RESEX RIO PRETO-JACUNDÁ REDD+ PROJECT MONITORING REPORT

Document Prepared by:

Project title	RESEX Rio Preto-Jacundá REDD+ Project
Project ID	1503
Crediting period	01-October-2012 to 30-September-2042
Monitoring period	VCS and CCB: 08 August 2020 – 30 September 2022
(CCB) GHG accounting period	01-October-2012 – 30-September-2042; 30-year total period
Original date of issue	*DD-Month-YYYY is the date the monitoring report was completed following the completion of the audit*
Most recent date of issue	*DD-Month-YYYY is the date the monitoring report was most recently submitted*
Version	1.2
VCS Standard version	v4.6
CCB Standards version	v3.1
Project location	Brazil, state of Rondônia, municipality of Machadinho D'Oeste
Project proponent(s)	Biofilica Ambipar Environmental Investments S.A. - Plínio Ribeiro plinio.ribeiro@ambipar.com / +55 11 3073-0430

	Associação dos Moradores da Reserva Extrativista Rio Preto-Jacundá (ASMOREX) - Denise Viana Borges denivianaborges@gmail.com / +55 69 99384-1171
Validation/verification body	RINA S.p.A.- Lucia Nunes Pereira lucia.pereira@rina.org / +55 11 93033-0816
History of CCB Status	CCB Validation: 19 October 2015
Gold Level criteria	Compliance with the criteria of "Exceptional Benefits to Communities": The project is led and implemented by the community on the land they own the right of use and management. During the monitoring period, the project generated net positive benefits for the well-being and empowerment of community members through investment in 11 pillars (Governance and adaptive management, Health, Income improvement, Education, Youth and women, Environment, Social organization, Communication, Infrastructure, Jacundá REDD+ Financial Mechanism, and Zoning). Compliance with the "Exceptional Biodiversity Benefits" criteria: The Project Area plays a very important role in biodiversity conservation, as it is in the "Rondônia Endemism Center". The vulnerability criterion is met by the regular occurrence of globally threatened species (according to the IUCN Red List), such as the Ateles chamek, included in the "Endangered" (EN) category. In addition, in this monitored period, the faunal survey carried out by the Monitora Program through ARPA, identified 1 species of fauna in the “Endangered” (EN) category and 5 in the “Vulnerable” (VU) category. In the permanent plots of the Forest Management, 2 species were observed in the “Vulnerable” (VU) category, 1 species in the “Endangered” (EN) category and 2 species are protected by law. Compliance with the "Exceptional Climate Benefits" criteria: the project's activities are planned and executed in a way that contributes to the adaptation of communities and biodiversity to climate change. Activities such as monitoring deforestation and biodiversity, strengthening of the management of non-timber forest products by families, maintenance of the communities' infrastructure and education and awareness-raising are required and carried out by the project.
Prepared by	Soraya Dias Pires Biofilica Ambipar Environmental Investments S.A.

CONTENTS

1 SUMMARY OF PROJECT BENEFITS 4
1.1 Unique Project Benefits 4
1.2 Standardized Benefit Metrics 6
2 PROJECT DETAILS 9
2.1 Summary Description of the Implementation Status of the Project 9
2.2 Project Implementation Status 20
2.3 Stakeholder Engagement & Safeguards 37
2.4 Management Capacity 46
2.5 Legal Status and Property Rights 52
3 CLIMATE 64
3.1 Monitoring GHG Emission Reductions and Removals 64
3.2 Quantification of GHG Emission Reductions and Removals 94
3.3 Optional Criterion: Climate Change Adaptation Benefits 106
4 COMMUNITY 110
4.1 Net Positive Community Impacts 110
4.2 Other Stakeholder Impacts 116
4.3 Community Impact Monitoring 116
4.4 Optional Criterion: Exceptional Community Benefits 137
5 BIODIVERSITY 149
5.1 Net Positive Biodiversity Impacts 149
5.2 Offsite Biodiversity Impacts 156
5.3 Biodiversity Impact Monitoring 158
5.4 Optional Criterion: Exceptional Biodiversity Benefits 173
APPENDIX 3: COMMERCIALLY SENSITIVE INFORMATION 176

