are aligned with their needs and aspirations, promoting development linked to the specific needs of these locations.

All relevant information and evidence on the dissemination of the project documents will be made available for analysis by the VVB.

2.2.8 Continued Consultation and Adaptive Management (G3.4)

The project takes all necessary steps to communicate and consult with local stakeholders in an ongoing process throughout the project's lifetime. The project aims to conduct an average of at least one consultation with local stakeholders per year. Each consultation should cover:

- The implementation stage of the project, including the outcomes and the significance of the activities from climate, social and biodiversity perspectives.
- The risks and benefits that the project brings to local stakeholders in the current implementation stage.
- Procedures related to the resolution of any disputes with interested parties, if applicable.
- The validation and verification process of VCS and CCB Programme and the site visit of the validation or verification body, if applicable.

Additionally, a permanent communication channel has been established with local stakeholders to receive any comments or suggestions regarding this REDD project. All communities have an online messaging group with the Upbio team via WhatsApp (+55 91 98517 3832), responsible for socio-environmental activities. This channel is used to facilitate communication and the management of information about local activities and actions carried out by the company.

Furthermore, Algar Farming has a document called “Communication Procedure and Record” (document implemented in 2019) and “Conflict Management and Mitigating Measures” (document implemented in 2021), describing procedures related to the receipt of demands and complaints when not resolved by Upbio, especially from communities⁴². These documents define the following communication channels:

- Ombudsman: 0800 034 2525;
- Direct service at the “Fazenda Pacajá” office;
- Suggestion and complaints box: still in the process of being implemented. The goal is for community members to submit their suggestions for better communication and conflict resolution;

⁴² Algar Farming works to resolve conflicts through conversation and the promotion of basic and environmental education. In this way, the REDD project itself and the expansion of the Socio-environmental Responsibility Program conducted by the company are ways to mitigate conflicts and maintain a good relationship with the communities.

- Official letter: a formal document in which the community will inform and/or request any demand from Algar Farming (see Figure 8).

Radio communication: a communication method in which the community goes to the guardhouse of the “Fazenda Pacajá” and informs what they intend to request. It is also necessary to formally inform (letter) the requested demand. The purpose of the radio is to facilitate and speed up communication between the parties.

Figure 8 - Community demand registration form

[illegible]

Source: project proponent's collection

After the establishment of the means of communication, all demands are met according to the level of urgency described below; and appropriate measures will be taken.

- Level 1: simple demands, easy to solve, which must be answered within 10 days after receiving the request;
- Level 2: demands of medium complexity for resolution, which will be answered within 15 days after receipt of the request;
- Level 3: highly complex resolution demands, which will be answered within 30 days of receiving the request.

In order to solve demands that may directly affect the community, the proponent of the project will send a specialized team for its adequate solution. All the feedbacks, grievances and demands will be recorded and monitored using the spreadsheet of the table below.

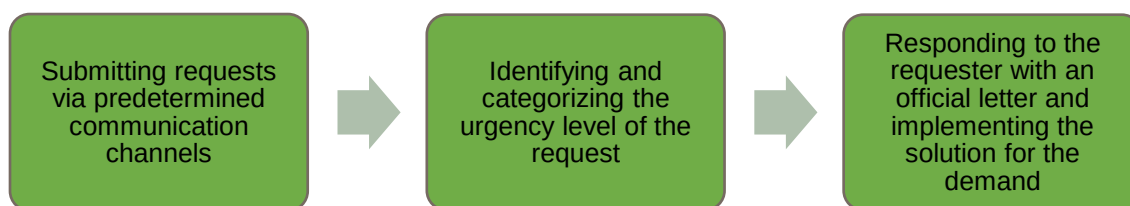
Table 8 - Recording and monitoring conflict resolution

Official letters number	Register Date	Subject	Official letter answer number	Response Date	Answer Subject	Status
1						
2						
3						
N						

Source: project proponent's collection

The demands will be classified and later the best means of resolution will be verified. The company will respond to all demands in a formal manner by means of an official letter, sent directly to the requester. The flow of request and demand resolution can be seen in Figure 9.

Figure 9 - Request flow and demand resolution



Source: project proponent's collection

With regard to forestry, the Management will be responsible for receiving, analyzing, dealing with the demand or complaint, in addition to providing feedback to the requesting/complaining party, a response

regarding the contacts received. The deadline for analysis and responses to demands of the following conditions:

- Autonomy of the Forestry Management depending on the required;
- Analysis and decision by senior management, when management does not have the competence or authorization to make decisions.

Claims related to impacts and compensation of damages will have deadlines established based on an analysis by the SFMP Management, which will define mitigation measures and implementation schedule, considering the complexity, risk and severity of the situation.

All communication will be recorded in the Demands or Complaints Registration Form (see

Figure 10), deposited in suggestion boxes in strategic locations, being consolidated in an electronic spreadsheet for registration and evaluation. The control and archiving of printed and digital documents will be the responsibility of the SFMP Management.

Figure 10 - Complaint and demands form

INFORMAÇÃO DA RECLAMAÇÃO	
Data da reclamação :	Reclamação tomada
Detalhes da Reclamação:	
Primeira Resposta de ação corretiva	
Causas suspeitas	
Que passos devem ser tomados para evitar a repetição do problema	
Data de ocorrência: _____	

Source: project proponent's collection

All relevant information and evidence on the documents and records will be made available for analysis by the VVB.

2.2.9 Stakeholder Consultation Channels (G3.5)

As detailed in sections “2.2.3 - Informational Meetings with Stakeholders”, “2.2.7 - Stakeholder Consultation” and “2.3.8 - Continued Consultation and Adaptive Management”, participatory consultations with the communities covered by the Socio-environmental Responsibility Program have been carried out monthly since the beginning of the project's activities in collaboration with Upbio. These monthly meetings will be held throughout the life cycle of the project and beyond, as the proponent recognizes that it is an effective way to get closer to communities and encourage them to continue participating and getting involved in the activities promoted.

As far as the other stakeholders are concerned, given that the project has already undergone validation and two verification periods, VCS and SOCIALCARBON, communication has been continuous since the beginning of the project, especially through formal meetings with the public sectors. The purpose of these meetings is to highlight the actions carried out by Algar Farming in relation to the SFMP and the ABC Norte REED Project and their impact on the communities. The records and developments of these meetings can be consulted in the section “2.2.7 - Stakeholder Consultation”. The approach reinforces the commitment to transparency and accountability to all those involved in the project.

2.2.10 Stakeholder Participation in Decision-Making and Implementation (G3.6)

With regard to the effective participation, as appropriate, of all communities⁴³, the Upbio Socio-environmental Responsibility Program, established since 2017 (initial visits to establish a closer connection with the communities), has undergone significant improvements as of 2022. Focusing on the collaborative planning of activities for the subsequent year in close partnership with the benefited communities, the Program expands its actions based on specific demands and aspirations of the communities, aiming at the continuity of previously implemented projects.

In the process, Upbio initiates the planning by preparing an outline of the proposed actions, taking into consideration the aforementioned issues. This draft is submitted to Algar Farming for validation. Once validated, the schedule is finalized, and the next step involves presenting it to the communities during the company's initial annual visit, regularly scheduled for February of the current year. After validation by the communities, the actions are implemented by Upbio, maintaining flexibility for adjustments as new demands arise or unforeseen events occur during the execution of the program.

⁴³ Contemplated by Upbio's Socio-environmental Responsibility Program, namely: Cristo Salvador, Divino Espírito Santo, Monte Sião, Nossa Senhora do Carmo and São Sebastião do Cipoal.

This method of collaboration and participatory planning aims to ensure an effective integration between the proposed goals and the real needs and expectations of the communities. By providing a space for the expression of local demands and incorporating dynamic adjustments throughout the process, the Socio-environmental Responsibility Program aims to strengthen the positive and sustainable impact on the communities served, promoting social and environmental development in an efficient and effective manner.

In addition, the communication channels established in section “2.2.8 - Continued Consultation and Adaptive Management” offer communities the opportunity to express their concerns, clarify doubts and make suggestions. This openness allows their contributions to be analyzed and, where appropriate, incorporated into the Socio-environmental Responsibility Program. This continuous feedback process and adaptability reinforces the commitment to listen and respond to the dynamic needs of communities, ensuring that the program is aligned with their expectations and promoting the effectiveness of the actions implemented.

2.2.11 Anti-Discrimination Assurance (G3.7)

Ecológica Assessoria upholds a strict Organizational Conduct that is founded on the principles of the Universal Declaration of Human Rights. The company condemn any form of abuse, harassment, discrimination, or exploitation, whether it be sexual, moral, or otherwise. Ecológica Assessoria is committed to ensuring that all our business practices align with the following core values:

Principles:

- Transparency: act transparently and account for your actions to society;
- Communication: provide specific communication channels to receive denunciations, complaints, and suggestions regarding gender issues and diversity that may occur in projects and programs implemented by Ecológica Assessoria, as well as in its internal environment;
- Alignment with public policies: act in accordance with public policies national issues relating to gender and diversity;
- Incentive: encourage projects and programs that contribute to equality of gender and women's empowerment; and
- Competencies: promote the training and development of staff in gender and diversity issues and act in the generation and management of knowledge about the subject.

Organizational culture:

- Ethics: act professionally under the principles of morality and good conduct in all our activities and work.
- Respect: respect implies understanding, acceptance, and appreciation of the qualities of all people, with their individuality, rights, and duties.

- Responsibility: employees must use all their resources in their activities technical capacity, professionalism, prudence, and care for the performance of their functions.
- Reliability: the commitment of Ecológica Assessoria employees to pay attention to their activities reliably and efficiently.

The company believes that these values are critical to building a sustainable and responsible organization that contributes positively to society and the environment.

2.2.12 Grievances (G3.8)

In the monitoring period in question (01-January-2021 to 31-March-2023), the records made can be viewed in the table below:

Table 9 - Office record control: external community

Official letters number	Register Date	Subject	Official letter answer number	Response Date	Answer Subject	Status
0025 2021	01-Sep 2021	Request to clean the access road for the school bus for students at Walter Garcia School	04 2021	08-Sep 2021	Fulfillment of the request made	Concluded
0026 2021	01-Sep 2021	Request for housing concessions for employees assigned to the Walter Garcia school	05 2021	08-Sep 2021	Fulfillment of the request made	Concluded
Y/N	21-Sep 2021	Ophthalmological consultation service	08 2021	30-Sep 2021	Fulfillment of the request made	Concluded
Y/N	25-Oct 2021	Request for wood for home renovation	10 2021	28-Oct 2021	Service according to availability of company materials	Concluded
0469 2022	04-Aug 2022	Authorization to dispatch cyclists	007 2022	17-Aug 2021	Fulfillment of the request made	Concluded

Source: project proponent's collection

2.2.13 Worker Training (G3.9)

On 22-May-2021, the Socio-environmental Responsibility Program team conducted a technical orientation session at the Divino Espírito Santo community, responding to requests from residents related to the appropriate use of the herbicide “Roundup”. Community members have expressed concerns about the inappropriate application of this product in the community center area, resulting in adverse environmental impacts.

Recognizing the importance of addressing these concerns, the Upbio team organized an educational event to educate the community on the correct handling of the herbicide. During the visit, a knapsack sprayer was made available, designed for the application of both natural insecticides and the herbicide in question. In addition, 1 liter of “Roundup”, 5 hats, 5 gloves and 5 masks (Personal Protective Equipment - PPE) were distributed.

The specialized technician conducted a comprehensive technical instruction on the use of the herbicide, addressing its composition, function, and the expected results when employing the product. Practical guidance included information on exact proportions, application techniques, as well as proper handling and storage practices. It is important to note that the team of the Socio-environmental Responsibility Program expressed its opposition to the use of this herbicide in the community, emphasizing the importance of sustainable and environmentally conscious agricultural practices.

Image 5 - Training on the use of the herbicide “Roundup” for the Divino Espírito Santo community



Source: project proponent's collection (May-2021)

In November-2021, the 1st “Internal Week for the Prevention of Accidents in Rural Work (or SIPATR)” was held, with the active participation of employees of the accommodations “JPR Serviços Florestais”, “ST Florestal” and the headquarters of “Fazenda Pacajá”. SIPATR is an event meticulously adjusted to address

the particularities and challenges associated with raising awareness about accident prevention in rural areas.

During the event, crucial topics were addressed, focusing on behaviors and situations that may pose risks to the health of employees, such as unsafe conditions, unsafe acts, malpractice and lack of attention. SIPATR has focused especially on the nuances of accident prevention in the context of rural work.

Among the variables that can impact the safety of rural workers, the organization and safety at work, personal hygiene, STIs (Sexually Transmitted Infections) and mental health stand out. SIPATR plays a crucial role in raising awareness of the risks faced by rural workers, contributing positively to the implementation of preventive measures that comply with the safety and health standards established in labor legislation.

With the continuous commitment to guide and raise awareness among employees about the prevention of accidents in their workplaces, the event was attended by 28 employees from “JPR” accommodation, 43 employees from “ST Florestal” accommodation and 23 employees from “Fazenda Pacajá”. An innovative dynamic was incorporated, using a human board with questions and answers related to the topics addressed during the event, making SIPATR more interactive and educational. Attendance lists with the participants will be presented to the VVB team.

Image 6 - Workshop conducted during the 1st “Internal Week for the Prevention of Accidents in Rural Work”



Source: project proponent's collection (November-2021)

Also in Divino do Espírito Santo community, on 22-April-2022, an educational action was conducted addressing the Prevention of Domestic Accidents, with an emphasis on raising awareness about scalping on vessels. The activity was developed in a playful and interactive way, aimed at children, young people and adults in the school community, ranging from early childhood education to Youth and Adult Education.

The event was held on the school premises, involving the entire school community with the support of local teachers.

The action began with an opening table, composed of the Upbio team, a representative of the teachers, a representative of the school community and a representative of the students present. During the educational activity, the main domestic accidents, including burns, cuts, falls and poisoning, were addressed, highlighting the necessary precautions to prevent such incidents within the home. The content was presented in a playful way, focusing on caring attitudes and the importance of paying attention to objects that may pose risks.

A pair dynamic was carried out to simulate the practice of mutual care in a simulated risk environment. Students from different grades and age groups participated in the dynamics, reinforcing the theme addressed and stimulating the children's attention. During the activity, the need to take care of friends and family to promote a healthier and more harmonious environment was emphasized. In addition, elucidative didactic materials on the subject were distributed, aiming to reinforce the concepts addressed and reduce the incidence of domestic accidents. This approach sought to encourage participation in healthy activities and promote awareness about accident prevention.

Image 7 - Dynamics in the "Prevention of Domestic Accidents" in the community of Divino Espírito Santo



Source: project proponent's collection (April-2022)

In November-2022, Algar Farming held the 2nd edition of the "Internal Week for the Prevention of Accidents in Rural Work" (or SIPART). Throughout the 16-November to 18-November, ABC Norte members and outsourced companies that have access to the "Fazenda Pacajá" participated in lectures and dynamics focused on prevention, information and education. The first day was aimed at ABC Norte and "Madeira J&Y" associates, the second day to "JPR Serviços Florestais" employees and the third day to "ST Florestal" employees.

Considering the particularities of “Fazenda Pacajá”, such as logistics and diversity of operations, the event’s organizing team allocated a specific day for each company, ensuring that all received the same lectures and dynamics. The central theme of the 2nd SIPATR was “Self-care: a commitment to health and safety”.

In general terms, the 2nd SIPATR prioritized awareness of self-care as a preventive and healthy practice. Integrating self-care with good safety and accident prevention practices, the event sought to promote quality of life inside and outside the work environment.

Image 8 - Activities developed during the 2nd edition of the "Internal Week for the Prevention of Rural Work Accidents"



Source: project proponent’s collection (November-2022)

In this context, ABC Norte prepares a monthly Occupational Safety report in order to document the activities and actions carried out throughout the current month. The main purpose is to validate and evidence the results achieved, in addition to presenting the action plan for the identified non-conformities.

The document records the occurrences related to the “Weekly Dialogue on Safety, Health and Environment’, an effective tool in the prevention of occupational accidents. In addition to fostering awareness, this dialogue promotes team integration through the exchange of shared experiences. Several topics are addressed, such as occupational diseases, hand and finger protection, inspection of machinery and equipment, the importance of communication and teamwork, among others.

The report also presents the Accident Index and outlines the action plan to correct SFMP-related non-conformities. In addition, the activities and deliberations of the Internal Commission for the Prevention of Rural Work Accidents (or CIPATR) are recorded, as determined by SEPRT Ordinance No. 22,677, of 22-October-2020, which establishes that the rural employer who maintains 20 or more employees hired for an indefinite period is obliged to establish and maintain CIPATR in operation. All of these reports will be presented to the VVB team.

2.2.14 Community Employment Opportunities (G3.10)

During community-related project activities, as detailed in section “2.1.11 - Project Activities and Theory of Change” of CCB’s PD, local residents will remain engaged in capacity building and training programs. The project will continue to offer training to producers to improve their agricultural, poultry and fishing practices, while implementing actions aimed at alternative sources of income, which will be adapted to the demands and specific context of each community.

In addition, the residents of “Vila ABC” play active roles in the project, acting as forestry technicians, in the guardhouses of the project area, in the cocoa plantation at the “Fazenda Pacajá” (outside the project area), at “Pacajá Móveis”, among other activities. All workers of “Vila ABC” are registered in accordance with the laws mentioned in section “2.2.15 - Relevant Laws and Regulations Related to Worker’s Rights” and participate in ongoing training as described in section “2.2.16 - Occupational Safety Assessment”.

It is essential to highlight that the stages of the selection process and hiring of workers follow specific criteria described in the respective job descriptions, requiring minimum qualifications. However, the company highlights its commitment to prioritizing the hiring of employees from local communities, underlining the preference for those who reside in the vicinity of the “Fazenda Pacajá” and in the municipalities of Portel and Bagre. This strategic approach aims to strengthen ties with the surrounding communities, not only providing employment opportunities but also contributing to local socio-economic development. By prioritizing local residents, the company seeks to generate a positive impact both on the work environment and on the quality of life of the people who make up these communities, thus aligning itself with its commitment to be an active partner in the sustainable development of the region.

2.2.15 Relevant Laws and Regulations Related to Worker’s Rights (G3.11)

In Brazil, workers are protected by well-defined laws, such as the “Consolidação das Leis de Trabalho” (CLT) Law N°. 5.452/43, which was recently updated by Law N°. 13.467/2017⁴⁴ (labor reform). Additionally, there is Law N°. 5,889/73, which specifically regulates the rules applicable to rural employees. The CLT includes “Normas Regulamentadoras” (NR) that provide guidance on mandatory procedures related to occupational safety and health, and these are cited in Chapter V, Title II, and were approved by Ordinance N°. 3214 in June-1978.

For the project, the following NR regulations are particularly relevant:

- NR 4 - Specialized Occupational Health and Safety Services.
- NR 5 - Internal Commission for Accident Prevention (last updated: SIT Ordinance N°. 247 of 12-July 12-2011).

⁴⁴ Available at: <https://www.planalto.gov.br/ccivil_03/_ato2015-2018/2017/lei/l13467.htm>.

- NR 6 - Personal Protective Equipment (PPE);
- NR 28 - Inspection and Penalties (deals with penalties that can be applied to companies that do not comply with the other rules established by the Federal Government);
- NR 31 - Safety and Health at Work in Agriculture, Livestock Forestry, Forestry, and Aquaculture;
- ILO Declaration on Fundamental Principles and Rights at Work;
- Conventions 87 and 98 - Dealing with union freedom and protection of the right to union and collective bargaining.

It is important to state that stakeholders associated with laws and regulations covering workers' rights are those employed by the Project's Instances. Therefore, all relevant laws and regulations covering workers' rights in Brazil are followed by the Project's instances and are communicated to each employee upon hiring.

2.2.16 Occupational Safety Assessment (G3.12)

A crucial element of the project lies in the diligent and effective dedication to the safety of employees, following the internal guidelines and official regulations of the federal and state governments. Due to the potential impact of work processes and the work environment on health, it is imperative to establish and apply a series of measures related to risk assessment. This includes promoting and preserving the physical and social well-being of employees, preventing occupational diseases, protecting against health risks, and ensuring a work environment appropriate to the physical and psychological aptitudes of those involved.

In this context, Algar Farming has a document entitled "SOP 10 - Standard Operating Procedure: Safety and Health at Work", which aims to describe the procedures necessary for the execution of Occupational Health and Safety measures, as well as Emergency Response actions that may occur during the activities.

The implementation of these procedures and the systematization of professional practice have the purpose of reducing possible errors and deviations in the exercise of professional activity, facilitating short, medium and long-term planning. The document serves as a guide, constituting essential tools to provide technical and practical information to the professionals involved, addressing aspects such as:

Image 9 - SOP 10: Standard Operating Procedure

Safety	Health
Accident prevention	Specialized occupational health services

Personal protective equipment	Control of activities involving unhealthy operations
Risk Prevention Program	Ergonomics
Safety signage	Hygienic-sanitary procedures in food and beverage handling
Fire protection	Sanitary conditions and comfort in workplace and potability assessment of water

Source: created by the authors using project proponent's collection

The intention is to make these procedures available on each service front, using them in the daily work practice of all professionals, associates and employees. This document details each activity, aiming to clarify any doubts and/or guide decision-making. In case of persistent doubts, the guidance of a senior technical manager is sought. ABC Norte, through its partners, is committed to providing resources, establishing safe procedures and work practices, aiming to prevent, eliminate and reduce failures.

The document "SOP 10 - Standard Operating Procedure: Safety and Health at Work" will be presented to VVB.

2.3 Management Capacity

2.3.1 Required Technical Skills (G4.2)

Ecológica Asesoría is responsible for managing all the necessary activities to develop a project description compatible with project standards and methodology. This includes calculating carbon credits generated, as well as providing assistance with project validation, verification under VCS/CCB and registration processes. The team responsible for these tasks is divided into five interconnected areas:

- **Technical monitoring team:** a technical team that specializes in developing REDD projects. They are responsible for project design, selecting activities, setting specific objectives, providing technical support to the owner, and monitoring that the activities are being carried out correctly.
- **Socioenvironmental Team:** this team is responsible for conducting socioeconomic analysis, engagement, and articulation with communities and other stakeholders. They are also responsible for developing and implementing social activities and indicators and monitoring socioeconomic indicators.
- **Sales Team:** the sales team is responsible for the negotiation of the contract and closing the deal as well as for the sales of the carbon credits generated by the projects.
- **Legal Department:** a legal team that specializes in property, proponent, land tenure, and other legal matters. This analysis is conducted through certificates from the federal and state court of

justice to identify potential land conflicts, overlaps with public areas, and possible risks of expropriation.

By working together, these teams ensure that Ecológica Assessoria's clients receive comprehensive support and expertise throughout the project development process. Additionally, after project validation/verification, Ecológica Assessoria coordinates Project Activities Governance in collaboration with the Algar Farming. Both parties are responsible for monitoring the project area to prevent invasions, changes to the biome, or any activity that could result in deforestation and loss of biodiversity. There is continuous communication between proponents throughout the project period.

The Algar Farming, a company belonging to the Algar Farming, was founded in 2014 with the aim of standing out in the agriculture and livestock sectors. Currently, it is part of the agriculture, protein, and forestry sectors. Guided by the belief in the future of agribusiness, it adopts an approach that combines work, technology, and sustainable practices. Continuously seeking innovative initiatives, the company aims to ensure excellence in its results.

Recently, Algar Farming integrated ABC Norte, with which it manages a total area of 145,000 hectares, of which 110,286.67 hectares are allocated to sustainable forest management. In this management, 4,500 hectares are handled annually, ensuring the sustainable use of the forest. Its activities encompass Forest Management, Furniture Manufacturing, and the Carbon Market, with this axis directly related to the ABC Norte REDD Project. Details about the team involved in this axis, including a brief description of their experiences, can be found in the table below:

Table 10 - Resumes of Algar Farming collaborators

Name	Description
Cinthya Ramos	Postgraduate degree in Occupational Safety Engineering from Estácio de Sá (2019); Bachelor's degree in Forest Engineering from UEPA (2017); Works as a Forest Supervisor, previously worked as an Environmental Analyst at the consultancy level; was an intern at the Brazilian Agricultural Research Corporation - EMBRAPA; was a scholarship recipient from CNPq and FAPESPA.
Maicon Farias	Technologist in Environmental Management from Faculdade Ideal (2011), Master's degree holder from the Graduate Program in Natural Resource Management and Local Development in the Amazon - NUMA/UFGA (2014), and currently pursuing a degree in Agronomy at the Federal Rural University of the Amazon. Participated in the AguaSocial academic mobility project (a cooperation project between UFGA and the European Union). Interned at the Directorate of Protected Areas - DIAP/SEMA (2010-2011). A member of the Cartography team at Belem GPS. Worked as a consultant for cartographic services for Anthropological Reports on Quilombola Communities in Amapá and Maranhão. Was a scholarship recipient at the Institute of Economic, Social, and Environmental Development of Pará - IDESP, working on projects related to

	Environmental Quality Indicators of Pará Municipalities and the Belo Monte Observatory. Mainly focused on the following topics: Remote Sensing, Cartography, Geoprocessing, and Environmental Management.
Maria Almeida	Forest Engineer graduated from the Federal Rural University of the Amazon (UFRA), currently working as a forest assistant at Algar Farming - “Fazenda Pacajá”. In terms of academic experience, she participated in the Institutional Program for Scientific Initiation Scholarships (PIBIC) at the Evandro Chagas Institute (IEC) from 2019 to 2021, focusing on research related to the bioaccumulation of heavy metals in aquatic macrophytes and the water of lakes in the water supply system of the Metropolitan Region of Belém-PA. In 2021-2023, she was part of the Tutorial Education Program in Forest Engineering - PET Florestal, engaging in teaching, research, and extension activities.
Luciana Pereira	Master's in Natural Resource Management and Local Development in the Amazon (UFPA); Bachelor's degree in Forestry Engineering from the Federal Rural University of the Amazon (2007), and a degree in Geography with a teaching and bachelor's degree from the Federal University of Pará (2008). Currently, she works as Executive of Forests at Algar Farming group and serves as Executive Director (alternate) at the Association of Forestry Engineers of Pará. Prior to her current role, she held the position of Forest Management Manager at FRM Brasil, a subsidiary of FRM France. She previously worked as a Forestry Engineer (technician) at the State Secretary of the Environment of Pará. She has experience in the field of Geography as a teacher and researcher, focusing primarily on topics such as Forest Concession, Sustainable Forest Management, Space, gentrification, public policies, Sustainability, ESG, Carbon, and Continuing Education.
Pamela Bahia	Graduated in Forestry Engineering from the Federal Rural University of the Amazon (2018), currently holds the position of Forestry Supervisor at ABC Agropecuária Brasil Norte S.A. Produção e Exportação. Has experience in the field of Forest Resources and Forestry Engineering, with emphasis on Sustainable Forest Management and Forest Certification.

Source: created by authors using project proponent's collection

2.3.2 Management Team Experience (G4.2)

Ecológica Assessoria has been operating in the forestry and carbon market since 1998 with REDD projects for forest carbon credit generation. Ecológica's DNA is its extensive experience as a developer of carbon emission reduction projects, with comprehensive socio-environmental co-benefits.

The technical and socio-environmental team has vast experience in a variety of disciplines critical to the planning and monitoring of projects. This includes forestry engineering, environmental management and engineering, geography, and geoprocessing analysis, among other related areas. The table below provides a brief description of the experiences of the Ecológica Assessoria team.

Table 11 - Resumes of Ecológica Assessoria collaborators

Name	Description
Aline Costa	Administration technician and Environmental Manager graduated from the University of São Paulo, Brazil. Currently a master's student in Applied Ecology at the University of Aveiro, Portugal. Working for more than two years as an Environmental Analyst and technician in the climate change sector with a focus on offsetting Greenhouse Gas emissions, building extensive experience in generating Emissions Reduction with the main international standards for Carbon Projects, since their conception to monitoring. Currently working as a technical coordinator of fossil fuel switch projects, and as an analyst in REDD projects.
Eliane Yamada	Eliane Yamada has more than 15 years' experience in socio-environmental projects, including experience with carbon projects, mainly REDD, sustainable rural development, agroecology, agroforestry systems, solid waste management plans and land structure. Developed and coordinated teams in settlement projects in Brazil through participatory rural diagnostics with the aim of implementing different types of agroecological projects. Coordinated a team to implement environmental projects, focusing on waste management and contaminated areas at a large Brazilian food retailer. Developed and coordinated innovation projects for sustainable development, with a focus on monitoring hydroelectric power plant and mapping the production chain of extractivists, and experience in biofuel projects in Africa and Latin American countries, with a focus on small farmers. Agronomist Engineer graduated from Escola Superior de Agricultura "Luiz de Queiroz"/USP. Master's degree in Science with an emphasis on Physics of the Agricultural Environment from the same institution and an MBA in Business Management from PECEGE/ESALQ/USP.
Júlia Batista	Bachelor's in international relations from Escola Superior de Propaganda e Marketing de São Paulo (ESPM) with a focus on Government Relations and technologist in Environmental Management from Centro Universitário SENAC de São Paulo. Has been working in the carbon market since 2021, accumulating knowledge from the commercial area to the technical area, specifically socio-environmental and, since April 2023, working specifically in the socio-environmental technical area, focusing on the development of socio-environmental impact monitoring reports (SOCIALCARBON and CCB) of forest conservation projects (REDD+). Currently integrates Ecológica Assessoria's socio-environmental technical team, participating in the development of socio-environmental impact monitoring reports (SOCIALCARBON and CCB), as well as in the design and implementation of external activities to improve the well-being of communities and conserve biodiversity in the region of REDD+ projects from the Ecológica Assessoria portfolio.
Lara de Paula	Bachelor's degree in environmental management from 'Universidade de São Paulo', with five years of experience in the environmental sector. Experience includes work in the parks and public areas department of the City of São Paulo, focusing on environmental education and preservation issues. Additionally, acquired experience in the banking sector, working on fronts related to ESG themes and socio-environmental risk analysis in corporate compliance area. Currently, a member of the technical team at Ecológica Assessoria, dedicated to developing REDD projects, following internationally recognized methodologies

	for the verification and certification of projects to reduce greenhouse gas emissions, such as the VCS (Verified Carbon Standard).
Lucas Freitas	Bachelor's degree in Environmental Management from the School of Arts, Sciences, and Humanities at the University of São Paulo (EACH-USP) and is currently enrolled in an MBA program in Diversity and Inclusion Management in Organizations at PUC Minas. With over four years of experience in the socio-environmental field, there is expertise at the intersection of socio-environmental issues and emancipatory processes, particularly in contexts of vulnerability. Demonstrated experience in promoting popular educational initiatives with the active participation of communities directly affected by negative environmental impacts. Currently, part of the socio-environmental team at Ecológica Assessoria, contributing to the design and implementation of projects aimed at reducing and removing carbon emissions, improving community well-being, and conserving biodiversity, framed within the REDD category (Reducing Emissions from Deforestation and Forest Degradation).
Marcelle São Pedro	Bachelor's degree in Forest Engineering from the Federal Rural University of Rio de Janeiro and master's degree in Science of Tropical Forests from the National Institute of Amazonian Research. Currently, is a PhD candidate in Science of Tropical Forests at the same institute, having 8 years of experience in research in the Amazon Forest. Worked with the recovery of degraded areas and bioindicators of atmospheric pollution in the Atlantic Forest. In the Amazon, worked with the regeneration of secondary forests and carbon accumulation in their biomass after deforestation and degradation by cattle raising. As a PhD candidate, evaluates ecological relationships between forest structure and plant and animal species diversity and composition changes in a terra-firme tropical forest. Strong background in ecology of terrestrial communities and ecosystems, data analysis, and programming in the R software. Currently, integrates Ecológica Assessoria's technical team, being responsible for implementing and monitoring REDD+ projects, following internationally recognized methodologies in the voluntary carbon market, such as VCS (Verified Carbon Standard).
Maria Roquette	Graduated in Biological Sciences and Master in Geography from Federal University of Espírito Santo, Brazil, has been working on socio-environmental projects for ten years in technical and management areas with experience on environmental monitoring, methodological development, socio-environmental diagnoses and technical elaboration. Recently acted as coordinator of Espírito Santo state team for Social Dialogue and Information and Service Centers, in the context of an environmental disaster. In community-based work, has experience on planning, monitoring and evaluation of production chains and worked as analyst and head on a methodology development project for fishing economic activity compensation policy eligibility. When working with/on traditional communities, prioritizes the development and application of participatory approaches. Currently integrates Ecológica Assessoria's technical team, collaborating on the development of REDD+ projects, following internationally recognized methodologies for verification and certification of projects, especially those related to climate, community and biodiversity (CCB) standards.
Mariana Carriles	Master's degree in Environmental Science and Bachelor's degree in Environmental Management from the University of São Paulo, with 12 years of experience in the development of socio-environmental projects centered around critical themes such as water security, urban solid waste, and climate change. Since 2021, actively engaged in climate-related activities and has successfully

	conducted studies on climate vulnerability, developing reports on corporate performance using the CDP Climate Change questionnaire, and overseeing the monitoring of fossil fuel switch projects in accordance with international standards within the voluntary carbon market (VCS and SOCIALCARBON). Currently, working as part of the technical team at Ecológica Assessoria, contributing to the implementation and monitoring of REDD+ projects in the Amazon, aligned with the guidelines of the CCB Standard.
Stefano Merlin	Solid background and extensive experience in environmental science, sustainable development, and climate change. Co-founder and president of a Brazilian NGO focused on research and development initiatives related to sustainability and climate change, demonstrating profound expertise in project management. From project conception to development and commercialization of carbon credit projects, possesses vast knowledge and skills. Recognized for establishing five companies specializing in the carbon credit market: Instituto Ecológica, Ecológica Advisory, Sustainable Carbon, Future Carbon, and GreenAfrika. With a portfolio comprising over 50 distinct projects, stands out as a pioneer in the voluntary carbon market, providing consultancy services to renowned organizations such as the United Nations Development Programme (UNDP), International Education Institute (EEI), NASA, and leaders in various sectors, including JP Morgan, Santander, BP, VW, and Climate Partners, among others. Additionally, co-authored various publications on carbon sequestration and social carbon, and contributed to the development of the Social Carbon Standard.
Teresa Simões	More than 25 years of experience in the financial area, as an angel investor, partner in transformation and restructuring companies, general manager of a Corporate Venture fund, CFO in Multinationals and Private Groups in which her main challenges were to develop companies/businesses to create value for shareholders. Angel investor with participation in approximately 20 projects supporting entrepreneurs in the strategic and financial development of their businesses. Strong background in the development and scale-up of start-ups and extensive knowledge in M&A throughout Europe, Brazil, Latin America, and the United States. Served as a board member for companies in FMCG, Industry, IT IS, Fintech, and Agricultural Services, among others. Degree in Business Administration from “Universidade Católica Portuguesa” with a postgraduate degree from Harvard Business School.
Yara Fernandes	Graduated in Environmental Management from the University of São Paulo, and holding a degree in Social Impact from the Amani Institute, Yara brings extensive experience in emission reduction projects, particularly in energy efficiency and forest conservation. With five years of professional experience in the field of climate change, she has been actively involved in REDD+ projects in the Brazilian Amazon, strategically aligning these initiatives with the Sustainable Development Goals (SDGs) and ESG strategies. In addition to her involvement in carbon projects, Yara also excels in socio-environmental impact programs, leveraging methodologies such as Social Carbon and the CCB Standard. Currently serving as the Technical Coordinator at Ecológica Assessoria, she leads two teams - technical and socio-environmental. In previous roles, she served as the Coordinator of the SOCIALCARBON Standard and Socio-environmental Coordinator at Future Carbon Group, where she was instrumental in establishing and leading the socio-environmental sector.

Source: created by authors

2.3.3 Project Management Partnerships/Team Development (G4.2)

Table 12 - Main information about AFLORA Engenharia

Organization name	AFLORA Engenharia
Role in the project	Technically responsible for the preparation and execution of the Sustainable Forest Management Plan and flora inventory
Contact person	Wiater Melo da Silva
Title	Technical responsible
Address	Ed., Mirai Oficccer, Rua Municipalidade, sala 1708, CEP 66053-180 - Umarizal - Belém - Pará - BRASIL
Telephone	+55 (91) 3241-3111
Email	-

Source: created by authors

Table 13 - Main information about Uezu Planejamento Ambiental

Organization name	Uezu Planejamento Ambiental S/S LTDA
Role in the project	Geographic Information System - GIS
Contact person	Alexandre Uezu
Title	CEO
Address	Rodovia Dom Pedro I - KM 47, SN, Nazaré Paulista - SP
Telephone	-
Email	aleuezu@ipe.org.br

Source: created by authors

Table 14 - Main information about Upbio Soluções Ambientais

Organization name	Upbio Soluções Ambientais
Role in the project	Fauna monitoring, socioeconomic diagnosis and regular visits to the communities under the Socio-environmental Responsibility Program
Contact person	Hilário Vasconcelos Rocha
Title	General Coordinator
Address	Edifício Angra - Tv. São Pedro, 842 - 203 - Batista Campos, Belém - PA, 66030-465
Telephone	(91) 984119202
Email	Upbioconsultoria@gmail.com

Source: created by authors

2.3.4 Financial Health of Implementing Organization(s) (G4.3)

Ecológica Assessoria is a company that specializes in developing projects aimed at generating carbon credits. They assist companies in identifying their potential for credit generation by leveraging technology, innovation, and intensive capital to create pathways for exponential growth. Ecológica Assessoria offers a broad spectrum of services: strategic environmental consulting, biomass, climate change, forest solutions, renewable energy, and other sustainability areas.

Ecológica's projects are outlined to reduce greenhouse gas emissions (GHGs) while generating socio-environmental impacts in specific locations. These carbon credits generated aim to impact positively in the local context, and objecting this, are certified by the highest international standards from the carbon market in order to offer reliability for the clients. A portion of the income from carbon credits is reinvested in social impact initiatives, always considering the local context.

While Ecológica Assessoria is headquartered in Brazil, it operates globally. They currently have a portfolio of 10 projects located in 4 Brazilian states, and they are fully capable of developing projects anywhere in Brazil, as well as in other Latin American countries.

2.3.5 Avoidance of Corruption and Other Unethical Behavior (G4.3)

In Brazil, there are two main legal instruments aimed at preventing corrupt practices and unethical behavior: Law 12,846/2013⁴⁵ (Anti-Corruption Law) and Law 8,429/1992⁴⁶ (Administrative Misconduct Law). The Anti-Corruption Law, also known as Law no. 12,846/2013, establishes regulations regarding the civil and administrative liability of legal entities in cases of actions against national and/or foreign public administrations. Meanwhile, under Law 8,429/1992, administrative misconduct is defined as immoral conduct that involves dishonesty and acts of bad faith by public officials.

In addition to complying with these laws, Ecológica Assessoria has implemented an internal Ethical Code to ensure that the company avoids involvement in any corrupt practices or unethical behavior.

2.3.6 Commercially Sensitive Information (Rules 3.5.13 – 3.5.14)

The project proponent considers information mandated by the CCB Standards as confidential or commercially sensitive, and thus, it cannot be disclosed publicly. This data will be provided in its entirety to the VVB during the validation and verification processes, but it is excluded from the public version. The following items represent the information that will exclusively be shared with the VVB:

- Agreements and contracts among involved parties;

⁴⁵ Available at: <https://www.planalto.gov.br/ccivil_03/_ato2011-2014/2013/lei/l12846.htm>. Accessed on: 24 Jan. 2024.

⁴⁶ Available at: <https://www.planalto.gov.br/ccivil_03/leis/l8429.htm>. Accessed on: 24 Jan. 2024.

- Property right documents.

No other commercially sensitive information will be omitted from the public disclosure of the CCB MR.

2.4 Legal Status and Property Rights

2.4.1 Recognition of Property Rights (G5.1)

The project area of the ABC Norte REDD Project is owned by ABC Agropecuária Brasil Norte S.A. - Produção e Exportação. The legal documents proving the land title and ownership of the property will be made available to the auditors during the validation process.

In Brazil, the owner of the area is entitled to all the resources resulting from it. The owner has the right to use, enjoy and dispose of the property. The limitation on the right to property occurs in the case of underground research and mining (article 20, item IX and article 176 of the Federal Constitution⁴⁷ and article 1,230 of the Civil Code⁴⁸).

As far as carbon credits are concerned, they can be taken as the result of a property, so they belong to the owner. The legislation is expressed in this sense for the Permanent Preservation Areas and Legal Reserve, in art 41, §4: "The maintenance activities of Permanent Preservation Areas, Legal Reserve and restricted use are eligible for any payments or incentives for services environmental issues, configuring additionality for the purposes of national and international markets for certified greenhouse gas emission reductions"⁴⁹.

Therefore, as per section "2.1.1 - Project Proponent" (see CCB's PD⁵⁰), project ownership is arising under law for ABC Agropecuária Brasil Norte S.A. - Produção e Exportação. Ecológica Assessoria is also Project Proponent as, per contractual right, where both companies have defined a percentage of ownership of the credits.

In addition, the VM0015 methodology implies that "The legal status of the land (private, forest concession, conservation concession, etc.) in the baseline case within the project area must exist elsewhere in the reference region. If the legal status of the project area is a unique case, demonstrate that legal status is not biasing the baseline of the project area." This is complied with the areas surrounding the Fazenda Pacajá that are not public or part of any protected area, such as project area. These conditions also comply with Land Use and Land Tenure items, once the conditions of the project area are found elsewhere in the reference region. The project area is governed by the same policies, legislation and regulations that apply elsewhere in the reference region. These policies are detailed in section "2.4.6 - Nacional and Local

⁴⁷ Available at: <http://www.planalto.gov.br/ccivil_03/constituicao/constituicao.htm>. Accessed on: 04 Sep. 2021.

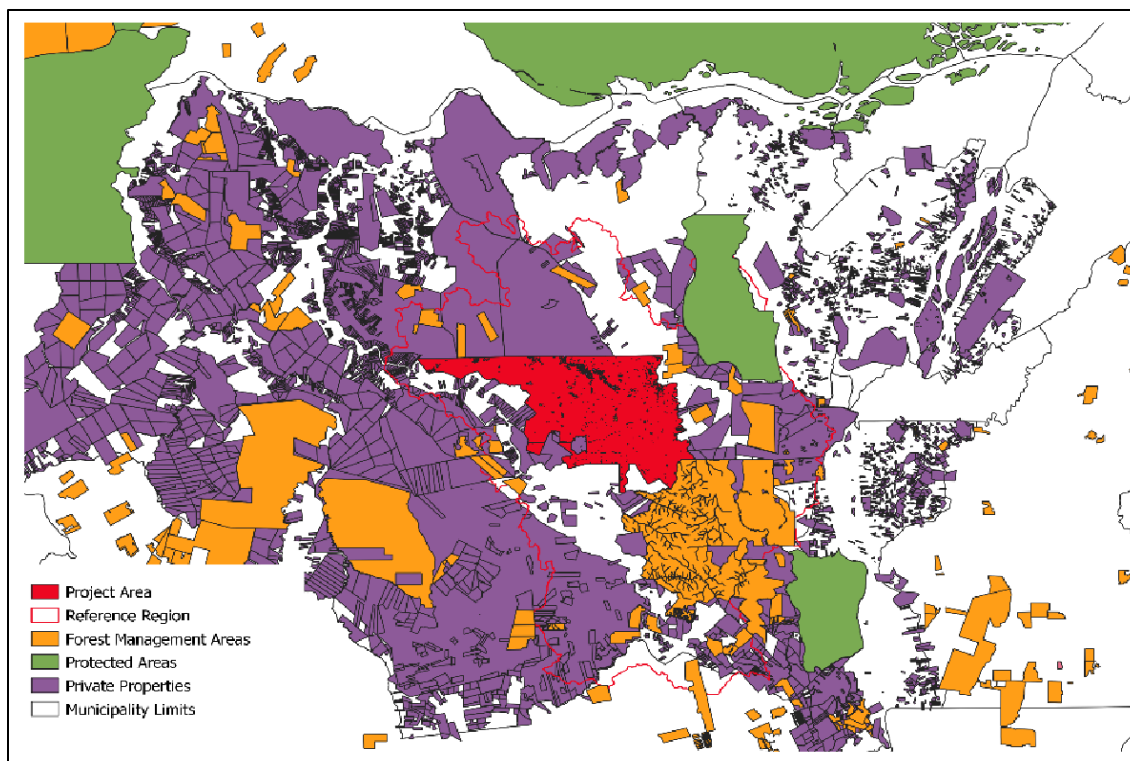
⁴⁸ Available at: <http://www.planalto.gov.br/ccivil_03/leis/2002/110406compilada.htm>. Accessed on: 04 Sep. 2021.

⁴⁹ Brazilian Forest Code. Available at: <http://www.planalto.gov.br/ccivil_03/_ato2011-2014/2012/lei/112651.htm>. Accessed on: 04 Sep. 2021.

⁵⁰ Available at: <<https://registry.verra.org/app/projectDetail/CCB/2558>>. Accessed on: 06 Feb. 2024.

Laws". Figure below shows the areas surrounding the Project Area, especially the municipalities of Portel, Bagre, Pacajá, Oeiras do Pará and Baião. Data presented is the private areas available at Brazil's Environmental Rural Registration⁵¹, National Protected Areas⁵²:

Figure 11 - Land tenure in the project zone



Source: VCS Standard REDD ABC Norte Project⁵³

2.4.2 Free, Prior and Informed Consent (G5.2)

The ABC Norte REDD Project is developed within a private property owned by Algar Farming. For this reason, the project will not trespass nor affect private property, community property, or government property. Once Free Prior and Informed Consent (FPIC) is the principle that a community has the right to give or withhold its consent to proposed projects that may affect the lands they customarily own, occupy or otherwise use, the FPIC does not need to be obtained since property rights are not affected by the project.

Since the project start date, during field visits, recurring conversations have taken place with the communities involved in Upbio's Socio-environmental Responsibility Program regarding the limits of the project area, reinforcing that no community will be negatively affected or have its territory invaded by the project. Stakeholder consultations will continue to occur throughout the project's life cycle, reinforcing the

⁵¹ Available at: <<https://www.car.gov.br/publico/imoveis/index>>. Accessed on: 04 Sep. 2021.

⁵² Available at: <<http://mapas.mma.gov.br/i3geo/datadownload.htm>>. Accessed on: 04 Sep. 2021.

⁵³ Available at: <<https://registry.verra.org/app/projectDetail/VCS/2558>>. Accessed on: 04 Jun. 2023.

project's objective and spatial limitation zone. This process aims to be conducted in a participatory manner with members of the communities located in the project zone.

2.4.3 Property Right Protection (G5.3)

ABC Norte recognizes, respects and supports local stakeholders' customary tenure/access rights to territories and resources. The project will never encroach on private property or relocate people off their lands without consent. In the event there are any ongoing or unresolved conflicts over property rights, usage or resources, the project shall undertake no activity that could exacerbate the conflict or influence the outcome of an unresolved dispute.

ABC Norte has a stable relation with the communities, with activities in the region dating back to 1979. In 2017 the company took over the management of the area and the SMFP, also initiating social actions with the communities, with the Socio-environmental Responsibility Program. Although there are 16 communities identified in the region, service is currently provided in only 5 of them, due to difficulties in transportation and communication with the other communities. With the carbon project revenue, the program is expected to reach all communities.

ABC Norte is the legal owner of the project area, however, has a verbal agreement with the communities to maintain the current use of land, as long as they commit to forest preservation and leave no environmental liabilities. There is no legal agreement since all contacts with the community are made prioritizing conversation and good relationship. In addition, the company prevents the community from being required to sign any documents, in order to avoid embarrassment and misunderstandings. The SMFP does not include the region occupied by the communities.

No community member has been or will be removed from their land, on the contrary, communities will be supported through programs and incentives the project proponent will instigate. In addition, the project did not introduce any invasive species or allow an invasive species to thrive through project implementation. If the project implements any reforestation project with non-native species over native species in the future, the possible risks and adverse effects of exotic species will be justified and explained to communities.

2.4.4 Identification of Illegal Activity (G5.4)

Since 2017, incidents of fires have been documented along the boundaries of the "Fazenda Pacajá", with the aim of cultivating cassava (a common crop in the Amazon) and engaging in timber theft. These episodes were carried out by a resident of the Monte Sião community.

To address the resulting conflict, ABC Norte follows Standard Operating Procedure 11 - Conflict Mediation as a guiding principle. As outlined in the document, the initial step involves establishing formal contact with the community leader. Through ongoing dialogue, representatives of ABC Norte consistently strive to

educate residents about the farm's boundaries, the forest management practices in the project area, and the prohibition of activities such as burning and timber appropriation.

After clarifying the facts with the community, the company takes requisite measures by reporting incidents to the competent authorities through police reports and dispatching official letters to regulatory bodies, seeking support for monitoring the area. This document will be submitted to the auditors.

To foster a more intimate dialogue with the communities, ABC Norte is dedicated to enhancing its existing communication channels. Presently, these channels include a messaging app number, social networks, direct contact with Upbio representatives during monthly technical visits to the communities, and direct communication with the manager of the "Fazenda Pacajá". ABC Norte has plans to install suggestion boxes in the communities, which will be collected monthly by the Upbio team and delivered to ABC Norte.

Furthermore, the project undergoes periodic monitoring through technical field visits conducted by Upbio, serving as the primary tool for ABC Norte to combat deforestation and timber theft. The team is responsible for documenting any instances of illegal activities within the communities.

Finally, to minimize the occurrence of illicit activities, the project aims to implement the activities outlined in section "2.1.8 - Project Activities and Theory of Change" (see CCB's PD⁵⁴) discouraging the engagement in such activities within the project area.

2.4.5 Ongoing Disputes (G5.5)

There are no records of conflicts or disputes in the area designated for the ABC Norte REDD Project concerning land rights, territories, and resources. Ongoing litigations with third parties or squatters are non-existent. The ownership and rights of access/use of resources in the region are upheld by "ABC Agropecuária Brasil Norte S.A. - Produção e Exportação", acknowledged by both the State of Pará and environmental entities.

Any disputes occurring in the project area within the last 20 years, which are known to the project, will be treated as potential risks. In such instances, mitigating measures will be implemented as deemed necessary.

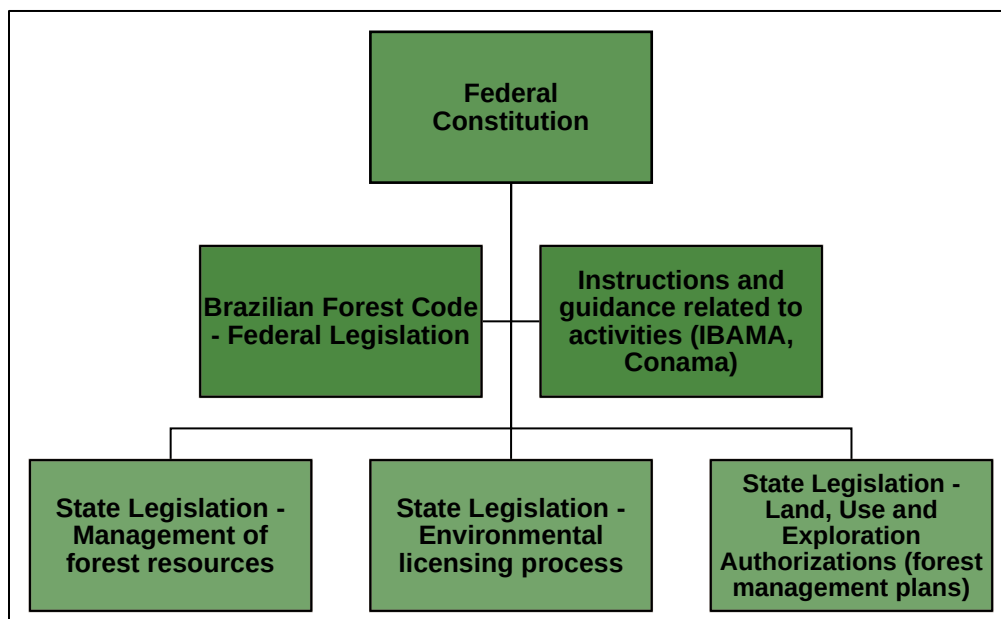
2.4.6 National and Local Laws (G5.6)

In a brief context of Brazilian legislation, the Federal Constitution determines that it is concurrent between the Union, Member States and the Federal District the competence to legislate on matters related to the protection of the environment, conservation of nature, defense of the soil, protection of landscape heritage and responsibility for damages to the environment. The same document establishes that municipalities are

⁵⁴ Available at: <<https://registry.verra.org/app/projectDetail/CCB/2558>>. Accessed on: 06 Feb. 2024.

responsible for legislation at the local level⁵⁵. However, in the absence of a qualified environmental agency or environmental council in the municipality, the state must carry out municipal administrative actions until its creation. In turn, in the absence of a qualified environmental agency or environmental council in the state and municipality, the Union will have to carry out administrative actions until its creation in one of those federative entities⁵⁶. It is also necessary to observe that a municipal law cannot contradict a state law, which in turn cannot contradict a federal law, under penalty of unconstitutionality.