1 SUMMARY OF PROJECT BENEFITS

1.1 Unique Project Benefits

Outcome or Impact	Achievements during the Monitoring Period	Section Reference	Achievements during the Project Lifetime
1) Climate: Mitigation of climate changes	Total emissions avoided in the monitoring period: 223,811 tCO2e Total deforestation avoided within the project area: 702 hectares Total inspection activities promoted by CUC/SEDAM: 79	3	Total emissions avoided over the lifetime of the project: 1,741,201 tCO2e Total deforestation avoided within the project area and leakage belt: 6,428 hectares Total inspection activities promoted by CUC/SEDAM: 101 (2020-2022)
2) Community: Improvement and investment in the living conditions and quality of life of impacted communities through incentives for extractivism, providing technical assistance and quality infrastructure, training and courses to improve the techniques used, improving communication channels and ensuring better access to environmental and health education	Number of families affected by the project: 33 Communities affected by the project: 5 Isolated families affected by the project: 3 Improvements and construction of shared infrastructures within RESEX: 4 Number of courses offered: 4	4	Number of families affected by the project: 33 Communities affected by the project: 5 Isolated families affected by the project: 3 Improvements and construction of shared infrastructures within RESEX: 12 Number of courses offered: 22

3) Biodiversity: Maintenance and monitoring of forest cover in the project area, ensuring the protection and conservation of habitats and local biodiversity, including species with some degree of threat.	Number of expeditions to monitor fauna: 3 (Monitora Program) Number of actions to survey flora: 2 (Forest Management) Number of species monitored: 48 (Monitora Program) and 125 (Forest Management) Number of species with some degree of threat monitored: 6 fauna (Monitora Program) and 3 flora (Forest Management)	5	Number of expeditions to monitor fauna: 1 (Ecoporé) and 3 (Monitora Program) Number of flora survey actions: 7 (forest management), 1 (flora diagnosis) Number of species monitored: - Fauna: 42 (Ecoporé), 48 (Monitora Program) - Flora: 471 (diagnosis), 125 (Forest Management) Number of species with some degree of threat monitored: 10 (fauna), 6 (flora)

1.2 Standardized Benefit Metrics

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	230.212	3.2.2	1.747.603
Forest[1] cover	For REDD[2] projects: Number of hectares of reduced forest loss in the project area measured against the without-project scenario	702	3.2.2	5.092
	For ARR[3] 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[4] 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

[1] 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*)

[2] 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*)

[3] 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*)

[4] 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*)

Training	Total number of community members who have improved skills and/or knowledge resulting from training provided as part of project activities	130	4.3.1.6 Social Organization	130
	Number of female community members who have improved skills and/or knowledge resulting from training provided as part of project activities of project activities	65	4.4.3 Net Impacts on Woman	73
Employment	Total number of people employed in of project activities,[5] expressed as number of full-time employees[6]	5	2.3.14	5
	Number of women employed in project activities, expressed as number of full-time employees	4	2.3.14	4
Livelihoods	Total number of people with improved livelihoods[7] or income generated as a result of project activities	28 (10 families)	4.3.1.3 Income improvement	41 (18 families)
	Number of women with improved livelihoods or income generated as a result of project activities	12 (10 families)	4.3.1.3 Income improvement	24 (18 families)
Health	Total number of people for whom health services were improved as a result of project activities, measured against the without-project scenario	130 (33 families)	4.3.1.2 Health	142 (33 families)
	Number of women for whom health services were improved as a result of project activities, measured against the without-project scenario	65 (33 families)	4.3.1.2 Health	75 (33 families)

[5] 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.
[6] 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])
[7] 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.

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	89	4.3.1.4 Education	89
	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	32	4.4.3 Net Impacts on Woman	32
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	4.3.1.9 Infrastructure	52 (19 families)
	Number of women 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	4.3.1.9 Infrastructure	46 (19 families)
Well-being	Total number of community members whose well-being8 was improved as a result of project activities	130 (33 families)	4.3.1	142 (33 families)
	Number of women whose well-being was improved as a result of project activities	65 (33 families)	4.3.1	75 (33 families)
Biodiversity conservation	Change in the number of hectares significantly better managed by the project for biodiversity conservation,[9] measured against the without-project scenario	68.255	5.1.1 Biodiversity Conservation Table	94.289

[8] 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.
[9] 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.