Figure 12 - Structure of the Brazilian legislation



Source: created by authors

Thus, in the state of Pará, the Secretariat of the Environment and Sustainability (Semas/PA) is the body responsible for environmental licensing, including authorizations for forestry intervention.

According to the Brazilian Forest Code (Law Nº 12.651, 25/05/2012)⁵⁷, all rural estates located in forest zones shall have:

- I. Permanent preservation area: protected areas covered or not by native vegetation, with the environmental function of preserving water resources, landscape, geological stability, biodiversity, gene flow of plants and animals, protecting the soil and ensuring the well-being of human populations.
- II. Legal Reserve: an area located within a rural property or possession which is required to be segregated, as well as the permanent preservation area, for the sustainable use

⁵⁵ Available at: http://www.mpsp.mp.br/portal/page/portal/documentacao_e_divulgacao/doc_biblioteca/bibli_servicos_produtos/bibli_boletim/bibli_boi_2006/RDC_07_23.pdf. Accessed on: 04 Set. 2021.

⁵⁶ Available at: <http://pnla.mma.gov.br/competencias-para-o-licenciamento-ambiental>. Accessed on: 04 Set. 2021.

⁵⁷ Available at: https://www.planalto.gov.br/ccivil_03/_ato2011-2014/2012/lei/l12651.htm. Accessed on: 04 Set. 2021.

of natural resources, conservation and rehabilitation of ecological processes, biodiversity conservation and shelter, and protection of native flora and fauna. In the Brazilian Legal Amazon, eighty percent (80%) of a rural property should be preserved.

However, there is a clear disregard for legal conservation requirements in the region. Much of the deforestation occurs in areas that should be preserved.

One of the main ways to combat deforestation in Brazil is command and control mechanisms, such as effective monitoring, requiring compliance with environmental legislation along with a greater State presence. However, this does not seem to be implemented in most regions of the country, because of the government's tendency to disregard these responsibilities in comparison with other social goals and economic interests, which has put Brazil among the world's largest deforesters. Given the approval of the new Forest Code in 2012, and its general pardoning of those who deforested, a significant increase in annual deforestation rates has been observed.

Despite the legal provisions intended to preserve at least 80% of the Amazon Forest coverage, lack of law enforcement by local authorities along with public policies seeking to increase commodity production and encourage land use for agricultural, bio energy and cattle breeding purposes have created a scenario of complete disregard for the mandatory provisions of the Forest Code. In addition, covering vast areas with low demographic density makes tracking of illegal activities and land surveillance very difficult for the authorities.

Moreover, according to PRODES, around 788,893 km² have been deforested until 2016, which is equivalent to 18.9% of the total Amazon biome area. Given the increasing deforestation trend observed in recent years, this data shows the non-compliance with the Legal Reserve requirement established by the Brazilian Forest Code.

Therefore, all calculations were made assuming that the reference region has a general non-compliance with the Brazilian Forest Code. Thus, the baseline scenario considers the potential of unplanned deforestation in the project area to surpass the limits stipulated by the Law.

As the project activity involves planned logging, it is important to describe compliance with applicable law.

Sustainable Forest Management is defined in Article 3, VII, of Law 12.651/2012 (National Forest Code), as the administration of natural vegetation to obtain economic, social and environmental benefits, respecting the support mechanisms of the ecosystem object of management and considering, cumulatively or alternatively, the use of multiple wood species or not, of multiple products and by-products of the flora, as well as the use of other goods and services.

The National Forest Code and Decree 5,975 also specifies the technical and scientific foundations of the SFMP (Article 31, 1st paragraph):

- III. Characterization of physical and biological environment;
- IV. Determination of existent stock;
- V. Exploitation intensity compatible with the forest's environmental support capacity;
- VI. Cutting cycle compatible with the restoration time of the volume of product extracted from the forest;
- VII. Promotion of the natural regeneration of the forest;
- VIII. Adoption of adequate silvicultural system;
- IX. Adoption adequate operating system;
- X. Monitoring of the development of remaining forest;
- XI. Adoption of mitigation measures for the social and environmental impacts.

In addition, the law also demands the fulfillment of obligations related to control and monitoring of the sustainable management. The company must submit an annual report to the environmental agency with information on the entire Sustainable Management Area and the description of the applicable activities and must be submitted to technical inspections to approve the operations and activities carried out in the management area.

The technical procedures for the preparation, presentation, execution and technical evaluation of sustainable forest management plans are regulated by IBAMA's Normative Instructions: 1 of 24/04/2007, 5, of 11/12/2006 and 2 - 27/06/2007; in addition to CONAMA's Resolution 406, of 02/02/2009.

The approval of the SFMP and expedition of environmental licenses is responsibility of the State Government, with law Nº 6,462 and normative instructions IN 05, IN 08, IN 45 and IN 01. After the SFMP approval, the company proceeds to the applicable Forest Management Licenses (AUTEX, in national level, and AUTEF, in Pará).

In this sense the preparation for REDD activities, programs and projects become essential for the Project Region, not only to promote forest conservation, but also to implement a new productive forest-based economy. This scenario needs to be reinforced because the areas in question hold incomparable biological and cultural diversity, with their traditional inhabitants marginalized from the process of economic development through capitalized livestock production.

Regarding other regulatory frameworks that exist in Brazil, on 28-November-2019, occurred the approval of the Federal Decree 10,144/2019, which establishes the National Commission for Reducing Emissions of Greenhouse Gases from Deforestation and Forest Degradation, Conservation of Forest Carbon Stocks, Sustainable Management of Forests and Increase of Forest Carbon Stocks - REDD.

The development of this Project is not in conflict with such Decree. It is important to clarify the difference between Law and Decree in Brazil. The Brazilian Federal Constitution establishes the principle of legality for all the national territory, according to the text of article 5, item II “no one shall be obliged to do or not to do anything other than by virtue of law”.

Law is an infra-constitutional (sub-constitutional) norm, it is a mandatory rule by the coercive force of the legislative power or of legitimate authority, which constitutes the rights and duties in a society. Law is different from Decree.

Decrees, on the other hand, are administrative acts, issued by the Chief Executive (president, governor or mayor), with the main objective of regulating and detailing a law, in order to grant it the necessary means for its faithful execution, without, however, being able to contradict any of its provisions or to innovate the Law.

Thus, in terms of the object, jurisdictionally and scope of the Decree 10,144/2019, it is understood that its application is merely administrative, that is, it merely organizes the functioning of the Federal Government about the REDD agenda. Its application is restricted to the federal entities of the Public Administration, and, because it is a decree, a normative type that only grants regulation to the matter of law, does not establish duties or obligations to the society.

Thus, Decree 10,144/2019 only limits the Federal Government's understanding of what shall be accounted for in order to comply with mitigation commitments of other countries to the United Nations Framework Convention on Climate Change. It does not impose a barrier or obstacles to the implementation of REDD projects and the commercialization of carbon assets generated from these projects. This consideration in the Decree does not affect or interfere with the voluntary or regulated carbon market, domestic or international.

There is no law in Brazil that does not allow or restrict the execution of REDD projects or that does not allow or restrict any commercial transaction of assets resulting from REDD projects. On the contrary, such transactions are valid and legally permitted. Thus, there is no contradiction or irregularity between the ABC Norte REDD Project and such Decree.

2.4.7 Project Benefit Crediting (G5.9)

Participation under Other GHG Programs

The ABC Norte REDD Project is already validated, identified by the number 2558 under Verra Registry⁵⁸, and is currently in the process of verification of the second monitoring period by the VCS Program. With a

⁵⁸ Available at: <<https://registry.terra.org/app/projectDetail/VCS/2558>>. Accessed on: 17 Jan. 2024.

credit period of 30 years, from 13-September-2017 to 12-September-2047, the project has the potential to reduce 30,138,794 tCO₂, as mentioned in section “1.2 - Standardized Benefit Metrics”.

The first two evaluations of the project's co-benefits were conducted in accordance with the SOCIALCARBON Standard, ensuring transparency and participation in monitoring through indicators linked to six resources: Social, Human, Financial, Natural, Biodiversity, or Technology and Carbon.

However, in 2021, the Standard announced its transition from a co-benefit standard to a full standard. As of 1-January-2024, projects that do not adhere to the SC accounting standard will no longer have the certification label.

In view of this, recognizing the methodological update of the SOCIALCARBON Standard and to continue monitoring the socio-environmental initiatives of the ABC Norte REDD Project, subsequent verifications of the socio-environmental benefits of the project will be conducted in alignment with the CCB Standard.

3 CLIMATE

3.1 Net Positive Climate Impacts

3.1.1 Net Impact (CL2.2, CL3.1, CL3.3)

Following the Guidance for the Use of CCB⁵⁹, as described in the section “7 - Net Climate Benefits”, page 33 “[...] The Climate section is used to demonstrate net positive climate benefits. It is not to be used for claiming quantified GHG emissions reductions or removals to be used as offsets. Projects that meet the requirements of a Recognized GHG Program do not need to use the Climate section”.

The ABC Norte REDD Project is already registered by the ID 2558⁶⁰, available on VERRA webpage and predicts to reduce 30,138,794 tCO₂e over the 30-year project lifetime.

3.2 Offsite Climate Impacts (Leakage)

3.2.1 Leakage Mitigation (CL3.2)

Not applicable, as described in the section 3.1.1.

3.3 Climate Impact Monitoring

3.3.1 Climate Impact Monitoring Results (CL4.1)

Not applicable, as described in the section 3.1.1.

⁵⁹ Available at: <https://verra.org/programs/ccbs/ccb-guidance/>. Accessed on: 23. Jan. 2024.

⁶⁰ Available at: <https://registry.verra.org/app/projectDetail/VCS/2558>. Accessed on: 23 Jan. 2024.

3.3.2 Dissemination of Monitoring Plan and Results (CL4.2)

Not applicable, as described in the section 3.1.1.

3.4 Optional Criterion: Climate Change Adaptation Benefits

Not applicable. During the next stages of project development, Ecológica Assessoria's technical team will study the best strategy to meet the requirements that will enable the project to reach the Gold Level for Climate, Community and Biodiversity.

3.4.1 Activities and/or Processes Implemented for Adaptation (GL1.3)

Not applicable. During the next stages of project development, Ecológica Assessoria's technical team will study the best strategy to meet the requirements that will enable the project to reach the Gold Level for Climate, Community and Biodiversity.

3.4.2 Adaptation Monitoring (GL1.4)

Not applicable. During the next stages of project development, Ecológica Assessoria's technical team will study the best strategy to meet the requirements that will enable the project to reach the Gold Level for Climate, Community and Biodiversity.

4 COMMUNITY

4.1 Net Positive Community Impacts

4.1.1 Community Impacts (CM2.1)

Based on the construction of the Theory of Change evidenced in the section "2.1.8 - Project Activities and Theory of Change" of CCB's PD⁶¹, the result of the reports collected in the workshop held with leaders of the five communities in the project zone contemplated by Upbio's Socio-environmental Responsibility Program, as well as on the activities developed in the communities evidenced in section "4.4.1 - Community Monitoring Plan", the positive impacts for communities are presented below:

Table 15 - Positive impacts on communities from the problem of "production stagnation"

Community Group	All communities covered by Upbio's Upbio's Socio-environmental Responsibility Program
Impact	Diversity in production

⁶¹ Available at: <<https://registry.verra.org/app/projectDetail/CCB/2558>>. Accessed on: 06 Feb. 2024.

Type of Benefit/Cost/Risk	Promoting diversity in production in communities through collective activities and sustainable practices has significant direct benefits. By strengthening social cooperation and community resilience, these initiatives open up new income opportunities and optimize logistics processes to ensure long-term sustainability. These benefits are tangible through the strengthening of social ties, the ability to cope with adversity, the diversification of income sources, operational efficiency, improved quality of local products, and the balance between economic and environmental benefits. This global approach not only boosts local economic development, but also reinforces social cohesion and promotes more responsible and efficient production in communities, according to their specificities. Some of these benefits were: • Encouragement of sustainable practices such as poultry farming, horticulture and fish farming. • Introduction of agroforestry practices, such as the cultivation of cocoa and açai, to strengthen production diversity. • Technical guidance to strengthen the productive capacity of communities. • Incorporation of specific demands of the communities for greater productive diversity.
Change in well-being	• Strengthening social ties by promoting cooperation and mutual support. • Increasing community resilience by providing more effective support in the face of societal challenges. • Expansion of income opportunities through the expansion of production, generating positive economic impacts. • Promoting a more conscious and responsible approach to natural resources.

Source: created by the authors

Table 16 - Positive impacts on communities from the issue of the problem “lack of community governance structuring”

Community Group	All communities covered by Upbio's Socio-environmental Responsibility Program
Impact	Structured and effective governance in communities
Type of Benefit/Cost/Risk	The proposed mobilizations to strengthen governance in vulnerable communities have indirect benefits. Through the establishment of collaborative spaces, greater social cohesion is promoted. In addition to the revitalization of existing environments and involvement in decisions related to the management of these spaces, active participation and a sense of ownership are encouraged. This sense of belonging contributes to the strengthening of trust among community residents and lays a solid foundation for more inclusive and transparent governance, aligned with the project's objectives. Some of these benefits were:

	• Social cohesion based on group dynamics and lectures on associativism. • Provision of information on public policies for the rural sector. • Dynamics and lectures on mental health for community leaders. • Active participation of communities in the definition of activities and collaborative planning.
Change in well-being	• Strengthening social cohesion through the consolidation of bonds between community members. • Development of activities more in line with the needs and demands of the communities. • Strengthening the trust of communities, contributing to a cooperative and collaborative environment.

Source: created by the authors

Table 17 - Positive impacts on communities from the problem-issue “limitations related to income generation through alternative sources”

Community Group	All communities covered by Upbio's Upbio's Socio-environmental Responsibility Program
Impact	Generate income through alternative sources
Type of Benefit/Cost/Risk	By diversifying sources of income, communities achieve economic autonomy, reducing financial vulnerability and promoting greater economic independence. Not only does this strategy have direct benefits for individual community members, but it also boosts the local economy as a whole. Continuous training plays a crucial role in promoting a proactive mindset in the management of local resources, contributing to environmental and economic sustainability through the establishment of practices aimed at preserving natural resources. Additionally, the development of diverse competencies strengthens communities' ability to face challenges, resulting in greater resilience in the face of change and adversity. The participatory approach creates a collaborative environment, in which diversity of skills is valued, promoting more cooperative and communitarian practices. Some of these benefits were: • Commercialization of products in events such as “Festejo Junino” and “Ação Social”. • Technical workshops, such as fabric painting. • Distribution of inputs and technical guidance for sustainable income generation. • Encouraging the production of handicrafts with natural materials, preserving cultural values. • Commercialization of diversified products, such as fruits, cheese, açaí, among others, in local events. • Direct sales between community members, ABC Norte and local fairs.

Change in well-being	• Expansion of income opportunities through the diversification of production, generating positive economic impacts. • Reduce dependence on a limited amount of products, promoting greater economic stability. • Reduce dependence on intermediaries by diversifying income opportunities. • Reduce financial vulnerability by diversifying sources of income and strengthening economic autonomy. • Strengthen the resilience of the community in the face of challenges, positively impacting the mental and emotional health of individuals. • Strengthen social bonds and community cohesion, promoting more united and collaborative communities.
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Source: created by the authors

By highlighting the positive impacts and their effects on strengthening social bonds, increasing community resilience and expanding income opportunities through diversification of production, communities are able to achieve improvement in overall well-being. Reducing dependence on limited products, promoting a responsible approach to resources and decreasing financial vulnerability are all consequences of this process. In addition, by fostering the active participation of community members, promoting activities aligned with their needs, and strengthening trust, the initiatives create a more collaborative environment.

It should also be noted that the positive impacts mentioned above cover the communities embraced more broadly by Upbio's Socio-environmental Responsibility Program. A more in-depth analysis on how these impacts are being effectively achieved can be found in section "4.4.1 - Community Monitoring Plan". In addition, the details related to the validation of such positive impacts by the communities served by the Program can be viewed in section "4.3.1 - Monitoring Plan Dissemination".

4.1.2 Negative Community Impact Mitigation (CM2.2)

Based on the Theory of Change outlined in section "2.1.8 - Project Activities and Theory of Change" of CCB's PD⁶² and considering the concept of negative impact presented by the SBIA Manual (Social and Biodiversity Impact Assessment) as an "outcome of an intervention"⁶³ i.e., as an unintended consequence of an outcome that compromises the success of the sequence of outcomes, some negative impacts were identified about the causal chain of the proposed activities for the communities. These elements, along with the negative impact and their mitigation strategies, are presented in detail in the following table.

⁶² Available at: <<https://registry.verra.org/app/projectDetail/CCB/2558>>. Accessed on: 07 Feb. 2024.

⁶³ Page 79. Available at: <<https://verra.org/wp-content/uploads/social-and-biodiversity-impact-assessment-sbia-manual-for-redd-projects-part-1.pdf>>. Accessed on: 23 Dec. 2023.

Table 18 - Negative Impact and Mitigation of Negative Impact on Communities

Aspect of the Theory of Change	Appearance description	Impact	Description of the impact	Mitigation measure
Positive impact product “diversity in production”	Formation of cooperatives and/or associations	Social exclusion	Possibility of creating divisions or excluding members of the community who do not participate in cooperatives, making it unrepresentative	Promote the representative inclusion of community members in cooperatives/associations, as well as in their decisions and benefits
Positive impact result “diversity in production”	Expanded access to local markets and sales channels	Dependence on volatile markets	Over-reliance on volatile markets can result in financial insecurity	Encourage market diversification to reduce reliance on a single channel
Positive impact product “diversity in production”	Establishment of continuous training activities, covering topics related to the diversification of production based on the knowledge of the community	Information overload	The over-provision of information can overwhelm some members of the community, resulting in difficulties in absorbing and applying knowledge	Structure learning activities gradually and adapted to the pace of the community
Positive impact product: “structured and effective governance in communities”	Renovation or construction of a functioning community area	Difficulty in maintaining the use of community space	Community dissatisfaction with the functionality or management of the space can negatively impact its ownership and belonging	Develop a plan for the ongoing maintenance of the community space, identifying responsibilities of the people of the communities
Positive impact product: “structured and effective governance in communities”	Operationalization and adoption of specific and formal consultation and deliberation procedures	Overload of processes and bureaucracies	Excessive procedures can overwhelm communities, which can discourage continued participation and adherence over time	Create moments of consultation and feedback from community members in order to improve the procedures adopted, ensuring that the process is adapted according to local needs and experiences

Positive impact “generate income through alternative sources”	Generate income through alternative sources	Social inequality	Certain alternative sources may benefit some groups more than others, generating the widening of social inequalities, instead of promoting economic inclusion	Implement actions to support vulnerable groups to ensure they benefit equitably from income- generating initiatives
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Source: created by the authors based on Theory of Change

As with risks (see section “2.3.4 - Community Costs, Risks and Benefits” of CCB’s PD), it is observed that the strategies for mitigating the negative impacts identified are, to a certain extent, integrated into the causal chain of the theory of change mentioned above. For example, the mitigating measure related to the implementation of moments of consultation and feedback with community members, to improve the procedures adopted and ensure the adaptation of the process according to local needs and experiences, is included in the activity “implement community engagement initiatives”. This activity, among other expected results, seeks to develop capacities for community management. This highlights the presence of the precautionary principle, as conceived by the document “Definitions of the CCB Program”⁶⁴.

In addition, the adaptive management process also serves to identify and mitigate possible negative impacts on the community (see section “2.3.8 - Continued Consultation and Adaptive Management” of CCB’s PD). Ongoing communication between the project team and local communities will ensure prompt identification and mitigation of any risk-related complaints in communities.

4.1.3 Net Positive Community Well-Being (CM2.3, GL1.4)

The impacts of the strategies outlined for and with communities, as described in section “2.1.8 - Project Activities and Theory of Change” of CCB’s PD and exposed in section “4.1.2 - Negative Community Impact Mitigation” have been carefully designed to generate substantial positive impacts, with the aim of significantly enhancing the quality of life of the communities involved. The comparative analysis with a “Non-Project Scenario” detailed in sections “4.1.1 - Descriptions of Communities at Project Start” and “4.1.4 - Without-Project Scenario: Community” of CCB’s PD, clearly shows that the project develops activities capable of providing concrete benefits to these communities. In this way, the planned strategies will result in exclusively positive impacts, such as:

⁶⁴ Available at: <https://verra.org/wp-content/uploads/2017/06/CCB_Program_Definitions_v3.0.pdf>. Accessed on: 23 Dec.2023.

- **Strengthening social ties:** the formation of collectives favors cooperation and mutual support, consolidating social bonds among community members. Additionally, the creation of spaces for dialogue promotes more effective communication, strengthening the social fabric.
- **Increasing community resilience:** by providing more effective support in the face of societal challenges, the strategies aim to strengthen community resilience. This includes implementing capacity-building programs for community members to develop skills that will enable them to face challenges more efficiently.
- **Expanding income-generating opportunities:** diversifying production not only generates positive economic impacts by providing residents with additional income opportunities but also includes specific training to empower community members in the effective management of their resources.
- **Reduced dependence on a limited number of products:** product diversification reduces dependency, promoting greater economic stability. Agricultural diversification strategies and the implementation of production chains contribute to this goal.
- **Resource-conscious approach:** a more resource-conscious and responsible approach to available resources is encouraged. This involves sustainable practices in the management of natural resources and awareness of the importance of environmental preservation, including rivers.
- **Less dependence on intermediaries:** diversifying income-generating opportunities not only reduces dependence on intermediaries, providing greater autonomy but also involves initiatives to strengthen local marketing by directly connecting producers to consumers.
- **Projects aligned with community needs:** the actions are consistent with the needs and demands of the community, strengthening trust and fostering a collaborative environment. This is achieved through a monthly process of consultation and participation of communities in decisions related to the project.

These net community impacts were identified as potential outcomes of the project's activities, designed based on the vulnerabilities and demands of the communities, identified both in the Theory of Change workshop held on 07-December-2023 and by the monthly activities of Upbio's Socio-environmental Responsibility Program. For a more in-depth analysis, see section "4.1.1 - Community Impacts".

Additionally, it is crucial to note that the results of the project will progressively benefit all people in the project area, even those who are not yet covered by the Upbio's Program. Forest conservation and the possible implementation of agroforestry systems represent crucial actions to ensure ecosystem services, benefiting the entire region. These actions promote climate benefits, such as improved soil quality, reduced GHG emissions, diversification, and food security, among others.

By relating the specific activities of the project to the expected benefits, the intention to not only address the vulnerabilities identified in the communities is evidenced, but also to promote a comprehensive transformation for overall well-being by incorporating sustainable and adaptive practices. For more detailed

information on the project activities and their relationship with the proposed impacts, it is recommended to revisit the section “2.1.8 - Project Activities and Theory of Change” of the CCB’s PD⁶⁵.

4.1.4 Protection of High Conservation Values (CM2.4)

As mentioned in the section “4.1.3 - High Conservation Values” of CCB’s PD⁶⁶, the REDD ABC Norte Project has adopted the guidelines outlined in the Resource Network’s “Common Guidance for the Identification of HCV”⁶⁷ document for categorizing HCV at the community level. The classification is carried out under the following categories:

- HCV 5: Community Needs - encompassing crucial locations and resources that fulfill the basic requirements of local communities or indigenous peoples (including livelihoods, health, nutrition, water, etc.). These are identified through direct engagement with the respective communities or indigenous peoples.
- HCV 6: Cultural Values - covering sites, resources, habitats, and landscapes of global or national significance in terms of cultural, archaeological, or historical importance. Additionally, this category includes elements of critical cultural, ecological, economic, or religious/sacred significance to the traditional cultures of local communities or indigenous peoples. These are identified through active engagement with these local communities or indigenous peoples.

The ensuing section presents the HCV identified for the community component:

⁶⁵ Available at: <<https://registry.terra.org/app/projectDetail/CCB/2558>>. Accessed on: 06 Feb. 2024

⁶⁶ Available at: <<https://registry.terra.org/app/projectDetail/CCB/2558>>. Accessed on: 06 Feb. 2024.

⁶⁷ Available at: <<https://www.hcvnetwork.org/library/common-guidance-for-the-identification-of-hcv-english-indonesian-french-portuguese>>. Accessed on: 08 Jan. 2024.

Table 19 - HCV: Pacajá river and other water bodies

High Conservation Value	Pacajá river and other water bodies (HCV 5 and 6)
Qualifying Attribute	The preservation and sustainability of water bodies, particularly rivers, play a crucial role in ensuring the survival and well-being of riverine communities. These communities depend directly on these resources to fulfill their basic needs, such as livelihoods, health, nutrition, and access to water. Additionally, rivers not only provide essential resources for daily life but also serve as means of transportation, facilitating trade and connection between these communities, Vila ABC, for example, and the headquarters of the “Fazenda Pacajá”. In addition to immediate needs, water bodies have profound cultural, historical, and ecological importance for riverine communities. Often, these sites are central to traditional practices, religious rituals, and the preservation of cultural identity. Considering this vital interdependence, the definition of water bodies as HCVs is justified. HCVs, in this context, not only protect ecosystems that are crucial to local communities but also ensure the preservation of cultural and historical sites, contributing to the long-term sustainability of these areas. This approach aims not only to protect biodiversity but also to safeguard the traditional ways of life and cultural identity of riverine communities.
Focal Area	It encompasses a radius of 1km around all communities covered by Upbio's ⁶⁸ .