	Number of globally Critically Endangered or Endangered species[10] benefiting from reduced threats as a result of project activities,[11] measured against the without-project scenario	1 fauna 1 flora	5.1.1 Biodiversity Conservation Table and 5.3.1	6 fauna 6 flora

2 PROJECT DETAILS

2.1 Summary Description of the Implementation Status of the Project

2.1.1 Summary Description of the Project (VCS, 2.1, 3.6; CCB, G1.2)

The Rio Preto-Jacundá REDD+ RESEX project is a partnership between Biofílica Ambipar Environmental Investments and the residents of the Rio Preto-Jacundá RESEX, represented by the Association of Residents of the Rio Preto-Jacundá Extractive Reserve (ASMOREX), with the Center for Rioterra Studies (CES Rioterra) as the third party implementing the planning and execution of the project's activities.

Among the main activities implemented during the monitoring period were: 1. monitoring deforestation through remote sensing with data from the PRODES project and complementary analysis with high-resolution images from the Web Planet/SCCON Platform with data from the PLANET and RapidEye satellites; 2. Articulation and contact with the responsible environmental agencies and the Rondônia State Environmental Development Secretariat (SEDAM) to act to contain agents of deforestation in the project area; and 3. The implementation of community scope activities structured around 11 pillars (Governance and adaptive management, Health, Income improvement, Education, Youth and women, Environment, Social organization, Communication, Infrastructure, Jacundá REDD+ Financial Mechanism and Zoning). For more details on the implementation status of each project activity, see Section 2.2; Section 4 and Section 5.

In this monitoring period, the only project activity that resulted in GHG emissions was the Forest Management operation, with emissions duly accounted for (3.2.2. Project Emissions). The Rio Preto-Jacundá RESEX REDD+ Project works with the aim of promoting the development of activities aimed at mitigating climate change, reducing GHG emissions caused by deforestation and forest degradation, promoting social well-being and conserving biodiversity in the region in which the RESEX is located. As a result, the total reductions in GHG emissions generated during this monitoring period (08/08/2020 to 09/30/2022) amounted to 223,811 tCO2e.

[10] Per IUCN's Red List of Threatened Species

[11] In the absence of direct population or occupancy measures, measurement of reduced threats may be used as evidence of benefit

The project area was reduced in this monitoring period. More details are described in Section 2.2.4 on Deviations in Project Description.

Actions have been taken to prevent events that could impact GHG emission reductions resulting in leakage and non-permanence of emission reductions. These actions include constant monitoring of the project area and leakage belt, coordination with environmental agencies to help monitor the RESEX, sustainable timber forest management and communication procedures with stakeholders through ordinary and extraordinary meetings. The aim of these actions is to establish a broad and transparent management of the territory, seeking to avoid as far as possible the occurrence of invasions, disputes and illegal practices and social tensions. The risks identified by the project are monitored and mitigated as described in Section 2.2.6. There have been no changes in the project proponents during this monitoring period.

2.1.2 Audit History (VCS, 4.1)

Audit Type	Period	Program	VVB Name	Number of years
Validation	01-October-2012	VCS and CCB	Rainforest Alliance / Imaflora	-
Verification	01-October-2012 -- 30-September-2015	VCS	Rainforest Alliance / Imaflora	3
Verification	01-October-2015 – 07-August-2020	VCS and CCB	Earthood Services Private Limited	5
Verification	08-August-2020 – 30-September-2022	VCS and CCB	RINA S.p.A.	2

2.1.3 Sectoral Scope and Project Type (VCS, 3.2)

Sectoral Scope	14: Agriculture, forestry, and other land use
AFOLU Project Category	Reducing Emissions from Deforestation and Forest Degradation (REDD)
Project Activity Type	Unplanned Avoided Deforestation (AUD)

2.1.4 Project Proponent (VCS, 3.7; CCB, G1.1)

Organization name	Biofílica Ambipar Environmental Investments
Contact person	Plinio Ribeiro
Title	Executive Director

Address	Av. Angélica, 2330 – Higienópolis 01228-200, São Paulo/SP, Brasil
Telephone	+55 11 3073-0430
Email	plinio@biofilica.com.br