Source: created by the authors

In this sense, on 28-May-2022, Upbio, through the Socio-environmental Responsibility Program, held a lecture in the São Sebastião do Cipoal community with the aim of raising awareness among residents about the importance of environmental preservation, especially with regard to rivers, considering their vital role for riverside communities. In addressing the relevance of environmental care, the lecture adopted a holistic perspective, focusing not only on the protection of natural resources, but also on safeguarding the cultural elements intrinsically linked to these aquatic ecosystems.

Exploring the 5R's (rethink, refuse, reduce, reuse and recycle) as guiding principles, the lecture provided practical tools for waste management while stimulating deeper reflection on the interdependence between environmental and cultural sustainability. This integrated approach has contributed to the construction of a collective consciousness that recognizes the preservation of rivers as an essential foundation for the cultural identity of riverine communities. In this context, the emphasis on preventing the introduction of waste into rivers encouraged individual and collective responsibility for proper disposal, highlighting the active participation of the community in the preservation of its environment.

⁶⁸ To define the Leakage Management Area, a radius of 1 kilometer around the communities was used. See section "3.3 - Project Boundary" VCS Standard. Available at: <<https://registry.terra.org/app/projectDetail/VCS/2558>>. Accessed on: 08 Jan. 2024.

Culturally, the activity highlighted the direct relationship between rivers and everyday activities, such as fishing and access to water. It sought to establish the connection between the preservation of rivers and the maintenance of traditional ways of life, highlighting that the health of rivers is crucial for the subsistence and cultural continuity of riverside communities. In this context, the lecture transmitted environmental knowledge and strengthened the communities' commitment to sustainable practices, consolidating an inseparable link between environmental preservation, cultural richness and long-term sustainability. In all, 12 residents participated in the activity.

The proposal is to integrate river preservation activities into Upbio's calendar of continuous actions in the coming years, aiming to involve not only the São Sebastião do Cipoal community, but also to cover the other communities covered by the company's Socio-environmental Responsibility Program. This strategy seeks to consolidate environmental awareness as a central pillar of Upbio's initiatives, promoting sustainability and the preservation of water resources in all riverside communities served.

Image 10 - Lecture on waste disposal and preservation of rivers in São Sebastião do Cipoal community



Source: project proponent's collection (July-2022)

In addition, the construction of the water monitoring report by the Upbio team is also a crucial activity for the conservation of the HCV in question. This report aims to document all actions related to compliance with the conditions of grants N°. 4939/2020_SEMAS/PA, N°. 3731/2019_SEMAS/PA and the Declaration of Waiver of Grant DDO-000.119/2020 for the “Fazenda Pacajá”. The reports cover the monitoring of parameters that allow you to observe and monitor water quality, such as pH, electrical conductivity, total dissolved solids, salinity, dissolved oxygen and temperature.

With regard to GRANT N°. 4939/2020_SEMAS/PA, which authorizes the abstraction of groundwater to supply Vila ABC, there are the following points:

- POINT 01/(P-01) - Located next to the old boiler. Its purpose is industrial use, with a release of 137m³/day.
- POINT 02/(P-02) - Located next to the Evangelical Church. Its purpose is human use, with the release of 175m³/day.
- POINT 03/(P-03) - Located near the airstrip. Its purpose is human use, with the release of 175m³/day.
- POINT 04/(P-04) - Located near the airstrip. Its purpose is human use, with the release of 175m³/day.

Regarding GRANT N°. 3731/2019_SEMAS/PA, which authorizes the withdrawal of surface water to supply Vila ABC, there is the following point:

- POINT 01(S-01) – Located on the banks of the Pacajá River. Its purpose is operational use with a flow rate of 100m³/h.

The location of these points can be seen in the figure below.

Figure 13 - Location of P-01, P-02, P-03, P-04 and S-01 at “Fazenda Pacajá”



Source: project proponent's collection

For the Declaration of Waiver of Grant DDO-000.119/2020, which authorizes the abstraction of groundwater to supply the accommodation of “Madeira J&Y”, there is the following point:

- POINT 01 (P1) - Located behind the accommodation of “Madeira J&Y”. Its purpose is for domestic use, with a flow rate of 5m³/day. It is currently active.

The location of the P1 can be viewed in the figure below.

Figure 14 - Location of P1 at “Fazenda Pacajá”



Source: project proponent's collection

The activity of monitoring the concessions and the declaration of exemption from granting comprises a comprehensive approach that includes regular inspections at the water withdrawal points, monthly monitoring of these locations and water sampling to carry out physicochemical analyses at the authorized points for abstraction. This detailed and continuous process aims to ensure compliance with the conditions established in the grants and declarations, ensuring compliance with environmental standards and the preservation of water resources.

Frequent monitoring also makes it possible to identify possible environmental impacts and ensure that abstractions are aligned with the authorized purposes, promoting the conservation of water courses and, consequently, improving the quality of life of communities that depend on this resource for the maintenance of their activities.

All relevant information and evidence on the monthly water monitoring reports carried out by the Upbio team, as well as the other project documents, will be made available for analysis by VVB.

4.2 Other Stakeholder Impacts

4.2.1 Mitigation of Negative Impacts on Other Stakeholders (CM3.2)

The other stakeholders susceptible to the impacts described in section “4.2 - Net Positive Impacts on the Community” of CCB’s PD are communities not yet covered by Upbio's Socio-environmental Responsibility

Program (see section “2.1.6 - Identification of Stakeholders” of CCB’s PD)⁶⁹. This definition was based on the fact that the identification of these impacts was derived from the Theory of Change (occurred after the monitoring period), based on the reports of the communities already benefited by the Program. The similarity of context and the sharing of characteristics between these communities allows us to anticipate similar positive impacts between them.

The strategic decision not to incorporate such communities at this particular stage of the project resulted from a meticulous analysis, highlighting the logistical challenges and the need for careful management (see section “2.1.7 - Stakeholder Description” of CCB’s PD). However, it must be stressed that this decision does not constitute an unalterable commitment. Algar Farming and Upbio are proactively engaged in assessing and overcoming these challenges, with the ultimate goal of extending the benefits of the project to these communities.

In this context, in addition to Upbio's Socio-environmental Responsibility Program, the main initiative promoted by ABC Norte to get closer to the other communities that live around the “Fazenda Pacajá” is the Social Action , an event that takes place in Vila ABC and offers several basic services to those present. These services include the issuance of documents (ID, driver's license, student ID), vaccinations, dental appointments, hairdressing services, recreational activities for children, as well as providing community members with the opportunity to market their handicrafts and local products (food, sweets and juices). The Social Action represents the culmination of the activities developed throughout the year and carried out in collaboration with public agencies, has health, citizenship and the environment as its main focuses.

On 04-December-2021, its 2nd edition took place in partnership with the Municipality of Portel through the Municipal Health Department and the Department of Document Issuance. The initiative provided health services, social assistance, and recreational activities for children and community residents. The event brought together about 200 residents from seven locations around the “Fazenda Pacajá”, including representatives of São Sebastião do Cipoal, Nossa Senhora do Carmo and Divino Espírito Santo communities. Health and citizenship services were offered on the Boat of the Fluvial UBS⁷⁰ of the Municipality of Portel, anchored on the banks of the “Fazenda Pacajá”.

⁶⁹ Available at: <<https://registry.verra.org/app/projectDetail/CCB/2558>>. Accessed on: 06 Feb. 2024.

⁷⁰ The Basic Health Units (or UBS) are the user's gateway to the Brazilian Unified Health System (SUS). It is there that the health care of the population begins, based on the principle of primary health care.

Figure 15 - Invitation to the 2nd edition of the social action promoted by ABC Norte



Source: project proponent's collection (December-2021)

It is important to note that, this year, the actions were conducted with a reduced number of participants to avoid agglomerations. In addition, the Socio-environmental Responsibility Program team was equipped with masks, hand sanitizer, and adopted all necessary measures to ensure social distancing and combat the spread of COVID-19.

Also, on 02-December-2022, the 3rd edition of Social Action was held. The initiative, carried out in partnership with the Municipality of Portel, took place in the space of the Walter Garcia School, benefiting more than 450 residents of eleven communities around the “Fazenda Pacajá”. The services offered included health care, citizenship and cultural activities.

Figure 16 - Opening of the 3rd edition of the social action promoted by ABC Norte



Source: project proponent's collection (December-2022)

In addition, a first contact with the Caminheiros do Bem (or Camarapi) community is planned in 2023, although it will take place after the end of the current monitoring period. During this meeting, the intention is to present the objectives of the Socio-environmental Responsibility Program and highlight the actions already carried out in the communities surrounding the “Fazenda Pacajá” since the beginning of the REDD Project. In this context, the main axes of action of the Program will be addressed, encompassing educational aspects, promotion of productive activity, as well as social and health support. The location of the community can be viewed in the CCB's “Figure 9 - Project Zone Map” (see section “2.1.5 - Project Zone Map”)⁷¹.

Such actions represent an essential strategy to expand the reach and benefits of Upbio's Program. The central objective is to include more communities in the scope of the program, aiming to enhance the positive impacts of the REDD Project. By expanding the scope of the Program, it seeks not only to strengthen the actions already implemented in the communities surrounding the “Fazenda Pacajá”, but also to provide a greater number of riverside communities with educational opportunities, support for productive activity, social and health assistance. In this way, the initiative seeks to maximize benefits and promote well-being in an increasing number of communities.

⁷¹ Available at: <<https://registry.terra.org/app/projectDetail/CCB/2558>>. Accessed on: 06 Feb. 2024.

4.2.2 Net Impacts on Other Stakeholders (CM3.3)

With regard to the mitigation of negative impacts on other stakeholders, for the ABC Norte REDD Project, the forecast is that these will not occur or are unlikely. As Algar Farming and Upbio expand their activities to include other communities, they will also benefit from these strategies in a fair and sustainable manner.

4.3 Community Impact Monitoring

4.3.1 Community Monitoring Plan (CM4.1, CM4.2, GL1.4, GL2.2, GL2.3, GL2.5)

The monitoring of the actions in the communities covered by Upbio's Socio-environmental Responsibility Program, during the period from 01-January-2021 to 31-March-2023, makes it possible to evaluate the effectiveness of the project's activities in relation to the positive impacts planned for these communities. Also, by monitoring the established indicators, it seeks to make the necessary adjustments to achieve the desired objectives and impacts. However, due to the fact that the monitoring period is retroactive⁷², prior to the construction of the Theory of Change and, consequently, of the indicators, it is important to note that the type of measurement, procedures adopted and forms of recording will not coincide with those established in the CCB PD (see section "4.4.1 - Community Monitoring Plan" of CCB's PD⁷³).

Despite this divergence, the development of the activities of the ABC Norte REDD Project has resulted in several benefits for the communities in the Project Zone covered by Upbio's Socio-environmental Responsibility Program. These communities include Cristo Salvador, Divino Espírito Santo, Monte Sião, Nossa Senhora do Carmo and São Sebastião do Cipoal.

The establishment of the new type of measurement, procedures adopted and forms of records is in the process of alignment between the project proponents and the company responsible for the socio-environmental actions in the communities. From the next Monitoring Plan, it is expected that the measurement will occur according to what was defined in each of the established indicators.

Thus, to monitor the activities, the monthly and annual reports made available by Algar Farming were used. In specific activities, other resources were used to cover the monitoring of the actions carried out, which were described according to the needs of each indicator. All documents will be made available to the VVB team.

⁷² It is also noteworthy that the first two monitoring periods assessing the benefits to the community and biodiversity of the ABC Norte REDD Project were formulated and verified under the SOCIALCARBON Standard methodology. However, in 2021, the Standard declared its transition from being solely a co-benefit standard to becoming a full standard. Commencing from 01-January-2024, projects that did not migrate to the SOCIALCARBON accounting methodology would lose their certification seal. Therefore, considering the methodological update of the SOCIALCARBON Standard and the need to continue monitoring the implemented actions of the ABC Norte REDD Project, from this verification onward the project's socio-environmental benefits will be conducted under the CCB Standard.

⁷³ Available at: <<https://registry.verra.org/app/projectDetail/CCB/2558>>. Accessed on: 06 Feb. 2024.

Indicator 1 and 2: Activities carried out and People benefiting from the activities

During the monitoring period, a variety of activities were implemented in the communities, with special emphasis on stimulating sustainable productive activities - poultry farming, horticulture and fish farming, above all - and educational and informative actions. The incentive to productive activities carried out by ABC Norte plays a crucial role in the development of production systems for the local communities in the Project Zone. This is particularly significant considering the region's difficult accessibility and the scarcity of public policies. Such initiatives already offer alternatives for generating income through more sustainable practices, contributing to the fight against forest deforestation and to local development.

In addition, the measurement of the actions outlined by the “Indicator 1: Activities carried out” will be presented together with the measurement of the “Indicator 2: People benefited by the activities”, since these data are correlated: the people benefited are those who, directly or indirectly, participated in the activities carried out by Upbio.

Poultry farming

- Conducting analyses aimed at monitoring the development of the aviary and evaluating the effectiveness of the built structure, in order to implement continuous improvements in production conditions.
- Provision of technical guidance on cost control and production in poultry farming, strengthening poultry breeding and marketing practices. In addition, a lecture addressing different chicken farming systems, with an emphasis on adequate constructions and alternative feeding options.
- In August-2022, a social support visit was carried out in the communities, providing the delivery of essential materials, such as bags of lime, nails and termite poison. The purpose of this action was to improve the conditions of poultry farming in the communities that adopt this production system.
- In October-2022, aimed especially at communities with poultry farming, and considering that many of them were already growing cassava, corn seeds were made available to all those interested in expanding production within the aviary. This initiative was designed with the purpose of strengthening poultry production in the communities that have this production system.
- In February-2022, families in Monte Sião community mentioned that poultry farming had a significant importance in feeding community members during the pandemic, in addition to being a source of income. The religious leader informed that the community is in the process of building a headquarters for the church and plans to raise funds for this purpose through the production and marketing of family poultry farming.

Image 11 - “Granja Solidária”: poultry farming activity in Nossa Senhora do Carmo Community



Source: project proponent's collection (February-2021)

Horticulture

- Technical visits to seedling nurseries, with emphasis in Divino Espírito Santo community. The visits made in this location culminated in the implementation of cocoa and açaí planting practices, fostering the development of the Agroforestry Project in collaboration with EMATER - Pará⁷⁴. In May-2021, the community planted 245 cocoa and açaí seedlings, strengthening its production capacity to meet the School Food Acquisition Program⁷⁵ contract. The community itself suggested diversification with other fruit trees, such as acerola, cupuaçu, orange and soursop, to be integrated into the Agroforestry System. In addition, vegetable seeds were delivered to the women of the community association, stimulating production and contributing to a comprehensive production project in the community.
- Exchange of products between the communities, where the Cristo Salvador community received three seedlings produced by Divino Espírito Santo community in February-2022.
- In April-2022, in Divino Espírito Santo community, a vegetable (coriander) planting workshop was held to stimulate production for food and subsequent commercialization. The knowledge about planting in furrows and cleaning crops was passed on to ensure good production. The substrate of the windrow was obtained from the poultry litter of the community's poultry production.

⁷⁴ Technical Assistance and Rural Extension Company of the State of Pará. Available at: <<https://www.emater.pa.gov.br/>>. Accessed on: 01 Feb. 2024.

⁷⁵ The National Acquisition Program consists of the transfer of federal financial resources to serve students enrolled in all stages and modalities of basic education in municipal, district, state, and federal networks, as well as in entities qualified as philanthropic or maintained by them. It encompasses schools maintained by non-profit entities, confessional schools maintained by non-profit entities, and community schools affiliated with states, the Federal District, and municipalities. The program aims to contribute to the biopsychosocial growth and development, learning, academic performance, and the formation of healthy eating habits among students through actions of food and nutrition education and the provision of meals that meet their nutritional needs during the school year. Law N°. 11,947, dated 16-June-2009, regulates school feeding and is currently governed by Resolution CD/FNDE N°. 06, dated 08-May-2020, and its amendments. Available at: <https://www.planalto.gov.br/ccivil_03/_ato2007-2010/2009/lei/11947.htm>. Accessed on: 01 Feb. 2024.

- In July-2022, in Cristo Salvador community, there was observation and technical guidance on the composting of organic material for use in the garden, promoting an agroecological system with organic, healthy and sustainable production. The community started its horticultural activities in May-2022.
- Donation of vegetable seeds (coriander, pumpkin, chives, kale) as a stimulus to the production of healthier food in communities in 2023.

Image 12 - Technical visit to promote horticultural activity in Cristo Salvador community



Source: project proponent's collection (July-2022)

Fish farming

- Conducting elucidative sessions in the communities, aiming to address questions and dispel doubts about the fish farming project promoted by Upbio. Throughout the monitoring period, comprehensive information was provided, including the implementation of biometric procedures to measure fish growth. This allowed for adjustments in the daily feeding amounts, ensuring effective monitoring of fish farming management in the communities.
- Development of a strategic agricultural calendar focused on the production of alternative feed. This calendar integrates products from the communities themselves, promoting more sustainable agricultural practices adapted to local conditions. As part of these activities, the distribution of inputs such as feeders, drinkers, growth and fattening feed took place. For example, on 23-July-2021, in Nossa Senhora do Carmo community, this distribution was accompanied by guidance on supplementing the feed of free-range chickens and the use of poultry litter in the preparation of compost for the production of fertilizer for the cultivation of vegetables.
- Expansion of income-generating activities from 2022. In March, for example, a dialogue was held with the leaders of the São Sebastião do Cipoal community to identify the demands of fish farming production. Support and encouragement will be offered to the fish farming activity through technical visits and sending

inputs, thus strengthening production. Also, in the visits carried out in July, it was observed the growing interest of the residents of the communities in the breeding of small animals for food and commercialization, being an important introduction of sustainable productive activity, as it guarantees the generation of income and a healthier diet, reducing the consumption of game.

Image 13 - Capture of fish in the tank where fish farming takes place in São Sebastião do Cipoal community



Source: project proponent's collection (August-2021)

Sustainable Forest Management

- Lecture addressing the processes inherent to sustainable forest management, from planning to certification. Detailed explanations were provided on licensing, post-approval actions by environmental agencies, such as inventory, timber harvesting, dragging and transportation. Highlight for the SFMP certification, conferring the seal of well-managed forest to ABC Norte. The lecture provided elucidations to the communities about the SFMP of the "Fazenda Pacajá".

Image 14 - Lecture on Sustainable Forest Management in Divino Espírito Santo community



Source: project proponent's collection (February-2021)

Carbon Market

- In June-2021, the active participation of the community, ABC Norte representatives and Ecológica Assessoria team took place in a lecture addressing the significance of forest preservation and the trading of carbon credits in the national and international markets. Special emphasis was given to warnings about the negative impacts of deforestation. This information not only raised awareness, but also provided a broader understanding of the feasibility of selling carbon credits, paving the way for carrying out social and environmental actions that are beneficial to communities.

Image 15 - Lecture on Carbon Market in Cristo Salvador community



Source: project proponent's collection (June-2021)

Associations

- Group dynamics and lectures were held that emphasized the relevance of associativism. These activities were strategically planned to address crucial topics, such as the fundamental principles of associativism, the pertinent legislation, and the practical benefits that communities can reap by engaging in this organizational model. The central objective of these initiatives was to strengthen community representation by empowering local leaders with the necessary knowledge to more effectively manage their associations. In this way, it was sought not only to promote social cohesion, but also to provide practical tools that enable communities to organize themselves more efficiently, aiming at sustainable development and continuous improvement of living conditions.

Figure 17 - Folder on Associativism distributed in the communities

SIMULAÇÃO DA ASSEMBLEIA GERAL DE FUNDAÇÃO



- Reunir o mínimo de 03 (três) pessoas;
- Apurar a manifestação de vontade;
- Elaborar a proposta de estatuto que deverá seguir a legislação;
- Convocar os interessados para a assembleia de fundação;
- Na assembleia, formalizar a manifestação de vontade de associação e aprovar o estatuto;
- Providenciar outros registros necessários.

REALIZAÇÃO



CONSULTORIA



ASSOCIATIVISMO




ASSOCIATIVISMO

É nas associações com outras pessoas, seja em casa, nas comunidades ou no trabalho, que entramos em contato com outras visões de mundo, nos aperfeiçoamos como indivíduos e nos tornamos capazes de construir uma sociedade melhor.

A IMPORTÂNCIA DE UMA ASSOCIAÇÃO

1. Representatividade.
2. Melhor atendimento de produtos e serviços.

PRINCÍPIOS

- Princípio da adesão voluntária e livre.
- Princípio da gestão democrática pelos sócios.
- Princípio da participação econômica dos sócios.
- Princípio da autonomia e independência.
- Princípio da educação, formação e informação.
- Princípio da interação.
- Princípio do interesse pela comunidade.

TERCEIRO SETOR DA ECONOMIA

1º SETOR: Órgãos Governamentais
2º SETOR: Empresas Privadas
3º SETOR: Instituições sem Fins Lucrativos

SEM FINS LUCRATIVOS! O QUE ISSO SIGNIFICA?

LEGISLAÇÃO

Lei nº 10.406/02 do Novo Código Civil
Artigos relacionados às associações: 53 ao 60

DOCUMENTOS OFICIAIS

1. Estatuto
2. Atas
3. Fichas cadastrais dos sócios

OUTROS DOCUMENTOS LEGAIS

1. CNPJ
2. Alvará de Funcionamento
3. Registros junto à Previdência Social - INSS e Caixa Econômica Federal - FGTS
4. Caso possua funcionários contratados, registrar na Delegacia Regional do Trabalho

REDES ASSOCIATIVAS

NOVA FORMA PARA OS EMPRESÁRIOS PENSAREM EM FAZER NEGÓCIOS.

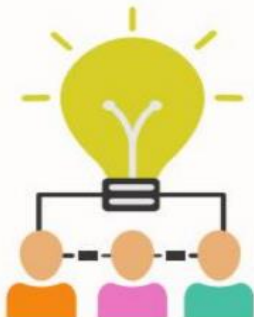
ASSOCIAR EMPREENDIMENTOS CRIANDO OUTRAS ATUAÇÕES NO MERCADO.

OBJETIVOS

- Criar parcerias.
- Agregar valor ao produto ou serviços.
- Enfrentar grandes concorrentes.
- Definir estratégias coletivas.
- Troca de experiências.

BENEFÍCIOS

- Fazer melhor negociação com fornecedores;
- Construção de marca;
- Comunicação com o mercado;
- Adesão a tecnologias dentre outros;
- Foco em soluções e não em problemas.



Source: project proponent's collection (November-2021)

Mental and Emotional Health for Community Leaders

- Implementation of dynamics focused on mental and emotional health in order to stimulate reflection and strengthen the emotions and reactions of community leaders in the face of daily adversity. This activity has played a significant role as a strategy to promote resilience in the face of day-to-day challenges and drive collective actions aimed at local development. In addition, it proved to be crucial in offering community members the opportunity to strengthen their ability to respond to everyday problems, in addition to fostering healthier relationships and a better quality of life. In the individual dynamics, participants were instructed to reflect on feelings and reactions related to worry, anxiety, happiness, and hope. In the group dynamics, the focus was to strengthen the appreciation of constructive thoughts and strategies that promote a more balanced state of mental health. This approach aims to contribute to the promotion of the psychological and emotional well-being of those involved.

Image 16 - Lecture on Mental and Emotional Health in Nossa Senhora do Carmo community



Source: project proponent's collection (February-2022)

Public policies for the rural sector

- In São Sebastião do Cipoal community (April-2022), a technical meeting was held with local leaders, aiming to provide crucial information for the socioeconomic development of the region. During this meeting, the head of EMATER Local played a key role in holding a comprehensive presentation on various aspects relevant to the community. Among the topics addressed, a detailed explanation of the opportunities for access to rural credit was highlighted, providing practical guidance and strategies for community members seeking to strengthen their agricultural activities. Topics related to land and environmental regularization were discussed, highlighting the importance of the Rural Environmental Registry (CAR) for the regularity of rural activities, and the Declaration of Aptitude for Pronaf (DAP), clarifying doubts and providing relevant information about this tool that facilitates access to public policies to encourage family farming. The meeting aimed to train community leaders and members, enabling them to make informed and strategic decisions for the sustainable development of their rural activities. The initiative aims to strengthen the economic

resilience of the community by promoting the efficient use of available resources and facilitating the alignment of local agricultural practices with current public policies.

Image 17 - Lecture on Public policies for the rural sector in São Sebastião do Cipoal community



Source: project proponent's collection (April-2022)

Promotion of the commercialization of products

- The “Festejo Junino” event held on 25-June-2022, at Vila ABC, was marked by the diversity of exhibits by residents of the communities contemplated by the Socio-environmental Responsibility Program of the “Fazenda Pacajá”. The program included June food stalls, in which participants had the opportunity to highlight and market their productions. Among the riverside communities that participated in the festivities at the family agriculture fair, Nossa Senhora do Carmo and Divino Espírito Santo stand out. The main objective was not only to market products, but also to generate income and promote the dissemination of local productions. The variety of products of the Nossa Senhora do Carmo community was remarkable, with the offer of chickens, fruits, cheese bread, whipped açaí, chestnut biscuit, chocolate cake, pepper sauce, handmade chocolate bars, cakes and tapioca flour, among others. The Divino Espírito Santo community also actively participated, bringing several family farming products for sale during the event. The community members presented a variety of fruits, such as pineapple, banana, coconut, papaya and sugarcane, as well as vegetables, coriander, chicory, gummy cakes, tapioca flour, cassava flour, among other items that enriched the diversity of the fair. This initiative not only strengthened community ties, but also provided a platform for the promotion of the local economy and sustainable family farming practices.

Image 18 - Promotion of the commercialization of products in “Festejo Junino” by Nossa Senhora do Carmo community



Source: project proponent's collection (June-2022)

Handicraft workshop as an alternative source of income

- During September-2022, the communities of the Socio-environmental Responsibility Program participated in a Handicraft Workshop aimed at women's learning. The main objective was to rescue the Traditional Knowledge of the Riverside Communities, highlighting a history and a range of handicrafts with unparalleled historical and cultural values. The target audience was made up of women family farmers, self-employed and housewives. During the workshop, decorative and utilitarian pieces were produced, using natural raw materials found in the region. The initiative included the reuse of vegetable fibers, vines, textile reuse and cotton thread, adding value to the pieces made. The methodology adopted involved theoretical and practical activities, with both individual and small group attention. Applied techniques for fiber processing, basketry, braiding, weaving and macramé were passed on. The handicraft workshops aroused the interest of the participating women in learning the techniques for the production of products with decorative potential and income generation.

Image 19 - Handicraft workshop for the women of Divino Espírito Santo community



Source: project proponent's collection (September-2022)

Fabric painting workshop as an alternative source of income

- In December-2022, during the 3rd edition of Social Action in Vila ABC, a technical fabric painting workshop was held with the participation of approximately 90 members, including children, women and elderly people present at the event. The purpose of the workshop was to instruct participants in advanced techniques of transferring designs to fabric and combining colors for a refined finish. The event was positively received by the participants, who recognized the value of this knowledge for the production of decorative pieces, as well as a possible application for income generation.

- In February-2023, in São Sebastião do Cipoal community, a technical handicraft workshop was conducted for 10 residents, focused on fabric painting as an interactive method to pass on advanced painting techniques. The workshop sought to value creativity, art, interaction and appreciation of the natural landscape. Advanced techniques of painting with paints were presented, using materials such as various drawings, carbon paper, raw cloth, fabric paints in different colors and brushes of different specifications. In the Divino Espírito Santo community, the workshop exclusively involved the female public, representing a specific strategy for valuing riverside women. The activity was also implemented in Nossa Senhora do Carmo community.

Image 20 - Fabric painting workshop in Divino Espírito Santo community



Source: project proponent's collection (February-2023)

The activities carried out reflect a solid commitment to sustainable development, aiming not only at the economic prosperity of local communities, but also at the consolidation of socially responsible agricultural and forestry practices. The approach adopted seeks efficiency both in actions related to poultry farming, fish farming and horticulture and in the broader initiatives of the Socio-environmental Responsibility Program. In addition, the practices implemented demonstrate a deep understanding of the complexities involved, taking into account external factors that directly impact the activities, seeking adaptive and innovative solutions to overcome these challenges. This commitment is not only limited to agricultural production, but also encompasses the social and economic strengthening of communities, promoting a balance between local development and environmental preservation.

It is also worth mentioning that the topics that do not have date indications correspond to the activities carried out monthly by Upbio's Socio-environmental Responsibility Program. This continuity does not follow a linear evolution, especially in the areas of poultry farming, fish farming, and horticulture, as these practices are subject to several variables, including external factors that can directly impact their development. The management of these techniques requires careful considerations, since they are closely linked to climatic conditions, seasonality, and other elements that significantly influence their performance.

Thus, based on the above elucidations, the results for "Indicator 1: activities carried out" and "Indicator 2 - People benefiting from the activities" can be seen in the tables below.

Table 20 - Indicator 1: activities carried out

Indicator 1	Activities carried out
Description	Measuring the number of activities conducted by the project during the current monitoring period, including: • Creation and maintenance of cooperatives and/or associations; • Diversification of cultivation and production techniques; • Community engagement; • Techniques for generating income through alternative sources; • Techniques for processing products produced by communities.
Type of measurement and procedures adopted	Definition of the objective and scope of the activity: the purpose and format of the activity will be established - such as seminars, conversation circles, workshops, among others - aligning them with the items highlighted in the description of the indicator. Registration tool: the tool used to record the activities will be, in addition to the photographic record, an attendance list controlled by the group responsible for the activity (usually Upbio). It is worth mentioning that the list will not have the signature of the residents of the communities due to the issues highlighted in the section "2.1.8 - Project Activities and Theory of Change" of CCB's PD⁷⁶. Participants: for each activity, relevant details such as date, time, location, topic and duration will be recorded. Evaluation: information about the participants of each activity will be included, such as the number of participants, community of origin, feedback, and other pertinent details. Activities will also be evaluated, asking participants about the benefits and learnings gained. Follow-up reports: the recorded data will be used to generate reports that present the total number of activities carried out in a specific period, as well as other relevant information regarding each activity. Analysis and adjustment: an analysis of the data will be conducted to identify trends, such as most popular themes and most served communities. This information will be essential to adjust the strategy and improve future activities. Communication of results: the results of the count of actions will be shared with the community and other relevant stakeholders.

⁷⁶ Available at: <<https://registry.verra.org/app/projectDetail/CCB/2558>>. Accessed on: 06 Feb. 2024.

Monitoring Frequency	Annual		
Forms of registration	Reports, emails, attendance lists, photographic records, recordings, meeting minutes and/or other documents will serve as evidence of the activities carried out.		
Monitored value (01-January-2021 to 31-March-2023)	Year	Period	Number of activities
	2021	01-January to 31-December	48
	2022	01-January to 31-December	47
	2023	01-January to 31-March	11
	Total		106
Aspect of the Theory of Change	• Formation of cooperatives and/or associations; • Establishment of continuous training activities, covering topics related to the diversification of production based on the knowledge of the community; • Development and implementation of activities for community engagement based on community demands; • Development and implementation of continuous training activities for product processing.		
Comments	Throughout the monitoring period, there was a remarkable development and expansion of poultry, horticulture and fish farming practices in the communities covered by Upbio's Socio-environmental Responsibility Program. The engagement of communities around these activities reflects not only the acceptance but also the assimilation of the sustainable principles and practices promoted by the program. Until 31-March-2023, the communities had the following practices: Cristo Salvador: poultry farming and horticulture; Divino Espírito Santo: horticulture; Monte Sião: poultry farming and horticulture; Nossa Senhora do Carmo: poultry and horticulture; São Sebastião do Cipoal: fish farming.		

Source: created by authors

Table 21 - Indicator 2: People benefiting from the activities

Indicator 2	People benefiting from the activities
Description	Measuring the number of people participating in the project's proposed activities related to the social scope.

Type of measurement and procedures adopted	Definition of the participants: initially, the people benefited by the action will be identified, including the name of the community, workers in the Project Area, among others. Registration tool: the tool used to register the number of participants will be, in addition to the photographic record, an attendance list controlled by the group responsible for the activity (usually Upbio). It is worth mentioning that the list will not have the signature of the residents of the community due to the issues highlighted in the section "2.1.8 - Project Activities and Theory of Change". Documentation and identification: for each activity, relevant details such as date, time, location, topic covered and duration will be recorded. Classification of beneficiaries: participants will be categorized into groups through information such as age, gender identity, race/ethnicity, educational level, among others. This will allow for a more detailed analysis of the impacts on different segments of the community. Analysis and adjustment: the data will be analyzed to identify trends, such as the most popular themes and the most served communities. This information will be essential to adjust the strategy and engage more people to participate in future activities. Communication of results: the number of people participating will be shared with the community and other relevant stakeholders.															
Monitoring Frequency	Annual															
Forms of registration	Reports, emails, attendance lists, photographic records, recordings, meeting minutes and/or other documents will serve as evidence of the activities carried out.															
Monitored value (01-January-2021 to 31-March-2023)	<table><tr><th>Year</th><th>Period</th><th>Number of people benefited</th></tr><tr><td>2021</td><td>01-January to 31-December</td><td>200</td></tr><tr><td>2022</td><td>01-January to 31-December</td><td>813</td></tr><tr><td>2023</td><td>01-January to 31-March</td><td>45</td></tr><tr><td colspan="2">Total</td><td>1,058</td></tr></table>	Year	Period	Number of people benefited	2021	01-January to 31-December	200	2022	01-January to 31-December	813	2023	01-January to 31-March	45	Total		1,058
Year	Period	Number of people benefited														
2021	01-January to 31-December	200														
2022	01-January to 31-December	813														
2023	01-January to 31-March	45														
Total		1,058														
Aspect of the Theory of Change	• Effective participation of communities in collective activities; • Greater participation of people from the communities in the proposed activities.															

Comments	No comments for the monitoring period in question (01-January-2021 to 31-March-2023).
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Source: created by authors

Indicator 3: space for communal use

As mentioned above, due to the fact that the monitoring period is retroactive, prior to the construction of the Theory of Change and, consequently, of the indicators, it is important to note that the type of measurement, procedures adopted and forms of recording will not coincide with those established in the CCB PD (see section “4.4.1 - Community Monitoring Plan” of CCB's PD⁷⁷).

Despite this divergence, the development of the activities of the ABC Norte REDD Project has resulted in several benefits for the communities in the Project Zone covered by Upbio's Socio-environmental Responsibility Program.

The establishment of the new type of measurement, procedures adopted and forms of records is in the process of alignment between the project proponents and the company responsible for the socio-environmental actions in the communities. From the next Monitoring Plan, it is expected that the measurement will occur according to what was defined in each of the established indicators.

Thus, to monitor the activities, the monthly and annual reports made available by Algar Farming were used. In specific activities, other resources were used to cover the monitoring of the actions carried out, which were described according to the needs of each indicator. All documents will be made available to the VVB team.

With regard to “Indicator 3: community use space”, it is important to note that all communities covered by the project have a designated space for community use, as evidenced in section “4.1.1- Descriptions of Communities at Project Start” of CCB's PD⁷⁸. However, it is notable that these spaces have not yet been fully appropriated by community members, either due to a lack of engagement or the unfavorable physical conditions of the space. In addition, these spaces have not been officially established as community venues.

Thus, within the context of the current monitoring period, actions were undertaken focusing mainly on the revitalization and physical definition of these spaces. Such initiatives were prominent in the communities of Divino Espírito Santo and São Sebastião do Cipoal, as detailed below:

Divino Espírito Santo community

⁷⁷ Available at: <<https://registry.verra.org/app/projectDetail/CCB/2558>>. Accessed on: 06 Feb. 2024.

⁷⁸ Available at: <<https://registry.verra.org/app/projectDetail/CCB/2558>>. Accessed on: 06 Feb. 2024.

- November-2021: during a conversation with the school's teacher in the community, it was announced that in the year 2022 the project to create the community library would be started. The space already existed, requiring only a renovation, which would be supported by the Socio-environmental Responsibility Program, including a book donation campaign.

- May-2022: the community mobilized to carry out a painting action in the space intended for the library. Children, young people and adults from the school community actively participated in the activity, which included weeding the surroundings of the library, cleaning the space and painting, strengthening the sense of belonging and collaboration in the construction of the space.

Image 21 - Painting of the library in Divino Espírito Santo community



Source: project proponent's collection (May-2022)

- June-2022: the community library received a boost with the donation of textbooks to the community school. This initiative aimed to enrich the library's collection, providing more reading options for community members.

- July-2022: social support visit was carried out, including the delivery of supplies for the construction of the library. During this visit, the presence of termites was identified, which made it impossible to paint the space. However, children's books were given for cataloguing and use in the library's future educational activities.

- August-2022: another visit was carried out, this time focusing on the maintenance of the library. In addition to maintenance supplies, 50 school kits with environmental education booklets were delivered, reinforcing the commitment of the Social and Environmental Responsibility Program to community education.

- September-2022: another delivery of materials for the construction of the library was made, including paints and the nameplate. This initiative continues to strengthen the development of the space and its future activities.

Image 22 - Delivery of the nameplate for the library in Divino Espírito Santo community



Source: project proponent's collection (September-2022)

- February-2023: during the monthly visit to the community, it was found that the community library is fully operational. As part of the maintenance, a “termite poison” product was left, preparing the environment for the return of school activities scheduled for March.

Image 23 - Community library of the Divino Espírito Santo community



Source: project proponent's collection (February-2022)

These movements not only seek to create more appropriate and functional spaces, but also to foster a sense of belonging and shared responsibility among community members. By revitalizing and making these spaces official, the goal is to strengthen community bonds, encouraging active and collaborative participation for the benefit of all. These actions represent not only physical improvements, but also significant advances in building more engaged communities.

São Sebastião do Cipoal community

- April-2022: ABC Norte strengthened its commitment to the community by clarifying that it would not only support, but donate crucial materials for the renovation of the school in São Sebastião do Cipoal community. This exemplary initiative was formalized through a letter sent to the Municipal Department of Education⁷⁹, evidencing the company's seriousness in contributing to the local educational environment.

Image 24 - Meeting with the São Sebastião do Cipoal community



Source: project proponent's collection (April-2022)

- July-2022: a strategic meeting was held at the community headquarters, highlighting ABC Norte's ongoing commitment. During this meeting, the company's previous commitment to support the renovation of the school was reaffirmed, considering the materials previously listed in the letter sent to the secretariat. In response to the poor condition of the school facilities, it was agreed that the Program would also contribute to immediate improvements, such as the painting of the school environment. This practical step aims to provide a more stimulating environment for teachers and students, promoting a more welcoming educational space.

- August-2022: ABC Norte materialized its support by delivering paints for painting and improving the school environment in the community. This action was in response to a direct request from community members, who sought to improve the local educational scenario. In addition to the paints, ABC Norte demonstrated

⁷⁹ Available at: <<https://semed.portel.pa.gov.br/>>. Accessed on: 05 Feb. 2024.

its commitment to education by distributing 50 school kits. These kits, containing environmental education booklets for coloring, were intended for the school's students, providing valuable educational resources and encouraging the active participation of children in the activities proposed by the Program. This holistic approach reinforces ABC Norte's role as a partner not only in infrastructure, but also in stimulating education and community well-being.

The monthly actions highlight ABC Norte's continuous commitment to educational and socio-environmental development in São Sebastião do Cipoal. Engaging in discussions about productive activities, supporting school reform, and improving the educational environment are significant steps toward consolidating a space for the entire community.

In this way, the actions that took place both in the Divido Espírito Santo community and São Sebastião do Cipoal community contribute, even if initially, to the definition of spaces for common use throughout the community, facilitating engagement and the development of joint actions. In addition, they stimulate a sense of belonging to the community. The data related to "Indicator 3: community use space" can be seen in the table below:

Table 22 - Indicator 3: Space for communal use

Indicator 3	Space for communal use
Description	Defining a physical location designed for community purposes or as a central point for information exchange and cooperation among community members.
Type of measurement and procedures adopted	Physical verification: if the community does not have a defined community space, a process of identifying and formalizing the site will be initiated. This will involve assigning a clear purpose to the space and promoting its recognition as a community area. This formalization may include the installation of signage, informational signs, or other visual means. If the community already has a designated space, actions will be implemented to improve its conditions, within the possibilities of the project, making it more welcoming and functional. Evaluation: to evaluate the effectiveness and usefulness of the space, conversations will be conducted with members of the community, in addition to formal evaluation mechanisms such as suggestion boxes or brief surveys during Upbio visits. These assessments will provide insights into the impact of the space on the community and identify areas for improvement. Communication of results: any change related to the community space will be communicated to the community and other relevant stakeholders.
Monitoring Frequency	Annual

Forms of registration	Formal document, validated by community members, that establishes a certain physical space as for community use, in addition to photographic records.		
Monitored value (01-January-2021 to 31-March-2023)	Year	Period	Number of visits to communities involving the theme of community spaces
	2021	01-January to 31-December	1
	2022	01-January to 31-December	8
	2023	01-January to 31-March	1
	Total		10
Aspect of the Theory of Change	Renovation or construction of a functioning community space.		
Comments	No comments for the monitoring period in question (01-January-2021 to 31-March-2023).		

Source: created by authors

Indicator 4: community protocol

As mentioned above, due to the fact that the monitoring period is retroactive, prior to the construction of the Theory of Change and, consequently, of the indicators, it is important to note that the type of measurement, procedures adopted and forms of recording will not coincide with those established in the CCB PD (see section “4.4.1 - Community Monitoring Plan” of CCB's PD⁸⁰).

Despite this divergence, the development of the activities of the ABC Norte REDD Project has resulted in several benefits for the communities in the Project Zone covered by Upbio's Socio-environmental Responsibility Program.

The establishment of the new type of measurement, procedures adopted and forms of records is in the process of alignment between the project proponents and the company responsible for the socio-environmental actions in the communities. From the next Monitoring Plan, it is expected that the measurement will occur according to what was defined in each of the established indicators.

⁸⁰ Available at: <<https://registry.verra.org/app/projectDetail/CCB/2558>>. Accessed on: 06 Feb. 2024.

Thus, to monitor the activities, the monthly and annual reports made available by Algar Farming were used. In specific activities, other resources were used to cover the monitoring of the actions carried out, which were described according to the needs of each indicator. All documents will be made available to the VVB team.

In relation to “Indicator 4: community protocol”, no specific activities or actions related to the construction of the protocol itself were carried out. However, it is important to highlight that the dialogue on “Associativism” mentioned in “Indicator 1” was a significant initiative that will serve as a basis for the elaboration of this protocol for the next monitoring periods. The discussions and lessons learned from this activity will contribute directly to the development of the community protocol, strengthening the principles of associativism and the active participation of the communities involved.

This activity was strategically planned to address crucial topics, such as the fundamental principles of associativism, the pertinent legislation, and the practical benefits that communities can reap by engaging in this organizational model. The central objective of these initiatives was to strengthen community representation by empowering local leaders with the necessary knowledge to more effectively manage their associations. In this way, it was sought not only to promote social cohesion, but also to provide practical tools that enable communities to organize themselves more efficiently, aiming at sustainable development and continuous improvement of living conditions.

The activity took place in São Sebastião do Cipoal community, on 18-November-2021, a community that houses both a chapel and a community shed for the development of collective activities. This locality stands out for being the only community of “quilombola” remnants in the region, housing the “Associação de Remanescentes Quilombolas de São Sebastião do Cipoal”.

Image 25 - Lecture on associativism in the São Sebastião do Cipoal community



Source: project proponent's collection (November-2021)

In Divino Espírito Santo community, the activity took place on 20-November-2021. This locality is endowed with a chapel, a community shed and a school, which are used as community spaces.

Image 26 - Lecture on associativism in the Divino Espírito Santo community



Source: project proponent's collection (November-2021)

By understanding the fundamentals of associativism, members of riverside communities will be better prepared to actively participate in the construction of the community protocol. The lecture will serve as a catalyst for raising awareness of the importance of collective organization and the creation of formal mechanisms for sustainable resource management, decision-making, and the promotion of local development.

Additionally, it provided a space for open dialogue, allowing community members to share their experiences, challenges, and aspirations. This exchange of information would be valuable in the formulation of the protocol, as it would reflect the specific needs and diversity of the residents of the riverside dwellers involved.

Ultimately, a lecture on associativism serves as a solid foundation for building the community protocol, empowering participants with the knowledge and collaborative mindset needed to drive sustainable initiatives and promote collective well-being.

Table 23 - Indicator 4: community protocol

Indicator 4	Community Protocol
Description	Defining and implementing formal guidelines or agreements within the community or community group to guide behavior, interactions, and practices that impact the community.

Type of measurement and procedures adopted	Identification of needs: carry out a survey of the needs and challenges perceived by the community or community group that justify the creation of a protocol. Protocol development: facilitate activities to create, revise, and finalize the community protocol. This will include details on expected behaviors, norms of coexistence, conflict resolution, and other relevant topics. Community approval: present the protocol to the community or group for collective review and approval. Ensure that as many members as possible have the opportunity to contribute and express their opinions. Implementation and dissemination: putting the protocol into practice and ensuring that all members are aware of its provisions. Use different means of communication, such as community meetings and printed material, to disseminate the information, including the Upbio WhatsApp group. Evaluation: to assess the effectiveness and usefulness of the protocol, conversations will be conducted with community members, in addition to formal evaluation mechanisms such as suggestion boxes or brief surveys during Upbio visits. These evaluations will provide insights into the protocol's impact on the community, as well as points for improvement.																	
Monitoring Frequency	Annual																	
Forms of registration	Formal physical and digital document, available to all community members and other relevant stakeholders. Allow for the revision and adaptation of the protocol as circumstances or community needs evolve.																	
Monitored value (01-January-2021 to 31-March-2023)	<table><tr><th>Year</th><th>Period</th><th>Number of activities related to the construction of the community protocol</th></tr><tr><td>2021</td><td>01-January to 31-December</td><td>2</td></tr><tr><td>2022</td><td>01-January to 31-December</td><td>0</td></tr><tr><td>2023</td><td>01-January to 31-March</td><td>0</td></tr><tr><td colspan="2">Total</td><td>2</td></tr></table>			Year	Period	Number of activities related to the construction of the community protocol	2021	01-January to 31-December	2	2022	01-January to 31-December	0	2023	01-January to 31-March	0	Total		2
Year	Period	Number of activities related to the construction of the community protocol																
2021	01-January to 31-December	2																
2022	01-January to 31-December	0																
2023	01-January to 31-March	0																
Total		2																
Aspect of the Theory of Change	Operationalization and adoption of specific and formal procedures for consultation and deliberation.																	

Comments

No comments for the monitoring period in question (01-January-2021 to 31-March-2023).

Source: created by authors

Indicator 5: schedule with activities established through the participation of communities

Due to the fact that the monitoring period is retroactive, prior to the construction of the Theory of Change and, consequently, of the indicators, it is important to note that the type of measurement, procedures adopted and forms of recording will not coincide with those established in the CCB PD (see section “4.4.1 - Community Monitoring Plan” of CCB's PD⁸¹).

Despite this divergence, the development of the activities of the ABC Norte REDD Project has resulted in several benefits for the communities in the Project Zone covered by Upbio's Socio-environmental Responsibility Program. These communities include Cristo Salvador, Divino Espírito Santo, Monte Sião, Nossa Senhora do Carmo and São Sebastião do Cipoal.

The establishment of the new type of measurement, procedures adopted and forms of records is in the process of alignment between the project proponents and the company responsible for the socio-environmental actions in the communities. From the next Monitoring Plan, it is expected that the measurement will occur according to what was defined in each of the established indicators.

Thus, to monitor the activities, the monthly and annual reports made available by Algar Farming were used. In specific activities, other resources were used to cover the monitoring of the actions carried out, which were described according to the needs of each indicator. All documents will be made available to the VVB team.

With regard to the development of Upbio's activities in collaboration with the residents of the served communities, the Upbio Socio-environmental Responsibility Program, established since 2017 (initial visits to establish a closer connection with the communities), has undergone significant improvements as of 2022. Focusing on the collaborative planning of activities for the subsequent year in close partnership with the benefited communities - Cristo Salvador, Divino Espírito Santo, Monte Sião, Nossa Senhora do Carmo and São Sebastião do Cipoal - the program not only maintains the established practices of poultry farming, horticulture and fish farming but also expands its actions based on specific demands and aspirations of the communities, aiming at the continuity of previously implemented projects.

In the process, Upbio initiates the planning by preparing an outline of the proposed actions, taking into consideration the aforementioned issues. This draft is submitted to Algar Farming for validation. Once validated, the schedule is finalized, and the next step involves presenting it to the communities during the

⁸¹ Available at: <<https://registry.terra.org/app/projectDetail/CCB/2558>>. Accessed on: 06 Feb. 2024.

company's initial annual visit, regularly scheduled for February of the current year. After validation by the communities, the actions are implemented by Upbio, maintaining flexibility for adjustments as new demands arise or unforeseen events occur during the execution of the program.

This method of collaboration and participatory planning aims to ensure an effective integration between the proposed goals and the real needs and expectations of the communities. By providing a space for the expression of local demands and incorporating dynamic adjustments throughout the process, the Socio-environmental Responsibility Program aims to strengthen the positive and sustainable impact on the communities served, promoting social and environmental development in an efficient and effective manner.

Thus, the official calendar of activities developed in 2023 can be seen in the following image:

Figure 18 - Actions and activities developed by Upbio during the year 2023⁸²

AÇÕES/ATIVIDADES	2023											
	MESES											
	JAN	FEV	MAR	ABR	MAI	JUN	JUL	AGO	SET	OUT	NOV	DEZ
Articulação institucional e fortalecimento de parcerias para as ações do PRS-ABC Norte												
Apoio à Agricultura e Oficina de Pintura em tecido												
Apoio à Agricultura e Campanha de Saúde												
Apoio à Agricultura e Oficina de Macramé												
Apoio à Agricultura e Oficina de bolsas em cartonagem												
AÇÃO SOCIOCULTURAL (Dança, corte de cabelo, manicure, arte e pintura)												
Apoio à Agricultura e Oficina de Pintura em tecido II												
Apoio à Agricultura e Oficina de Biojoias II												
Apoio à Agricultura e Oficina de aromatizante ecológico												
Apoio à Agricultura e Oficina de Dia das Crianças												
Apoio à Agricultura e Oficina de beneficiamento de folhas e sementes												
AÇÃO SOCIAL												
Relatório Técnico Mensal												

Source: project proponent's collection (March-2023)

⁸² In green, there are the activities already carried out by Upbio. In beige, the activities to be carried out by the company.

Table 24 - Indicator 5: schedule with activities established through the participation of communities

Indicator 5	Schedule with activities established through the participation of communities.
Description	Creating a time plan that details the planned activities to be carried out in the community, considering the contributions and active participation of residents.
Type of measurement and procedures adopted	Identification of needs: conduct consultations and participatory meetings to identify the needs, aspirations, and priorities of communities in relation to planned activities. Collaborative planning: facilitating joint planning activities with the active participation of communities. Involve community members in setting specific goals, objectives, and activities to be included in the schedule. Drafting the schedule: develop a detailed timeline that includes all planned activities, their start and completion dates, and the resources needed. Ensure that the timeline reflects the aspirations and priorities of communities. Review and approval: present the timeline to communities for review and approval. Provide space for feedback and adjustments based on community input. Outreach: communicate the timeline in a clear and accessible manner to all members of the community. Use different means of communication, such as community meetings, bulletin boards, or printed material, to ensure that information is widely disseminated, including the Upbio WhatsApp group. Implementation: begin the implementation of activities according to the established schedule. Maintain open communication with communities throughout the process. Participatory evaluation: carry out periodic evaluations of activities in conjunction with communities. Incorporate ongoing feedback to make adjustments to the schedule if necessary. Continuous adaptation: allowing for revision and adaptation of the schedule as needs and circumstances evolve.
Monitoring Frequency	Annual
Forms of registration	Formal physical and digital document, available to all community members and other relevant stakeholders.