Organization name	Associação dos Moradores da Reserva Extrativista Rio Preto-Jacundá - ASMOREX
Contact person	Denise Viana Borges
Title	President of ASMOREX
Address	Av. Diomero Moraes Borba, 4162 – Bom Futuro 76868-000, Machadinho d'Oeste/RO, Brasil
Telephone	+55 69 3581-2084
Email	denivianaborges@gmail.com

2.1.5 Other Entities Involved in the Project

Organization name	Centro de Estudos da Cultura e do Meio Ambiente da Amazônia - CES Rioterra
Role in the project	Coordination of socio-economic and environmental studies; planning of conservation activities; support in the validation and verification of the project; implementation and monitoring of the REDD+ project's activities; guidance, follow-up, and administrative, financial and managerial monitoring of activities inherent to the implementation of the Project; supervision of the accounting report; support for political coordination.
Contact person	Alexis de Sousa Bastos
Title	General Project Coordinator
Address	Rua Padre Chiquinho, 1651 – Centro 76803-786, Porto Velho/RO, Brasil
Telephone	+55 69 99212-9136
Email	alexis@rioterra.org.br

Organization name	Secretaria de Estado de Desenvolvimento Ambiental – SEDAM
Role in the project	To manage the RESEX in the municipalities of Machadinho D'Oeste and Vale do Anari; to decide on social, economic, political and environmental activities of interest to the reserves and their communities; to seek, through agreements and other means, the self-sustainability of the unit; to establish guidelines for the preparation of programs, plans and projects aimed at the reserves; to monitor the actions of projects and carry out an analysis of the costs-benefits and results.
Contact person	Daniel Santos de Souza
Title	Conservation Units Coordinator
Address	Palácio Rio Madeira Av. Farquar, 2986 – Bairro Pedrinhas 76801-470 – Porto Velho/RO, Brasil
Telephone	+55 69 3212-9616
Email	cuc@sedam.ro.gov.br

Organization name	MADREX
Role in the project	Maintenance of activities related to timber forest management in RESEX.
Contact person	Avalone Sossai de Farias Cargo
Title	Responsible for Low Impact Forest Management
Address	Av. Vereador José Damasceno S/N, Lt 981-B, qd 29 Bairro Setor 02, 76867-000, Vale do Anari/RO, Brasil
Telephone	+55 69 99970-3434
Email	madrex.madeireira@gmail.com

Organization name	CDREX - Conselho Deliberativo das Reservas Extrativistas Estaduais de Machadinho D'Oeste e Vale do Anari

Role in the project	Activities related to management, such as: to monitor and evaluate the execution of the project's activities, to deliberate on the social, economic, and environmental spheres and to draw up guidelines for the development of programs, plans and projects aimed at RESEX.
Contact person	Fabricio Pereira de Jesus
Title	President of the Deliberative Council of the State Extractive Reserves of Machadinho D'Oeste and Vale do Anari and Manager of SEDAM's Machadinho D'Oeste Regional Office
Address	Avenida Castelo Branco, 3099 - Centro 76868-000, Machadinho D'Oeste/RO, Brasil
Telephone	+55 69 3212-9660
Email	fabriciofpj_pb@hotmail.com erga.mdo@sedam.ro.gov.br

2.1.6 Project Start Date (VCS, 3.8)

Project start date	01-October-2012
Justification	The date on which the partnership contract between Biofílica Ambipar and ASMOREX was signed.

2.1.7 Benefits Assessment and Project Crediting Period (VCS, 3.9; CCB, G1.9)

Crediting Period	The crediting period for the RESEX Rio Preto-Jacundá REDD+ Project is from October 1, 2012 to September 30, 2042. It conforms with the requirements because is more than 20 years and less than 100 years, according to VCS Standard v4.6.
Start Date of First or Fixed Crediting Period	01-October-2012
Total Number of Years of Crediting Period	30 years
CCB Benefits Assessment Period	01-October-2012 to 30-September-2052

2.1.8 Project Location (VCS, 3.11; CCB, G1.3)

☒ *KML file has been provided*

The Project is located in the Rio Preto-Jacundá Extractive Reserve, situated in the municipalities of Machadinho D'Oeste and Cujubim (Figure 1), in the state of Rondônia, with latitude 8°56'10.41"S and longitude 62°16'28.02"O as its centroid. Close to the Rio Preto-Jacundá RESEX, and consequently to the Project Area, are the state of Amazonas (to the north), the state of Mato Grosso (to the east) and the Anari Valley (to the south), as well as Porto Velho, the capital of the state of Rondônia, approximately 350km away. In addition, the Machado or Ji-Paraná (north-northeast), Curica (west) and Juruá (east) rivers border the RESEX.