Monitored value (01-January-2021 to 31-March-2023)	Year	Period	Schedule with activities established through the participation of communities
	2021	01-January to 31-December	0
	2022	01-January to 31-December	0
	2023	01-January to 31-March	1
	Total		1
Aspect of the Theory of Change	Schedule with planned activities established through the participation of the communities.		
Comments	No comments for the monitoring period in question (01-January-2021 to 31-March-2023).		

Source: created by authors

Indicator 6: income from alternative sources

Again, due to the fact that the monitoring period is retroactive, prior to the construction of the Theory of Change and, consequently, of the indicators, it is important to note that the type of measurement, procedures adopted and forms of recording will not coincide with those established in the CCB PD (see section "4.4.1 - Community Monitoring Plan" of CCB's PD⁸³).

Despite this divergence, the development of the activities of the ABC Norte REDD Project has resulted in several benefits for the communities in the Project Zone covered by Upbio's Socio-environmental Responsibility Program.

The establishment of the new type of measurement, procedures adopted and forms of records is in the process of alignment between the project proponents and the company responsible for the socio-environmental actions in the communities. From the next Monitoring Plan, it is expected that the measurement will occur according to what was defined in each of the established indicators.

Thus, to monitor the activities, the monthly and annual reports made available by Algar Farming were used. In specific activities, other resources were used to cover the monitoring of the actions carried out, which were described according to the needs of each indicator.

⁸³ Available at: <<https://registry.verra.org/app/projectDetail/CCB/2558>>. Accessed on: 06 Feb. 2024.

Therefore, the information regarding the amount of income generated through alternative practices, provided by Upbio's Socio-environmental Responsibility Program team, is recorded in the monthly reports prepared by the company and made available to Ecológica Assessoria through Algar Farming. All documents will be made available to the VVB team.

2021

- 21-February: in Nossa Senhora do Carmo community, 08 chickens were sold, while 02 were destined for the community's own consumption. The selling price was set at 30 BRL for chickens and 35 BRL for roosters. The person responsible for the "Granja Solidária" reported that, at the end of the month, he obtained a return of 250 BRL with the sale of chickens, an amount that has already been reinvested in the purchase of more inputs and animals for the maintenance of the poultry farming activity.

- 23-April: in Monte Sião community, as reported by one of the producers, the first production of the poultry farming activity generated a profit of 655 BRL.

- 26-July: in Monte Sião community, another producer reported a revenue of 570 BRL from the poultry farming activity, which provided support for the acquisition of new inputs and the continuity of the activity.

- 18-November: in Monte Sião community, during a dialogue with one of the producers, it was informed that 16 chickens were consumed by the family, contributing to better food security and savings of 480 BRL that would be spent on the purchase of food. Additionally, the producer pointed out that 06 chickens were sold for 30 BRL each, totaling a financial return of 180 BRL for the family. In total, the production of poultry farming in the community provided a return flow of 660 BRL, contributing both to the family economy and to income generation.

Table 25 - Poultry farming production in Monte Sião community

Destination of chickens	Quantity	Unit price	Total (BRL)
Consumed	16	30 BRL	480 BRL
Sold	06	30 BRL	180 BRL
Total	24	-	660 BRL

Source: project proponent's collection (November-2021)

- 19-November: in Nossa Senhora do Carmo community, one of the poultry producers reported the sale of 23 chickens at 40 BRL each, totaling a gain of 920 BRL.

- 20-November: in Cristo Salvador community, during the monthly visit, one of the producers reported that he consumed 01 chicken, while 26 chickens were sold at 30 BRL each, generating an income of 780 BRL. In relation to the production of another producer, the consumption of 03 chickens for family feeding was

mentioned. During the visit, 05 chickens were sold to ABC Norte, with a unit value of 30 BRL, resulting in a total income of 150 BRL.

2022

- 25-June: at the “Festejo Junino” event, which took place in Vila ABC, the Nossa Senhora do Carmo community participated with the sale of various products, including chicken, fruits, cheese bread, whipped and lumped açaí, chestnut biscuit, chocolate cake, pepper sauce, artisanal chocolate, cakes, tapioca gum, among others. The sales of these products totaled a revenue of 1,000 BRL.

- 25-June: at the same event, the Divino Espírito Santo community also contributed to the sale of products from family farming, such as pineapple, banana, coconut, papaya, sugarcane, vegetables, coriander, chicory, gum cakes, tapioca flour, among others. The income obtained by the members of the community was 345 BRL.

Image 27 - Commercialization of products from the Divino Espírito Santo community during the “Festejo Junino”



Source: project proponent's collection (June-2021)

- 30-July: in São Sebastião do Cipoal community, through the fish farming activity, 04 fish of the “tambaqui” species were sold for 20 BRL each, resulting in an income of 80 BRL for the local producer.

- 30-July: in Nossa Senhora do Carmo community, one of the producers presented and sold 05 liters of tapioca flour, a product improved through the Program's activities. There is no information on the amount for which the flour was sold.

Image 28 - Tapioca flour sold by the producer of the Nossa Senhora do Carmo community



Source: project proponent's collection (July-2021)

2023

- As of March, no income-generating activities were registered in the communities covered by Upbio's Socio-environmental Responsibility Program. This initial period of the year was marked by a planning and preparation phase, where actions and projects were being outlined and organized. The absence of a record of income generation in this interval is in line with the process of building and structuring the activities that will be implemented in the subsequent months, reflecting the initial phase of the program's execution cycle for the year 2023.

Thus, for the "Indicator 6: income from alternative sources", we have the following values:

Table 26 - Indicator 6: income from alternative sources

Indicator 6	Income from alternative sources
Description	Qualitatively assessing household income from alternative sources.

Type of measurement and procedures adopted	Identification of alternative sources: identify the different alternative sources of income available to households. Explore communities' perceptions of the importance and feasibility of these sources. Data collection: conduct open conversations and application of a semi-structured questionnaire to collect information on the diversification of income sources. Characterization of contributions: to describe qualitatively how alternative sources contribute to the total income of families. Examine the narratives and stories to understand the perceived impact. Perceptions analysis: analyze households' perceptions of the effectiveness and sustainability of alternative sources compared to conventional sources. Communication of perceptions: disseminate the perceptions, as well as the results of the questionnaire, to community members, clarifying any doubts regarding the generation of income from alternative sources.																	
Monitoring Frequency	Annual																	
Forms of registration	Report, semi-structured questionnaire, interview, e-mail, photographic record, recording and other documents that corroborate as evidence of the activities carried out.																	
Monitored value (01-January-2021 to 31-March-2023)	<table><tr><th>Year</th><th>Period</th><th>Income from alternative sources</th></tr><tr><td>2021</td><td>01-January to 31-December</td><td>4,165 BRL</td></tr><tr><td>2022</td><td>01-January to 31-December</td><td>1,425 BRL</td></tr><tr><td>2023</td><td>01-January to 31-March</td><td>0 BRL</td></tr><tr><td colspan="2">Total</td><td>5,590 BRL</td></tr></table>			Year	Period	Income from alternative sources	2021	01-January to 31-December	4,165 BRL	2022	01-January to 31-December	1,425 BRL	2023	01-January to 31-March	0 BRL	Total		5,590 BRL
Year	Period	Income from alternative sources																
2021	01-January to 31-December	4,165 BRL																
2022	01-January to 31-December	1,425 BRL																
2023	01-January to 31-March	0 BRL																
Total		5,590 BRL																
Aspect of the Theory of Change	Generate income through alternative sources.																	
Comments	The highlighted values related to income generation from alternative sources in the communities went beyond just the revenue generated from product sales; they also encompassed the economy resulting from the consumption of these products for subsistence.																	

Source: created by authors

Indicator 7: markets reached by cooperatives/associations

Within the scope of “Indicator 7: markets reached by cooperatives/associations”, there are no specific records on the sales channels of producers, either individually or through cooperatives and associations. However, when analyzing the experiences and perceptions of the residents during the monthly visits to the communities, it was evidenced that the generation of income through the commercialization of the products unfolds through three main channels: a) direct sales among community members; b) sales to ABC Norte company and c) participation in Portel Municipal Fair.

a) Selling among community members, in addition to strengthening local ties, stimulates the internal economy and establishes a direct and decentralized relationship between producers and consumers. This local commerce not only fosters income generation, but also promotes the autonomy and sustainability of communities, while strengthening social cohesion. In this context, in the months of April-2021 and May-2021, signs were installed in the aviaries of the communities of Nossa Senhora do Carmo and Monte Sião, respectively, to give visibility to the products offered (see image).

Image 29 - Informational signs in the aviaries of the Nossa Senhora do Carmo and Monte Sião communities, respectively



Source: project proponent's collection (April-2021 and June-2021)

Not only that, it is important to highlight that the Social Action event held annually by ABC Norte in collaboration with the Municipality of Portel is also configured as an additional sales channel, as evidenced in “Indicator 6: income from alternative sources”, in addition to playing a fundamental role as a culmination event of the activities developed by Upbio and of approximation between the communities contemplated by the Socio-environmental Responsibility Program.

b) The commercialization to the ABC Norte company represents a strategic partnership that enables the generation of income for the producers, establishing a bridge between the local communities and the

“Fazenda Pacajá”. This collaborative relationship contributes to the economic sustainability of the activities developed in the communities, providing an additional source of income.

c) Participation in Portel Municipal Fair represents a significant opportunity to expand the reach of the products of the communities covered by the Program. This initiative seeks to reach a more diverse audience, providing visibility and recognition to local products. However, it is important to note that, despite the benefits, this type of sale faces considerable logistical challenges: the travel time to the fair and the difficulties associated with the storage of products along the way have been relevant obstacles to the full viability of this channel. During the construction of the Theory of Change in collaboration with community leaders, such difficulties were identified and discussed (see section “2.1.8 - Project Activities and Theory of Change” of CCB's PD⁸⁴). As part of the proposals for the next period of monitoring and actions by Upbio, there is an effort to minimize these logistical difficulties.

Thus, the results measured through the "Indicator: markets reached by cooperatives/associations" can be seen below:

Table 27 - Indicator 7: markets reached by cooperatives/associations

Indicator 7	Markets reached by cooperatives/associations.
Description	Measuring the capacity of cooperatives or associations to expand their presence and participation in different markets.
Type of measurement and procedures adopted	Formulation of the Indicator: Number of new markets reached = total new markets established in the current monitoring period - number of markets established in the previous monitoring period. Interpretation: A positive value indicates an increase in the number of markets served since the beginning of the period considered. A negative value suggests a reduction in the number of markets. Data collection: will be collected through direct interviews with members of cooperatives/associations. The count should consider the markets served at the beginning and end of the established period. Communication of results: data will be shared with cooperatives/associations at their meetings and with other relevant stakeholders.
Monitoring Frequency	Annual

⁸⁴ Available at: <<https://registry.verra.org/app/projectDetail/CCB/2558>>. Accessed on: 06 Feb. 2024.

Monitored value (01-January-2021 to 31-March-2023)	Year	Period	Community sales channels
	2021	01-January to 31-December	a) Community b) ABC North c) Portel Municipal Fair
	2022	01-January to 31-December	
	2023	01-January to 31-March	
Aspect of the Theory of Change	• Expanded access to local markets and sales channels.		
Comments	No comments for the monitoring period in question (01-January-2021 to 31-March-2023).		

Source: created by authors

4.3.2 Community Monitoring Plan Dissemination (CM4.3)

Following the guidelines established in section “2.2.1 - Stakeholder Access to Project Documents”, the monitoring plan will be disseminated to communities and other stakeholders through the following strategies:

- **VERRA platform:** the monitoring plan, as well as the results of the checks, will be shared on the VERRA platform⁸⁵, ensuring transparency and reaching a wider audience.
- **Communication channels:** the plan will be accessible to communities through Upbio's WhatsApp (+55 91 98517 3832), which is already used as a communication vehicle.
- **Algar Farming headquarters:** the plan will be available at Algar Farming's headquarters and will be presented to stakeholders during periodic meetings about the project. Communities will also be able to access it, even those not covered by Upbio's Socio-environmental Responsibility Program.
- **E-mail to other stakeholders:** Algar Farming and/or Ecológica Assessoria will send an e-mail to the other stakeholders identified in section “2.1.6 - Stakeholder Identification” of the CCB's PD containing the monitoring plan and the next steps related to the project, as established by the PD and RM of the ABC Norte REDD Project. Communities will not be included in this email, considering that there are more effective ways to make the document available, considering the local reality.
- **Upbio's field activities through Socio-environmental Responsibility Program:** during the field visits carried out by Upbio in the communities, the monitoring plan summary and its results will be communicated orally and through printed material.

⁸⁵ Available at: < <https://registry.verra.org/>>. Accessed on: 08 Feb. 2024.

For the communities, this moment is scheduled to take place between 27-February-2024 and 29-February-2024, following the itinerary:

- 27-February-2024: Caminheiros do Bem and Monte Sião Community.
- 28-February-2024: Divino Espírito Santo and Cristo Salvador Community.
- 29-February-2024: São Sebastião do Cipoal and Nossa Senhora do Carmo Community.

In addition, and the technical team of Ecológica Assessoria will be available for contact through the e-mail: tecnica@ecologica.br.

Finally, the document containing the results of the first monitoring period (01-January-2021 to 31-March-2023) will be distributed in Portuguese, based on the local language, to the community leaders, who will sign a receipt of receipt of the documents. This initiative will be implemented to guarantee that all stakeholders have access to the information and the opportunity to address any issues that may arise.

4.4 Optional Criterion: Exceptional Community Benefits

Not applicable. During the next stages of project development, Ecológica Assessoria's technical team will study the best strategy to meet the requirements that will enable the project to reach the Gold Level for Climate, Community and Biodiversity.

4.4.1 Short-term and Long-term Community Benefits (GL2.2)

Not applicable, as described in section 4.4.

4.4.2 Marginalized and/or Vulnerable Community Groups (GL2.4)

Not applicable, as described in section 4.4.

4.4.3 Net Impacts on Women (GL2.5)

Not applicable, as described in section 4.4.

4.4.4 Benefit Sharing Mechanisms (GL2.6)

Not applicable, as described in section 4.4.

4.4.5 Governance and Implementation Structures (GL2.8)

Not applicable, as described in section 4.4.

4.4.6 Smallholders/Community Members Capacity Development (GL2.9)

Not applicable, as described in section 4.4.

5 BIODIVERSITY

5.1 Net Positive Biodiversity Impacts

5.1.1 Biodiversity Changes (B2.1)

Table 28 - Biodiversity element: 191 species commercial, non-commercial and potential species identified

Biodiversity Element	191 species commercial, non-commercial and potential species identified
Monitored Change	Sustainable forest management with FSC certification and Chain of Custody (CoC) certification.
Justification of Change	The project is based on selective and low-impact logging management according to a previous Sustainable Forest Management developed, by dividing the area under sustainable forest management into a total of 35 cutting plots, which will be harvested annually (one part each year) and at a certain intensity of harvesting (the design considers a cutting cycle every 35 years, allowing natural regeneration and the growth and reproduction of unharvested individuals. A great diversity of species (191) with timber potential has been inventoried. The Forest Management Unit will be divided into annual production units, considering a 35-year cycle. The methodology of the Sustainable Forest Management Plan (SFMP) includes the license of a General Forest Management Plan and the preparation of the Annual Operating Plan, which begins with a forest inventory, in which the variety and quantity of potential species to be harvested are documented. This process makes it possible to know the number of individuals of each species that are suitable for harvesting, and the approximate volume of wood that they will generate, which makes it possible to calculate and control, among other things, the total volume of wood to be harvested. After this step, it is possible to identify the seed trees that are kept in the forest, guaranteeing the production of seeds, ensuring the survivability of the species, and favouring their natural regeneration. Felling is done by directing the fall and minimizing damage to the surrounding vegetation so that the clearings left in the forest are of similar dimensions to those created by the natural fall of the trees. This favours regeneration since the entry of light into the clearings triggers the growth of seedlings that remain in a dormant state under the shade of the parent tree. This allows the conservation of the forest cover, almost untouched, guaranteeing successively the conservation of innumerable species of associated flora and fauna. To this end, the project has trained personnel, created infrastructure, and adapted the processes necessary to obtain the Sustainable Forest Management Certification - FSC 100% - guaranteeing an

	environmentally sustainable, socially inclusive, and economically viable model. The SFMP has a certification of its Chain of Custody (CoC), which certifies that the product reaches the customers in agreement with the traceability processes and the three pillars of sustainability (environmental, social, and economic). In this way, the forest maintains its rhythms and cycles similarly to the natural way, maintaining its processes, and where the species that indicate the health of the ecosystems register healthy and growing populations.
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Source: created by the authors using project proponent's collection

Table 29 - Biodiversity element: rivers and igarapés

Biodiversity Element	Rivers and <i>igarapés</i>
Monitored Change	Protection and conservation of water bodies inside the project area
Justification of Change	On 28-May-2022, Upbio, through the Socio-environmental Responsibility Program, conducted a lecture in the São Sebastião do Cipoal community to raise awareness among residents about the importance of environmental preservation, especially concerning rivers, considering their vital role for riverside communities. In addressing the relevance of environmental care, the lecture adopted a holistic perspective, focusing not only on the protection of natural resources but also on safeguarding cultural elements intrinsically linked to these aquatic ecosystems. Exploring the 5Rs (rethink, refuse, reduce, reuse and recycle) as guiding principles, the lecture provided practical tools for waste management, stimulating deeper reflection on the interdependence between environmental and cultural sustainability. This integrated approach contributed to building a collective consciousness that recognizes river preservation as an essential foundation for the cultural identity of riverside communities. In this context, the emphasis on preventing the introduction of waste into rivers encouraged individual and collective responsibility for proper disposal, highlighting the active participation of the community in preserving its environment. In addition, the construction of monthly water monitoring reports by the Upbio team is a crucial activity for the conservation of rivers and streams. This report aims to document all actions related to compliance with the conditions of grants No. 4939/2020_SEMAS/PA, No. 3731/2019_SEMAS/PA, and the Declaration of Waiver of Grant DDO-000.119/2020 for the "Fazenda Pacajá". The reports cover the monitoring of parameters that allow observation and control of water quality, such as pH, electrical conductivity, total dissolved solids, salinity, dissolved oxygen, and temperature. Frequent monitoring also enables the identification of possible environmental impacts and ensures that withdrawals align with authorized purposes, promoting the conservation of watercourses. Further details about the actions can be viewed in Section "4.1.4 Protection of High Conservation Values".

Source: created by the authors

Table 30 - Biodiversity element: threatened fauna species

Biodiversity Element	Threatened fauna species monitoring and conservation
Monitored Change	Identification, monitoring, protection, and conservation of threatened species
Justification of Change	Small mammals are key elements in natural communities, acting at different trophic levels and in the processes of predation and seed dispersal. In this context, inventories focusing on assemblages of these organisms are the basis for understanding ecological processes such as population dynamics and community structures and for developing management plans in natural environments⁴⁴. Habitat loss and fragmentation, resulting from human activities, constitute the greatest threats to terrestrial mammals in Brazil and are related to economic development through the growth of cultivated and urban areas, increased population density, atmospheric and aquatic pollution, and increased road network⁴⁵. During the monitoring period (in June-2022) the “Fazenda Pacajá” is certified by the Onça Pintada Institute, which aims to certify that the fauna in the farm region is intact. In other words, despite the Sustainable Forest Management implemented in the area, the impact of this activity is not harmful to the local fauna. The certificate is valid for one year and can be renewed each time it expires. In addition, project proponent carried out a fauna monitoring to identify the species of mammals, bats, herpetofauna and avifauna existing in the project area. The results are presented in section “5.3.1 - Biodiversity Monitoring Plan”. Monitoring studies have the main objective of knowing the influence of the main impacts (positive and negative) generated by the implementation of a project on local fauna. In addition to trying to unravel these impacts, monitoring studies recommend mitigating or compensatory measures, supported by a consistent database, generated from sampling carried out over a time gradient.

Source: created by the authors using project proponent's collection

5.1.2 Mitigation Actions (B2.3)

For the ABC Norte REDD Project, the central strategy adopted to mitigate potential negative impacts on biodiversity involves maintaining the monitoring of terrestrial fauna, carried out through specific campaigns. For the monitoring period in question, the first campaign was carried out between 25-February-2021 and 06-March-2021 and the second between 28-July-2022 and 05-August-2022 (the latter marked by the dry season in the region). The planning and execution of these activities follow the Fauna Monitoring Plan, respecting the conditions contained in the Authorization for the Capture, Collection, Management and Transport of Wildlife. In addition, the sampling standards and analysis criteria meet the legal requirements

established by Normative Instruction 52/2010 SEMAS/PA⁸⁶ and by Resolution 301/2012 of the Federal Council of Biology⁸⁷. The responsibility for preparing and conducting the monitoring is the responsibility of Uppio, a specialized and legally qualified company.

For this section, it was highlighted how the continuous monitoring of fauna contributes to the protection of the species highlighted in section “5.1.2 High Conservation Values” of CCB’s PD⁸⁸, considering that, in order to protect such species, it is necessary to understand their context/situation over time.

Saguinus niger

The constant monitoring of fauna plays an extremely important role in the preservation of the *Saguinus niger* species, which is vulnerable and endemic to the Amazon, according to the classification of the Red List of Threatened Species of the International Union for Conservation of Nature (IUCN)^{89, 90}. The *Saguinus niger* is subject to several threats, including habitat loss due to deforestation and environmental degradation.

The persistent observation of this species in its areas of occurrence, recorded in both monitoring periods, represents a positive indication. This constancy suggests a successful adaptation to local environmental conditions, constituting an important sign that the project's activities do not exert negative impacts on the preservation of the species.

⁸⁶ Available at:

<<https://www.semas.pa.gov.br/legislacao/normas/view/1414#:~:text=Estabelece%20normas%20e%20procedimentos%20para,Esta do%2C%20e%20d%C3%A1%20outras%20provid%C3%A2ncias>>. Accessed on: 09 Feb. 2024.

⁸⁷ Available at: <<https://cfbio.gov.br/2012/12/28/resolucao-no-301-de-8-de-dezembro-de-2012/>>. Accessed on: 09 Feb. 2024.

⁸⁸ Available at: <<https://registry.terra.org/app/projectDetail/CCB/2558>>. Accessed on: 09 Feb. 2024.

⁸⁹ Available at: <https://www.gov.br/icmbio/pt-br/assuntos/centros-de-pesquisa/cpb/arquivos/fichas_primatas/CALLITRICHIDAE/ficha_saguinus_niger.pdf>. Accessed on: 14 Nov. 2023.

⁹⁰ Available at: <<https://www.iucnredlist.org/es/species/160901052/192553958>>. Accessed on: 14 Nov. 2023.

Image 30 - Presence of the species *Saguinus niger* in the campaign between 28-July-2022 and 05-August-2022



Source: project proponent's collection (2022)

Panthera onca

Wildlife monitoring plays an essential role in the conservation of *Panthera onca*, a species classified as "Near Threatened" by the International Union for Conservation of Nature (IUCN) Red List of Threatened Species in 2016⁹¹.

The simultaneous observation of the species suggests the effective preservation of the environment. The presence of these animals, positioned at the top of the food chain, indicates a balanced and healthy ecosystem, being extremely important for the regulation of prey populations and the maintenance of ecological balance.

In addition, the fact that *Panthera onca* was sighted in both monitoring campaigns positively reinforces this conclusion. The consistency of this pattern suggests a successful adaptation of the species to the local environment. The continuity of their presence indicates that the habitat offers favorable conditions for survival and reproduction.

⁹¹ Available at: <<https://www.iucnredlist.org/es/species/15953/123791436>>. Accessed on: 14 Nov. 2023.

Image 31 - Records of the species *Panthera onca* in the two fauna monitoring campaigns



Source: project proponent's collection (2021-2022)

Guaruba guarouba

Although no observations of *Guaruba guarouba* were recorded during the monitoring periods, it is imperative to highlight the continued importance of these activities for the preservation of this species, especially as it is classified as "Vulnerable" by the International Union for Conservation of Nature (IUCN) Red List of Threatened Species in 2018⁹².

It is noteworthy that the absence of records during the monitored period does not imply, in any way, a permanent presence of the species in the area. Fauna monitoring represents an essential tool to understand patterns of presence and absence, behavior and seasonal movements of species. In the case of the *Guaruba guarouba*, whose population is under pressure due to habitat loss and illegal capture, regular surveillance is vital to detect possible changes in its distribution.

Thus, *Saguinus niger* and *Panthera onca* demonstrate successful adaptation, while *Guaruba guarouba* highlights the importance of continuous surveillance. The monitoring of fauna, essential for the management of protected areas, contributes to the implementation of specific conservation measures, seeking to balance human development with environmental preservation.

Thus, it is evident that the actions of monitoring terrestrial fauna in the REDD ABC Norte Project are not only in line with the precautionary principle, but also exemplify it in practice. By anticipating, assessing, and responding in a preemptive manner to potential environmental consequences, the project demonstrates a strong commitment to sustainability and biodiversity conservation in line with this guiding principle.

⁹² Available at: <<https://www.iucnredlist.org/species/22724703/132029835>>. Accessed on: 14 Nov. 2023.

5.1.3 Net Positive Biodiversity Impacts (B2.2, GL1.4)

The ABC Norte REDD Project outlines a set of activities aimed at optimizing broad benefits in the climate, community and biodiversity context. The preponderant advantages associated with the third axis are intrinsically correlated with the minimization of deforestation, the preservation of habitats and the conservation of floristic diversity (through SFMP) and fauna diversity (through monitoring of terrestrial fauna).

The adverse impact of deforestation goes beyond the mere quantitative reduction of plant specimens, representing a concrete threat to faunal diversity: the loss, degradation and fragmentation of habitats can lead to the extinction not only of species directly linked to these environments, but also of other related species, underlining the urgent importance of environmental preservation.

Fauna monitoring studies, concomitantly with the SFMP, have identified, since the inaugural phase of the project, the presence of endangered endemic species in the region. Many of them are on the IUCN “red list”⁹³ (as is the case of *Saguinus niger*, *Guaruba guarouba* and *Panthera onca*, for example), emphasizing the crucial need to maintain forest integrity in the area for the short and long-term preservation of these species.

In this context, the reduction of deforestation and the positive results achieved assume a crucial magnitude. All negative impacts that cease to occur on the ecosystem are considered as net positive impacts on biodiversity. In addition, the implementation of the project's activities has a direct and positive impact on biodiversity, contributing to the maintenance of vegetation cover and species in adequate environmental conditions and with satisfactory levels of conservation.

These positive impacts result mainly from the prevention of deforestation, the effective monitoring of biodiversity, the technical assistance offered, environmental education workshops, and capacity building and training courses. A notable example of raising awareness on this topic is the workshop on the “5R” (rethink, refuse, reduce, reuse and recycle), conducted on 28-May-2022 in São Sebastião do Cipoal community by Upbio (see section “4.1.4 - Protection of High Conservation Values”). This integrated approach has contributed to the construction of a collective consciousness that recognizes preservation as an essential pillar for the cultural identity of communities.

Thus, a community that is properly empowered and aware of the natural wealth around it plays an essential role as a tangible benefit for biodiversity, promoting sustainable coexistence between human activities and environmental preservation.

⁹³ Available at: <<https://www.iucnredlist.org/species/22724703/132029835>>. Accessed on: 09 Feb. 2024.

5.1.4 High Conservation Values Protected (B2.4)

Targeted, low-impact logging through SFMP, an important component of the project, is carefully planned to ensure that there are no adverse impacts on biodiversity-related HCVs (see section “5.1.2 - High Conservation Values” of CCB’s PD)⁹⁴. On the contrary, the strategy of sustainable harvesting of this natural resource contributes positively to the conservation of practically intact forest cover. This approach is particularly beneficial for the preservation of numerous species of flora and fauna, including those that are threatened with extinction, thus reinforcing the biological richness of the region.

The special focus on these values evidences the project's commitment to maintaining the ecological integrity of the area, considering not only the quantity but also the quality of the wildlife and ecosystems present.

In addition, the project carries out an annual inventory of fauna, a fundamental practice for the systematic monitoring of the species existing in the project area. This proactive approach allows for the development of effective monitoring plans to ensure the livelihoods of local species. At the same time, it is a strategic measure to minimize possible impacts on animal welfare, demonstrating continuous and responsible care for the local fauna. In this way, the initiative not only safeguards the integrity of the ecosystem, but also shows a long-lasting commitment to the conservation of the species that share this environment.

5.1.5 Invasive Species (B2.5)

Not applicable. Considering that the main objective of the project is forest conservation, the project activities do not foresee the use or introduction of native or invasive species, whether fauna or flora.

5.1.6 Impacts of Non-native Species (B2.6)

Not applicable, as described in section 5.1.5.

5.1.7 GMO Exclusion (B2.7)

No GMO will be used in the project activities.

5.1.8 Inputs Justification (B2.8)

Not applicable.

⁹⁴ Available at: <<https://registry.terra.org/app/projectDetail/CCB/2558>>. Accessed on: 09 Feb. 2024.

5.2 Offsite Biodiversity Impacts

5.2.1 Negative Offsite Biodiversity Impacts (B3.1) and Mitigation Actions (B3.2)

The project's activities are not anticipated to have any adverse impacts on biodiversity beyond - or within - the project zone. Moreover, if any negative impacts on biodiversity are detected, both within and beyond the project zone, prompt measures will be proposed and implemented to prevent and mitigate them.

Table 31 - Negative offsite impact and mitigation measures

Negative Offsite Impact	Mitigation Measure(s)
Fires and burns	- Partnership with a local fire brigade, with training, supply of materials and fuel; - Actions to raise awareness about the use of fire in the region, open to both participants and non-participants in the project; - Monitoring of fires outside the project area.
Deforestation and forest degradation	- Monitoring of deforestation outside the project zone, including leakage belt; - Partnership with local bodies to promote trainings for the local communities regarding the climate change and the importance to adopt sustainable practices; - Training in sustainable rural production activities for the local communities which lives from the agriculture and livestock.
Illegal hunting or fishing activities	Installation of information signs about places of high conservation value and prohibition of hunting or fishing in the project area that will be able to inform the community outside the project area.
Sustainable forest management - Frighten animals	- Restrict the circulation of personnel and equipment on the Project Area to avoid frightening or modifying the behaviour of animals; - Regular meetings with communities living within the leakage management area explaining about the difference between the customary and the predatory hunting and fishing; - Timber harvesting should be performed on annual plots and not at several locations simultaneously; - Establish procedures to monitor fauna on traditional hunting spots inside each APU.
Sustainable forest management - Vehicle transport	- Monitor vehicles for their compliance on driving speed; - Establish speed bumps and spray roads with water near populated areas; - Establish and monitor time limits for harvest transportation to avoid disturbing locals during rest periods.

Source: created by the authors

5.2.2 Net Offsite Biodiversity Benefits (B3.3)

The ABC Norte REDD Project plays a key role in promoting significant positive impacts on biodiversity, standing out for the comprehensive conservation of extensive forest areas, including those that are home to threatened and vulnerable species. In the unlikely scenario of minimal negative impacts occurring outside the project boundaries, these are promptly identified and addressed through planned actions that aim to contribute effectively to the mitigation of these impacts. Such actions include:

- **Satellite image report:** a monthly satellite image report is issued containing information on field openings.
- **Continuous fauna monitoring:** maintenance of rigorous and continuous monitoring of biodiversity through fauna monitoring carried out by Upbio, ensuring the preservation of species and ecosystems over time.
- **Patrolling:** conducting frequent patrol rounds to detect and address potential threats to biodiversity, providing a proactive response to adverse events.
- **Application of good practices in sustainable forest management:** implementation of practices that strengthen property governance and minimize impacts on biodiversity during forest management activities.
- **Community involvement in activities related to biodiversity preservation:** promoting the engagement of local communities in actions related to biodiversity preservation, recognizing the importance of community support for the success of the project.
- **Sustainable use of natural resources:** adoption of practices aimed at the sustainable use of natural resources, ensuring the maintenance of the forest in the long term, such as those developed by Upbio in the communities covered by the Socio-environmental Responsibility Program (poultry farming, horticulture and fish farming, for example).

At the same time, employees involved in field activities undergo regular training to reduce the exploitation of impacts, addressing topics such as equipment operation, safety, ergonomics, among others (see section “2.2.13 - Worker Training” and “2.2.16 - Occupational Safety Assessment”).

These actions, fully aligned with the commitment of the ABC Norte REDD Project to biodiversity conservation and environmental sustainability, reinforce its contribution to the preservation of the Amazon biome.

5.3 Biodiversity Impact Monitoring

5.3.1 Biodiversity Monitoring Plan (B4.1, B4.2, GL1.4, GL3.4)

Indicador 1: project area undisturbed

Table 32 - Aspects related to indicator 1: project area undisturbed

Activity	Biodiversity variable	Source	Indicator	Area	Frequency
Protection of the project's native vegetation area	Forest cover	Technical report, local patrols	Project area undisturbed	Entire project area	Monthly

Source: created by the authors

With regard to the protection of the project's native vegetation area, several activities have been strategically developed to ensure the preservation of this crucial environment. Let's highlight some of these initiatives:

- **Satellite imagery report:** a monthly satellite imagery report is issued on a regular basis that contains detailed information about field openings, providing a comprehensive view of changes in the area.
- **Patrolling:** conducting frequent patrols is a key practice to detect and address potential threats to biodiversity. This proactive approach allows for a rapid response to adverse events while ensuring the security of the ecosystem.
- **Application of good practices in sustainable forest management:** the implementation of practices that strengthen property governance is essential to minimize impacts on biodiversity during forest management activities. This includes preserving mother trees and adopting sustainable methods.
- **Community involvement in biodiversity preservation activities:** recognizing the importance of community support, there is an ongoing effort to involve local communities in actions related to biodiversity preservation. This fosters a collaborative approach and strengthens the bonds between the project and the people living in the region.
- **Sustainable use of natural resources:** the adoption of practices aimed at the sustainable use of natural resources is a priority. This includes initiatives such as the agroforestry system developed by Upbio in the communities covered by the Social and Environmental Responsibility Program. These practices aim to ensure the long-term maintenance of the forest by promoting harmony between human activities and the natural ecosystem.

The set of actions implemented for the protection of the native vegetation area within the scope of the project not only meets a variety of specific objectives but, more comprehensively, contributes significantly to the effective preservation of the forest area. By adopting measures such as satellite monitoring, regular patrols, the application of good practices in sustainable forest management, and the active involvement of local communities, the project establishes a robust network of safeguards. These initiatives not only protect biodiversity and the natural conditions of the forest, but also strengthen the resilience of the ecosystem in the face of potential threats. In addition, the commitment to the sustainable use of natural resources ensures the continuity of the forest and promotes a balanced coexistence between human activities and the rich biodiversity of the environment. In this way, the benefits of these actions extend beyond the environmental sphere, reinforcing the long-term commitment to the long-term preservation of the forest area.

Indicador 2: biodiversity monitoring (fauna)

Table 33 - Aspects related to indicator 3: biodiversity monitoring (fauna)

Activity	Biodiversity variable	Source	Indicator	Area	Frequency
Fauna monitoring	Terrestrial mammal fauna, herpetofauna, and avifauna, includes HCV wildlife	Camera traps, technical report, fauna inventory	Biodiversity monitoring - Quantity, family name, species name, location	Strategic points of the UPAs that were explored within "Fazenda Pacajá"	2 annual monitoring: 1 in the dry season and 1 in the rainy season

Source: created by the authors

During the monitoring period, two fauna inventory campaigns were conducted in accordance to the Biodiversity Monitoring Plan, as presented in section "5.4.1 - Biodiversity Monitoring Plan" of CCB's PD.

The fauna inventory campaigns were carried out at "Fazenda Pacajá" in partnership with Upbio, a specialized consultancy company on developing environmental studies. The execution of the activities was based on the Fauna Monitoring Plan, in addition to the recommendations and conditions contained in the Authorization for Capture, Collection, Management, and Transport of Wild Fauna (AU) under no. (5141/2023), issued by the State Secretariat for the Environment and Sustainability of Pará (SEMAS/PA). The sampling standards and analysis criteria followed legal requirements as recommended by Normative Instruction 52/2010 SEMAS/PA, in addition to Resolution 301/2012 of the Federal Council of Biology.

The two campaigns were conducted on 25-February-2021 to 06-March-2021⁹⁵ and on 28-July-2022 to 05-August-2022, during the rainy and dry seasons, respectively. The first took place in the UPA 16, where

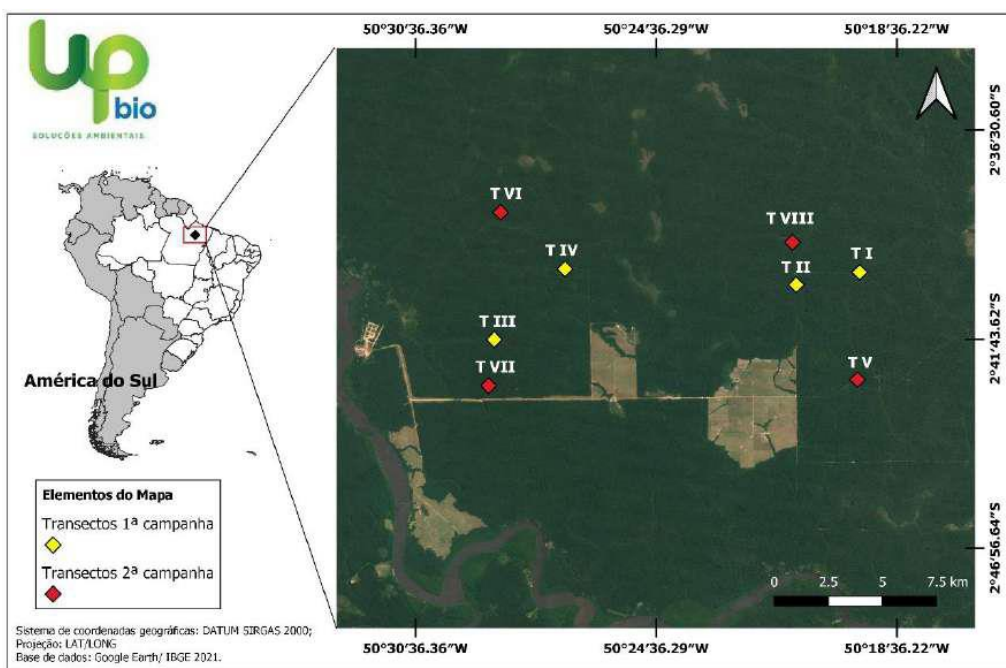
⁹⁵ Information from the fauna inventory for this period was accessed in the Fauna Monitoring Report, which presents combined results from two campaigns, one that took place in 2020 and one in 2021. As one of the campaigns refers to the monitoring period presented in this report, the data was considered.

wood extraction activities took place months prior to the fauna inventory. The 2022 campaign was conducted in sample points at UPAs 06 and 15.

It is noteworthy that, for the CCB's PD data from fauna monitoring carried out in June-2023 was used with the aim of characterizing the project area biodiversity with the most recent data possible. However, since this monitoring report deals with a retroactive period, information corresponding to the monitoring period (01-January-2021 to 31-March-2023) was considered.

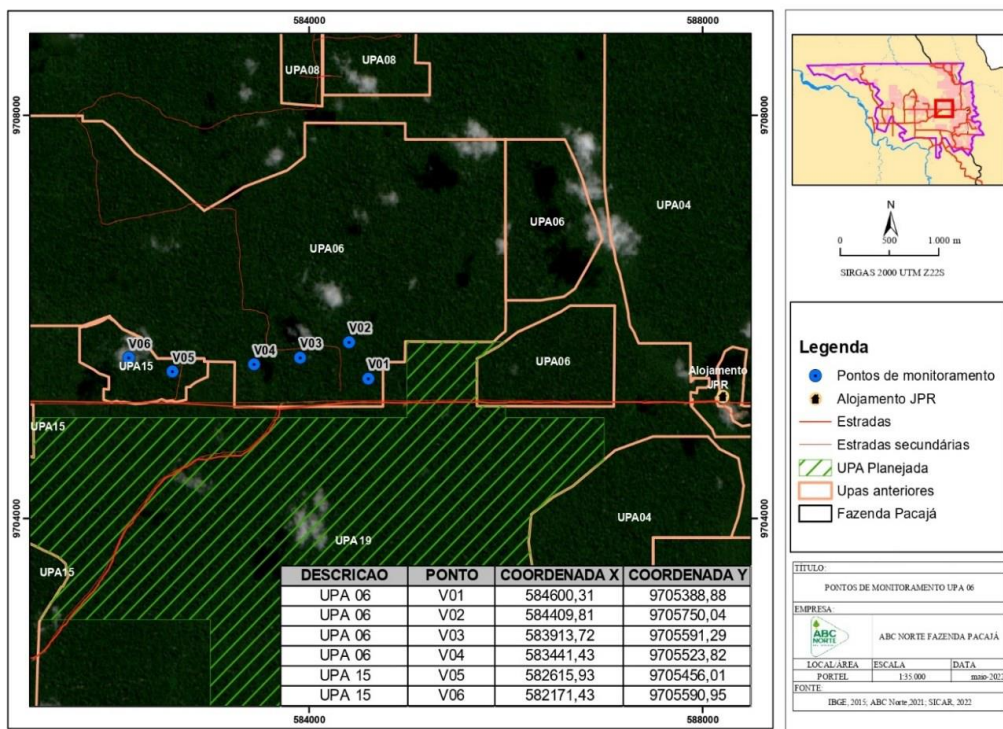
It is noteworthy that the sampling of some groups, as small mammals, birds, chiropterans and insects, were carried out only in the 2022 campaign, with an increase in sampling effort and technical capacity, with the aim of better characterizing and monitoring the local fauna.

Figure 19 - Location of sampling units in APU 16, where 2021 campaign took place



Source: project proponent's collection (2021)

Figure 20 - Locality of APUs 06 and 15, where 2022 campaign took place



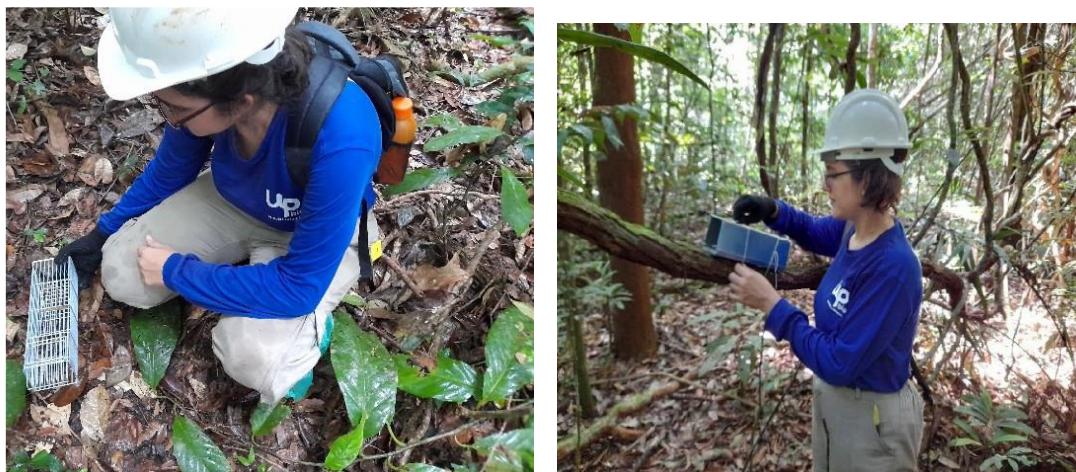
Source: project proponent's collection (2022)

Terrestrial mammals

Due to the high morphological and behavioral diversity of mammals, the methods used for diagnosis are specific, as each one is suitable for capturing and observing a fraction of this group. For medium and large mammals the sampling technique used was visual census to visually record species (direct records), in addition to feces, footprints, hair, or tracks (indirect records). Also, trap cameras were installed at sampling points, which were activated 24 hours a day for two days in each unit, strategically inserted in possible locomotion trails, close to dens, in resting places, reproduction, and feeding of mammals.

For small mammals, different types of traps were used, live traps, Shermans and Tomahawks, of different sizes arranged on the ground or in trees, lianas, etc., up to a maximum height of two meters. The traps were installed at a minimum distance of 20 meters, remaining open for 48 hours at each point, totaling 960 hours/sampling point. The traps, inspected at dawn, were placed with bait (banana, pineapple, peanuts, cornmeal and sardines), which were replaced every day during monitoring.

Image 32 - Installation of Tomahawk and Sherman traps



Source: project proponent's collection (2022)

Image 33 - Installation of life traps



Source: project proponent's collection (2022)

During fauna monitoring, 29 species (described in the table below) of mammals were recorded, divided into 17 families, using the methods described. The species recorded during fauna monitoring in both campaigns are presented in the table below:

Table 34 - List of Species recorded from terrestrial mammal fauna during fauna monitoring

Family	Scientific name	Regional name	Campaigns		IUCN threat status
			25-Feb-2021 to 06-Mar-2021	28-Jul-2022 to 05-Aug-2022	
Atelidae	Allouata macconnelli	Guariba	X	-	Least Concern
Atelidae	Alouatta discolor	Guariba	-	X	Vulnerable
Canidae	Cerdocyon thous	Raposinha/cachorro do mato	X	X	Least Concern
Cebidae	Saimiri sciureus	Saimiri	X	-	Least Concern
Cebidae	Saguinus niger	Sagui-preto	X	X	Vulnerable
Cebidae	Sapajus apela	Macaco-prego	X		Least Concern
Cervidae	Mazama nemorivaga	Veado-catingueiro/Veado foboca	X	X	Least Concern
Cervidae	Mazama americana	Veado materio	-	X	No data
Cuniculidae	Cuniculus paca	Paca	X	X	Least Concern
Dasypodidae	Dasypus novemcinctus	Tatu-galinha	X	-	Least Concern
Dasypodidae	Dasypus sp.	Tatu-galinha		X	No data
Dasyproctidae	Dasyprocta leporina	Cutia	X		Least Concern
Dasyproctidae	Dasyprocta croconota	Cutia	-	X	No data
Didelphidae	Philander opossum	Cuíca	-	X	Least Concern
Didelphidae	Marmosa murina	Cuíca	-	X	Least Concern
Didelphidae	Metachirus nudicaudatus	Cuíca marrom	-	X	Least Concern
Echimyidae	Proechimys sp.	Rato de espinho	-	X	No data
Erethizontidae	Coendou sp.	Porco-espinho	-	X	Least Concern
Felidae	Panthera onca	Onça-pintada	X	X	Near Threatened

Family	Scientific name	Regional name	Campaigns		IUCN threat status
			25-Feb-2021 to 06-Mar-2021	28-Jul-2022 to 05-Aug-2022	
Felidae	<i>Puma concolor</i>	Onça-parda	X	-	Least Concern
Felidae	<i>Leopardus pardalis</i>	Jaguaririca	-	X	Least Concern
Felidae	<i>Leopardus wiedii</i>	Gato maracajá	-	-	Near Threatened
Myrmecophagidae	<i>Tamandua tetradactyla</i>	Tamanduá	-	X	Least Concern
Pitheciidae	<i>Chiropotes utahickae</i>	Cuxiú	-	X	Vulnerable
Procyonidae	<i>Procyon cancrivorus</i>	Mão-pelada	X	-	Least Concern
Procyonidae	<i>Nasua nasua</i>	Quati	X	-	Least Concern
Sciuridae	<i>Guerlinguetus gilvularis</i>	Esquilo	X	-	No data
Tapiridae	<i>Tapirus terrestris</i>	Anta	X	X	Vulnerable

Source: project proponent's collection

Among the records, the presence of Agouti (*Dasyprocta sp*) stands out, which is a species that is greatly affected by humans, as it suffers great pressure due to hunting for the consumption of protein of animal origin. Also, the brocket deer (*Mazama nemorivaga*) is an important record for the area of influence of “Fazenda Pacajá”, considering that deer are difficult to detect and suffer from pressure from indiscriminate hunting, which is one of the main factors in the decline of its population the Amazon rainforest.

Considering the felid family, the presence of *Panthera onca* and *Leopardus wiedii* (classified as least concern) stands out. Another species that deserves special attention is the *Saguinus niger*, classified as vulnerable, according to the Red List of Endangered Species of the International Union for the Conservation of Species (Red List - IUCN) and considered endemic to the Amazon, as is *Saimiri sciureus*.

Image 34 - *Dasyprocta leporine*



Image 35 - *Marmosa murina*



Source: project proponent's collection

In the first campaign, in 2021, the data suggest that the sample point at which all indices were the highest, the results may be related to the absence of extraction activities, since that part of the Annual Production Unity was still being marked and identified, in addition to the presence of water bodies in the area. In that place, the two species of big cats from the Amazon, the Jaguar and the Brown Jaguar (*Panthera onca* and *Puma concolor*) were recorded, suggesting that the environment in that location was best preserved as it presented mammals considered “top of the food chain”.

Chiropterans

The bats sampling conducted in two sample points with the aid of seven ground-level mist nets, measuring 12 x 3 m with 25 mm mesh, set up along trails and possible bat flight routes captured in natural populations. Captures started at 18:00h and ended at 00:00h, and inspections were carried out at intervals of 20 to 30 minutes, each point was sampled for two consecutive nights. The captured specimens were removed from the nets manually using gloves and placed in cloth bags. In the intervals between inspections, specimens were analyzed and identified according to the identification key for Amazonian bats. As small mammals, chiropterofauna were sampled only in 2022 campaign. In that sense, sampling points were held in Annual Production Units 06 and 15. Four species of bats were registered during the monitoring inventory area, as presented below.

Table 35 - List of species recorded for Chiropterofauna

Scientific name	Sample Unit 1	Sample Unit 2	IUCN threat status
<i>Micronycteris hirsuta</i>	X	-	Least Concern
<i>Artibeus obscurus</i>	X	X	Least Concern
<i>Lophostoma silvicolum</i>	X	X	Least Concern
<i>Carollia perspicillata</i>	-	X	Least Concern

Source: project proponent's collection

Image 36 - *Artibeus obscurus*



Source: project proponent's collection

Carollia perspicillata is a frugivorous species that has a strong preference for fruits of the genus *Piper* (family Piperaceae). It forages mainly in the understory, being commonly found on forest edges, clearings and trails within the forest, characteristics that may explain the high number of records during the monitoring. It shelters in foliage, tree hollows, caves, drains and even abandoned buildings. It has a wide distribution, both in South America and Brazil, where it is only absent in the south of Rio Grande do Sul.

Herpetofauna

For sampling herpetofauna, two methods were considered: active search limited by time (day and night transects), carried out in both campaigns - 2021 and 2022 - and pitfall traps, only in last one. In this case, three lines of pitfall traps were installed, each containing five buckets equidistant 10 meters apart. The buckets were checked in the morning, aiming to sample amphibians, lizards, snakes, chelonians and crocodilians.

The time-limited search intended to cover different habitats and micro-habitats of amphibians and reptiles (rocks, lagoons, puddles, etc.), with an active search being carried out for three hours in the morning and three hours at night in each Sampling Unit (AU) and adjacent areas or locations that could serve as possible reproductive sites.

Image 37 - Time limited search in day and night periods



Source: project proponent's collection

As a result from herpetofauna monitoring, 64 species from 24 families were identified as showed in table 36.

Table 36 - List of species recorded for Herpetofauna

Order	Family	Scientific name	Campaigns		IUCN threat status
			25-Feb-2021 to 06-Mar-2021	28-Jul-2022 to 05-Aug-2022	
Squamata	Colubridae	<i>Leptodeira annulata</i>	X	-	Least Concern
Squamata		<i>Chironius multiventris</i>	X	-	Least Concern
Squamata		<i>Chironius carinatus</i>	X	-	Least Concern

Order	Family	Scientific name	Campaigns		IUCN threat status
			25-Feb-2021 to 06-Mar-2021	28-Jul-2022 to 05-Aug-2022	
Squamata		<i>Chironius scurrulus</i>	X	-	Least Concern
Squamata		<i>Dipsas indica</i>	X	-	Least Concern
Squamata		<i>Phrynonax poecilonotus</i>	X	-	Least Concern
Squamata		<i>Imantodes cenchoa</i>	-	X	Least Concern
Squamata		<i>Taeniophallus quadriocellatus</i>	-	X	Least Concern
Squamata	Gymnophthalmidae	<i>Leposoma percarinatum</i>	X	-	Least Concern
Squamata	Iguanidae	<i>Iguana iguana</i>	X	-	Least Concern
Squamata	Viperidae	<i>Bothrops atrox</i>	X	X	Least Concern
Squamata		<i>Bothrops taeniata</i>	-	X	
Squamata	Sphaerodactylidae	<i>Gonatodes humeralis</i>	X	X	Least Concern
Squamata		<i>Chatogekko amazonicus</i>	X	X	Least Concern
Squamata	Dactyloidae	<i>Anolis fuscoauratus</i>	X	X	Least Concern
Squamata		<i>Dactyloa punctata</i>	-	X	
Squamata	Tropiduridae	<i>Tropidurus oeradicus</i>	X	-	No data
Squamata		<i>Plica umbra</i>	X	-	Least Concern
Squamata		<i>Plica plica</i>	-	-	
Squamata	Teiidae	<i>Kentropyx calcarata</i>	X	X	Least Concern
Squamata		<i>Ameiva ameiva</i>	X	X	Least Concern
Squamata		<i>Cnemidophorus cryptus</i>	X	X	Least Concern
Squamata		<i>Tupinambis teguixin</i>	X	-	Least Concern

Order	Family	Scientific name	Campaigns		IUCN threat status
			25-Feb-2021 to 06-Mar-2021	28-Jul-2022 to 05-Aug-2022	
Squamata	Maboyidae	<i>Copeoglossum nigropunctatum</i>	X	-	Least Concern
Squamata	Scincidae	<i>Varzea bistriata</i>	X	-	Least Concern
Squamata		<i>Copeoglossum nigropunctatum</i>	-	X	Least Concern
Squamata	Gekkonidae	<i>Hemidactylus mabouia</i>	X	-	Least Concern
Squamata	Elapidae	<i>Micrurus lemniscatus</i>	-	X	Least Concern
Squamata	Polychrotidae	<i>Polychrus marmoratus</i>	-	X	Least Concern
Testudines	Geoemydidae	<i>Rhinoclemmys punctularia</i>	X	-	No data
Testudines	Chelidae	<i>Platemys platycephala</i>	-	X	No data
Anura	Dendrobatidae	<i>Ranitomeya ventrimaculata</i>	X	-	Least Concern
Anura		<i>Ranitomeya amazonic</i>	-	X	Least Concern
Anura	Leptodactylidae	<i>Adenomera andreae</i>	X	X	Least Concern
Anura		<i>Leptodactylus fuscus</i>	X	-	Least Concern
Anura		<i>Leptodactylus pentadactylus</i>	X	X	Least Concern
Anura		<i>Physalaemus cuvieri</i>	X	-	Least Concern
Anura		<i>Physalaemus ephippifer</i>	-	X	Least Concern
Anura		<i>Leptodactylus mystaceus</i>	X	X	Least Concern
Anura		<i>Rhinella marina</i>	X	-	Least Concern
Anura	Bufonidae	<i>Rhinella major</i>	X	-	Least Concern
Anura		<i>Rhinella margareti</i>	X	X	Least Concern
Anura		<i>Rhinella cf. proboscidea</i>	X	-	Least Concern
Anura		<i>Rhinella cf. proboscidea</i>	X	-	Least Concern

Order	Family	Scientific name	Campaigns		IUCN threat status
			25-Feb-2021 to 06-Mar-2021	28-Jul-2022 to 05-Aug-2022	
Anura	Hylidae	<i>Scinax boesemani</i>	X	-	Least Concern
Anura		<i>Scinax ruber</i>	X	X	Least Concern
Anura		<i>Scinax x signatus</i>	X	-	Least Concern
Anura		<i>Scinax nebulosus</i>	X	-	Least Concern
Anura		<i>Osteocephalus taurinus</i>	X	X	Least Concern
Anura		<i>Boana cinerascens</i>	X	X	Least Concern
Anura		<i>Trachycephalus typhonius</i>	X	X	Least Concern
Anura		<i>Trachycephalus resinifictrix</i>	-	X	Least Concern
Anura		<i>Dendropsophus sp. (aff.) minusculus</i>	X	-	No data
Anura		<i>Boana boans</i>	X	-	Least Concern
Anura		<i>Boana cf. raniceps</i>	X	-	Least Concern
Anura		<i>Boana geographica</i>	-	X	Least Concern
Anura		<i>Boana lanciformis</i>	-	X	Least Concern
Anura		<i>Boana fasciata</i>	-	X	Least Concern
Anura	Microhylidae	<i>Ctenophryne geayi</i>	X	-	Least Concern
Anura	Phyllomedusidae	<i>Pithecopus hypochondrialis</i>	X	X	Least Concern
Anura		<i>Callimedusa tomopterna</i>	X	-	Least Concern
Anura		<i>Phyllomedusa vaillanti</i>	X	X	Least Concern
Anura	Craugastoridae	<i>Pristimantis fenestratus</i>	X	-	Least Concern
Anura	Aromobatidae	<i>Allobates femoralis</i>	X	-	Least Concern

Order	Family	Scientific name	Campaigns		IUCN threat status
			25-Feb-2021 to 06-Mar-2021	28-Jul-2022 to 05-Aug-2022	
Anura	Strabomantidae	<i>Pristimantis fenestratus</i>	-	X	Least Concern

Source: project proponent's collection

Image 38 - *Ranitomeya ventrimaculat*



Source: project proponent's collection

Image 39 - *Pristimantis fenestratus*



Source: project proponent's collection

Image 40 - *Micrurus lemniscatus*



Source: project proponent's collection

Some species are recorded only in one of the seasons (dry season or rainy season). This can be explained by the conditions of specific habitats or food availability formed during one of these seasons, as is the example of *Ranitomeya ventrimaculata*, *Callimedusa tomopterna*, *Ctenophryne geayi*, *Plica umbra*, *Tupinambis teguixin* and *Rhinoclemmys punctularia*.

Litter species such as *Adenomera andreae*, *Rhinella margaritifera*, *Rhinella proboscidea*, *Ranitomeya ventrimaculata* and *Allobates femoralis* recorded during the samplings, corroborate that non-significant alteration of the environment were done, especially *R. ventrimaculata* and *A. femoralis*, which are individuals that need microhabitats with specific characteristics of environmental quality to survive. The presence of *Anolis fuscoauratus* and *Plica umbra* demonstrates that the area provides the necessary support for the maintenance of the species, since they are arboreal lizards and do not support drastic changes in the environment.

The data suggest that the increase in breeding sites and microhabitats, such as temporary pools formed during the rainy season in the region, directly influences the abundance and dominance of some species, as observed by Kopp *et al.* (2010)⁹⁶. Additionally, higher species richness is probably related to the proximity to the water body present in the area.

⁹⁶ Available at: <<https://www.scielo.br/j/isz/a/4yGJT6DTbDxjvpXCXWFnGQh/abstract/?lang=pt>>. Accessed on: 09 Feb. 2024.

Insect vectors

Like other groups, the sampling of insect vectors only was conducted in the 2022 campaign, as an effort to better understand the local fauna.

Mosquitos were collected through two types of capture, they are: (i) The CDC (Centers for Disease Control) trap consists of a transparent film cylinder approximately 20 cm long and 10 cm in diameter. At the top, there is a small lamp and, just below, a fan that produces an air current with a gravitational direction and works with a current of 6 or 12 v. An aluminum tray covers the trap, protecting it from the rain. The Culicidae collected by this method are trapped and remain alive in the receiving compartment. (ii) Shannon Trap.

The CDC traps were placed at the three points at night, being installed at 6:00 pm and inspected at 7:00 am. Shannon samples were collected from 6:00 p.m. to 9:00 p.m. Samples were collected one night at each sampling point, totaling 72 hours of sampling from CDC traps and 9 hours of sampling from Shannon traps.

Image 41 - CDC trap installed



Image 42 - Collecting species in Shannon traps



Source: project proponent's collection

During the sampling period, it was possible to obtain 28 specimens of vector insects distributed in 4 genera in "Fazenda Pacajá": *Aedes fulvus*; *Anopheles pseudotibia maculatus*; four species of the genus *Culex sp* (*Culex sp1*; *Culex sp 2*; *Culex sp3*; *Culex sp4*) and *Psorophora cingulata*.

Populations of the genus *Anopheles* are known to occur throughout the Amazon Region. They are considered efficient vectors with a dispersion radius of 3 km. The females of these species are anthropophilic but they can feed on domestic animals.

Most of the species belonging to the genus *Culex* are considered arbovirus vectors and an important transmitter of the S.L.E. virus; the species has a strong tendency to the anthropic environment, since its

immature forms are easily found in liquid collections for domestic use (FORATTINI, 2002⁹⁷; SEGURA & CASTRO, 2007⁹⁸).

Avifauna

The avifauna monitoring was carried out using two sampling methods: point census with visual and auditory recording and bird capture using mist nets. The fixed point census consisted of the researcher moving along the transects, stopping every 50 meters, where a recording point was established.

In addition, the team of avifauna researchers installed six mist nets measuring 12 x 3 meters. The nets were inspected every 20 minutes to avoid the death or stress of the captured animals. After being captured, the birds were carefully removed from the mist net, and biometric measurements were taken (length of the beak, tarsus, wing, tail, total length, and weight), besides to examination to identify the presence of seedlings (remiges, rectrices, and metrics) and the incubation plate, to provide information on reproductive cycles.

During the sampling period it was possible to obtain the following records during the monitoring of the fauna of the “Fazenda Pacajá”:

Table 37 - List of species recorded for Avifauna

Family	Scientific name	Regional name	IUCN threat status
Furnariidae	<i>Dendrocincla fuliginosa</i>	Arapaçu-pardo	Least Concern
Furnariidae	<i>Glyphorhynchus spirurus</i>	Arapaçu-de-bico-de-cunha	Least Concern
Tyrannidae	<i>Mionectes oleagineus</i>	Abre-asa	Least Concern
Thraupidae	<i>Ramphocelus carbo</i>	Pipira-vermelha	Least Concern
Troglodytidae	<i>Pheugopedius coraya</i>	Garrinchão-coraia	Least Concern
Thraupidae	<i>Saltator maximus</i>	Tempera-viola	Least Concern
Thamnophilidae	<i>Thamnomanes caesius</i>	Ipecuá	Least Concern

Source: project proponent's collection

⁹⁷ Forattini, O. P. Culicidologia médica: Identificação, biologia, epidemiologia. São Paulo: Editora Universidade de São Paulo, 2002. 860 p.

⁹⁸ Segura, M. N. O.; Castro, F. C. Atlas de culicídeos na Amazônia brasileira: características específicas de insetos hematófagos da família Culicidae. Belém, PA: Instituto Evandro Chagas, 2007. 67 p., ISBN 978-85-6042000-1.

Image 43 - Pheugopedius coraya



Figure 21 - Ramphocelus carbo



Source: project proponent's collection

The species *Thamnomanes caesius* is known to be exclusively forested, from an understory area, was recorded during the campaign. This can be considered quite satisfactory, since this record can be considered as a positive indicator for the area, promoting the maintenance of an entire ecosystem.

During fauna monitoring campaigns, positive bioindicator species for preserved environments were found, as well as species with great adaptability in anthropized environments.

In the 2022 campaign, species that were recorded in all sampling units were present during the first monitoring campaign, this fact becomes interesting, as it indicates that the sampling units can form a kind of ecological corridor.

The continuity of fauna monitoring is indicated to enhance the knowledge and monitor the presence and status of local species, especially vulnerable species such as *Tapirus terrestris*, *Saguinus niger* and *Chiropotes utahickae*. In that direction, major efforts and the adoption of different methodologies to reach a wider range of animals was adopted between campaigns.

Indicador 3: biodiversity monitoring (flora)

Table 38 - Aspects related to indicator 3: biodiversity monitoring (flora)

Activity	Biodiversity variable	Source	Indicator	Area	Frequency
Flora monitoring	Tree species diversity, includes HCV trees	Sample plots, technical report, flora inventory, forest inventory	Biodiversity monitoring - Quantity, tree species name, location	Strategic points of the UPAs that were explored within "Fazenda Pacajá"	Annually

Source: created by the authors

For the monitoring of this indicator, the data used involve the number of species managed by the activities of the FSMP of the "Fazenda Pacajá", that is, the total area of effective management of UPAs 18 and 19 (active in the current monitoring period) in the years 2021 and 2022. At the end of December-2022, all forestry activities were paralyzed due to non-conformities on the part of the lessee company, Madeireira J&Y. Consequently, the months of 2023, included in the monitoring period, were not taken into account. Specifically, in March-2023, the beginning of the embargo period in the project region is highlighted, in line with the guidelines of the Department of the Environment regarding the significant increase in rainfall, a condition that makes the execution of forestry activities unfeasible. Thus, the species managed were:

Table 39 - Species managed in UPA 18 during the monitoring period

Species	2021 - UPA 18		
	Number of trees authorized for management	Number of trees logged	Number of standing trees
Abiu	10	6	-
Abiu-branco	85	44	24
Abiurana	549	196	302
Amapá-doce	22	13	10
Andiroba	426	230	181
Angelim-amargoso	381	235	129
Angelim-pedra	97	53	47
Angelim-vermelho	533	208	224
Barrote	275	109	96
Breu	173	62	91
Caju	6	5	1
Caju-açu	155	78	66

Carapanaúba	88	11	51
Cedroarana	3	2	-
Coco-pau	196	93	90
Copaíba	79	44	31
Cumaru	264	124	108
Cumarurana	87	6	61
Cumbaru	36	18	14
Cupiúba	1.157	526	466
Curupixá	45	28	16
Fava	13	6	10
Faveira	387	206	147
Freijó	7	4	3
Goiabão	32	20	12
Guajará	1.100	499	516
Guajará-bolacha	2.282	1.144	1.043
Ipê	2	-	2
Ipê-amarelo	2	1	1
Ipeúba	1.753	582	1.042
Itauba	23	11	10
Itaubarana	3	1	1
Jatobá	120	58	53
Jutaí-mirim	13	6	3
Louro-canela	183	79	78
Louro-faia	18	10	10
Louro-preto	90	23	66
Louro-tamaquare	199	109	83
Louro-vermelho	233	154	75
Maçaranduba	1.505	840	649
Mandioqueira	71	33	36
Maparajuba	1.826	966	823
Matamatá	1.482	649	568
Matamatá-preto	106	41	83
Matamatá-vermelho	554	299	215
Melancieiro	1	1	1
Mirim	194	86	106
Muiracatiara	190	110	71
Orelha-de-macaco	160	83	60
Pau-santo	12	-	12
Pequiá	19	6	8
Pequiarana	183	79	72
Quaruba	185	72	106
Quarubatinga	48	19	28
Sapucaia	271	95	124

Sucupira	126	72	40
Sucupira-preta	8	7	4
Tanibuca	561	209	240
Tatajuba	15	9	6
Tauari	888	502	297
Taxi	333	152	151
Taxi-preto	229	69	157
Tento-amarelo	224	101	100
Timborana	2.151	564	921
Ucuubarana	21	11	7
Uxi	28	3	24
Uxirana	388	186	187
Total	22.906	10.268	10.259

Source: project proponent's collection

Table 40 - Species managed in UPA 19 during the monitoring period

Species	2022 - UPA 19		
	Number of trees authorized for management	Number of trees logged	Number of standing trees
Abiu	4	3	1
Abiu-branco	210	78	132
Abiu-vermelho	13	11	2
Abiurana-branca	110	44	66
Andiroba	440	316	124
Angelim-amargoso	500	208	292
Angelim-pedra	246	49	197
Angelim-vermelho	467	208	259
Barrote	11	9	2
Biriba	38	24	14
Buiçu	100	-	100
Caju-açu	4	4	-
Coco-pau	217	112	105
Copaibarana	1.594	1.400	194
Coração-de-negr	3	1	2
Cumarú	292	124	168
Cumarú-amarelo	85	27	58
Cupíúba	1.202	415	787
Curupixá	105	62	43
Faveira	29	25	4
Freijó	12	3	9

Goiabão	5	5	-
Guajará	390	203	187
Guajará-bolacha	1.840	658	1.182
Ingá	6	-	6
Ipê	2	1	1
Itauba	53	-	-
Jatobá	185	92	93
Louro-canela	57	35	22
Louro-faia	13	10	3
Louro-preto	23	17	6
Louro-vermelho	87	76	11
Maçaranduba	2.567	1.169	1.398
Mandioqueira	55	34	21
Maparajuba	2.212	958	1.254
Marupá	2	2	-
Matamatá-ci	35	2	33
Matamatá-preto	113	65	48
Matamatá-vermelho	568	223	345
Melancieiro	38	17	21
Muiracatiara	158	108	50
Orelha-de-macaco	255	76	179
Pequiá	54	32	22
Pequiarana	168	68	100
Quaruba	8	5	3
Quarubatinga	45	41	4
Quaruba-vermelha	13	1	12
Sapucaia	56	40	16
Sucupira	67	55	12
Sucupira-amarela	192	1	191
Sucupira-preta	45	4	41
Tanibuca	317	153	164
Tatajuba	21	13	8
Tauari	407	259	148
Taxi-amarelo	13	8	5
Taxi-branco	55	40	15
Taxi-pitomba	107	115	-8
Taxi-preto	67	38	29
Tento	35	3	32
Tenteiro	444	38	406
Timborana	924	396	528
Ucuubarana	73	52	21
Uxi	5	-	5
Uxirana	361	140	221

Virola	1	1	-
Total	17.856	8.397	9.459

Source: project proponent's collection

Sustainable forest management (SFM) provides a wide range of significant benefits for the preservation of flora and the balance of forest ecosystems. One of its main contributions is the conservation of biodiversity. By adopting practices that aim to preserve not only tree species but also their communities and natural habitats, sustainable management acts as a guardian of biological diversity, playing a vital role in protecting endangered or rare species.

Another crucial benefit provided by SFM is the natural regeneration of forests. Carefully designed to allow plant populations to renew themselves in a sustainable way, sustainable management contributes to the life cycle of plants, ensuring the continuity and vitality of plant communities, through the preservation of matrices and the protection of areas conducive to regeneration.

Additionally, the implementation of monitoring trails and non-invasive methods in sustainably managed areas contributes to efficient data collection, providing valuable insights into the health and population status of species. SFM not only preserves local fauna, but also becomes an integrated research and conservation tool, promoting long-term ecological sustainability.

Indicador 4: impact on remaining flora

Table 41 - Aspects related to indicator 4: impact on remaining flora

Activity	Biodiversity variable	Source	Indicator	Area	Frequency
Monitoring of the dynamics of vegetation before and after the wood harvesting	Botanical identification of the species forestry, spatial distribution of commercial species	Sample plots, reports, documents, and registries from project proponent	Impact on remaining flora	UPAs that were explored	Annually

Source: created by the authors

The monitoring of vegetation dynamics before and after wood harvesting, aimed at understanding the impact of project activities on the remaining flora, was conducted in collaboration with the Federal Rural University of the Amazon. As part of their final project for the environmental engineering course, students produced a report estimating parameters of horizontal structure and species diversity through a sample forest inventory conducted after forest management activities in the “Fazenda Pacajá” area.

The study area, which is subject to sustainable forest management practices, has cutting intensities of 20.9074 and 19.6971 m³/ha for the Annual Production Units (UPA) 16 and 17, respectively. A total of 23

plots were established, with 18 in UPA 16 and 5 in UPA 17, each measuring 50 x 50 m. Plot allocation followed a simple random sampling method.

Phytosociological analysis revealed 49 families, 129 genera, 219 species, and 2562 individuals. The most prominent families across all phytosociology variables were *Lecythidaceae*, *Fabaceae* and *Sapotaceae*. Among genera, *Pouteria* stood out with 16 species, followed by *Eschweilera* and *Protium* with 8 species each, collectively contributing 33.61% of the floristic composition in the area. Species with the highest Coverage Value and Importance Index (IVC and IVI) were *Eschweilera amara* (Aubl.) Ndz, *Eschweilera coriacea* (DC.) S.A.Mori and *Vouacapoua americana* (Aubl.).

The study concluded that the distribution diameter of the forest studied after exploration showed a negative exponential, representing that the cutting intensity probably did not impact the capacity regenerative for future management. The results indicated that the forest has a high diversity, even though it is being explored, suggesting that the area may contain species of high conservation value conservation and ample opportunity for management.

5.3.2 Biodiversity Monitoring Plan Dissemination (B4.3)

Following the guidelines established in section “2.2.1 - Stakeholder Access to Project Documents”, the monitoring plan will be disseminated to communities and other stakeholders through the following strategies:

- **VERRA platform:** the monitoring plan, as well as the results of the checks, will be shared on the VERRA platform⁹⁹, ensuring transparency and reaching a wider audience.
- **Communication channels:** the plan will be accessible to communities through Upbio's WhatsApp (+55 91 98517 3832), which is already used as a communication vehicle.
- **Algar Farming headquarters:** the plan will be available at Algar Farming's headquarters and will be presented to stakeholders during periodic meetings about the project. Communities will also be able to access it, even those not covered by Upbio's Socio-environmental Responsibility Program.
- **E-mail to other stakeholders:** Algar Farming and/or Ecológica Assessoria will send an e-mail to the other stakeholders identified in section “2.1.6 - Stakeholder Identification” of the CCB's PD containing the monitoring plan and the next steps related to the project, as established by the PD and RM of the ABC Norte REDD Project. Communities will not be included in this email, considering that there are more effective ways to make the document available, considering the local reality.

⁹⁹ Available at: < <https://registry.verra.org/>>. Accessed on: 08 Feb. 2024.

- **Upbio's field activities through Socio-environmental Responsibility Program:** during the field visits carried out by Upbio in the communities, the monitoring plan summary and its results will be communicated orally and through printed material.

For the communities, this moment is scheduled to take place between 27-February-2024 and 29-February-2024, following the itinerary:

- 27-February-2024: Caminheiros do Bem and Monte Sião Community.
- 28-February-2024: Divino Espírito Santo and Cristo Salvador Community.
- 29-February-2024: São Sebastião do Cipoal and Nossa Senhora do Carmo Community.

In addition, and the technical team of Ecológica Assessoria will be available for contact through the e-mail: tecnica@ecologica.br.

Finally, the document containing the results of the first monitoring period (01-January-2021 to 31-March-2023) will be distributed in Portuguese, based on the local language, to the community leaders, who will sign a receipt of receipt of the documents. This initiative will be implemented to guarantee that all stakeholders have access to the information and the opportunity to address any issues that may arise.

5.4 Optional Criterion: Exceptional Biodiversity Benefits

Not applicable. During the next stages of project development, Ecológica Assessoria's technical team will study the best strategy to meet the requirements that will enable the project to reach the Gold Level for Climate, Community and Biodiversity.

5.4.1 Trigger Species Population Trends (GL3.3)

Not applicable, as described in section 5.4.

5.4.2 Effectiveness of Threat Reduction Actions (GL3.4)

Not applicable, as described in section 5.4.

6 ADDITIONAL PROJECT IMPLEMENTATION INFORMATION

As evidenced in section "1 - Summary of Project Benefits", the first two monitoring periods assessing the benefits to the community and biodiversity of the ABC Norte REDD Project were formulated and verified under the SOCIALCARBON Standard methodology. However, in 2021, the Standard declared its transition from being solely a co-benefit standard to becoming a full standard. Commencing from 01-January-2024, projects that did not migrate to the SOCIALCARBON accounting methodology would lose their certification seal. Therefore, considering the methodological update of the SOCIALCARBON Standard and the need to

continue monitoring the implemented actions of the ABC Norte REDD Project, from this verification onward the project's socio-environmental benefits will be conducted under the CCB Standard.

7 ADDITIONAL PROJECT IMPACT INFORMATION

During the current monitoring period (01-January-2021 to 31-March-2023), Upbio's Social and Environmental Responsibility Program implemented a series of initiatives aimed at women's empowerment in communities. These actions aimed to strengthen the role of women in these locations and create opportunities for personal development. The table below presents a summary of the activities carried out:

Table 42 - Activities involving the women's inclusion in communities

Aspect	Activities
Women's inclusion	Delivery of vegetable seeds to women of the Divino Espírito Santo community Association: the activity played a crucial role in strengthening women's empowerment and stimulating the sustainable development of the community. This initiative empowers women as key agents in promoting food security and boosting local economy. In addition to promoting the cultivation of vegetables, the action represents a lever for the diversification of productive activities, contributing to the financial autonomy of the women involved. Carpentry workshop: this workshop aimed to identify the interests and skills of the participants for carpentry, to promote the creation of a women's association in the future. The goal is to create sustainable furniture and decoration items, using waste from forest management in the area as raw material, in addition, generating income for the community. The first edition was held at "Fazenda Pacajá" in July-2022 and the target audience was wives of farm employees. Natural fiber handicraft workshop: the objective of the initiative was to rescue the traditional knowledge of riverside communities to produce decorative and utilitarian objects, using natural raw materials available in the region and reused textile materials. Different fiber processing techniques, basketry, braiding, weaving, and macramé were taught. The workshop was held in September-2022 in 05 communities (Cristo Salvador, Divino Espírito Santo, Monte Sião, Nossa Senhora do Carmo and São Sebastião do Cipoal) and 32 women participated in the initiative. Fabric Painting workshop: the goal of the workshop was to promote female empowerment and social interaction through art and creativity. The initiative was carried out for the first time in December-2022, during the 3rd "Social Action". The workshop was attended by 90 women, including children, adults and the elderly. The second workshop was held in February-2023 in 03 communities (Divino Espírito Santo, Nossa Senhora do Carmo and São Sebastião do Cipoal). Of the 25 people who participated, 20 were women.

Source: created by authors

The continuity of these activities is essential to consolidate the process of empowerment of riverine women in situations of vulnerability. By strengthening their skills and providing access to relevant knowledge, Upbio's Socio-environmental Responsibility Program not only promotes individual autonomy but also contributes to building a more resilient and equitable community.

The financial empowerment, through the generation of income from alternative sources, for example, plays a crucial role in this scenario. By providing opportunities for women to actively participate in the local economy, the program not only diversifies families' sources of income, but also stimulates the sustainable economic development of riverside communities.

It is hoped that this process will contribute not only to individual empowerment, but also to the achievement of the Gold Level for Community by the ABC Norte REDD Project.