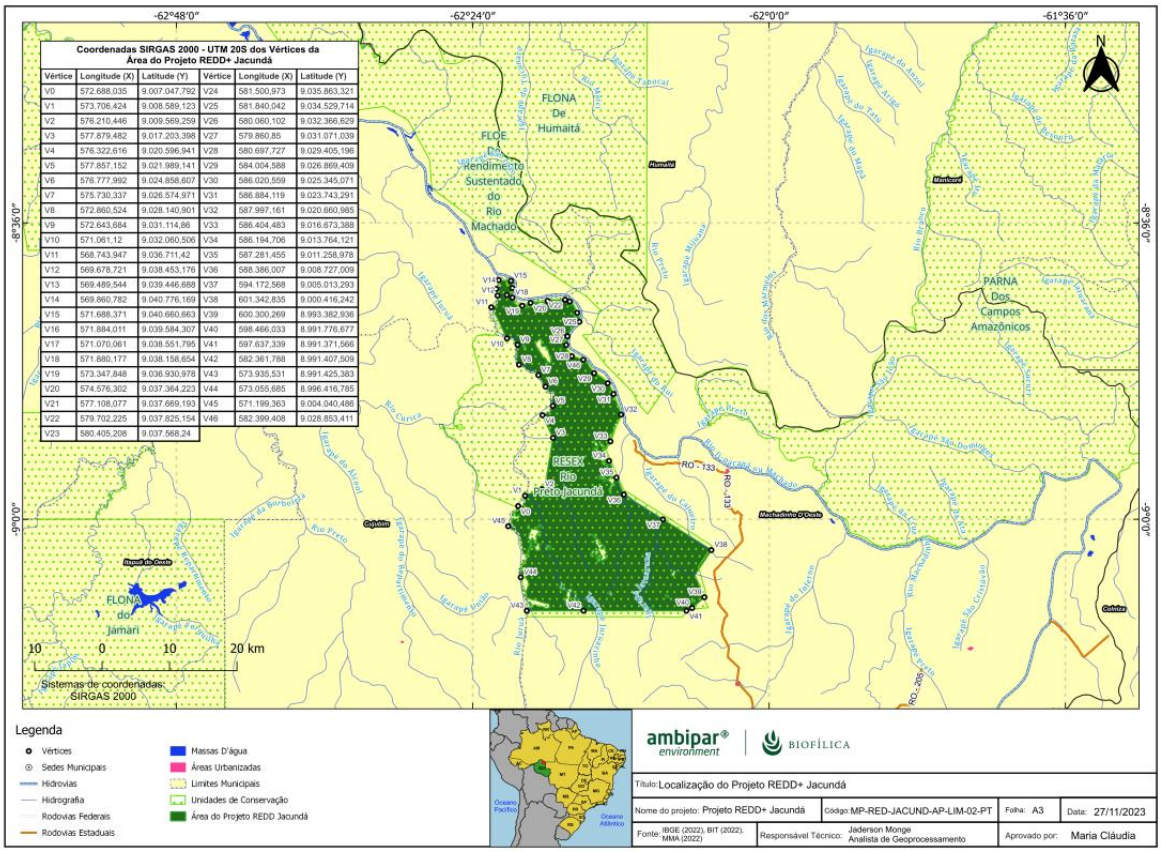

Figure 1. Location of the Rio Preto-Jacundá REDD+ RESEX Project.

The geodetic coordinates that define the project boundaries are shown in the table below.

Table 1. Vertices and geodetic coordinates of the Rio Preto-Jacundá REDD+ RESEX Project Area. Coordinate system: UTM - Zone 20S, Datum WGS 1984.

Vertice	X	Y
1	573.935,50	8.991.425
2	572.415,20	9.006.347

Vertice	X	Y
10	587.997,20	9.020.661
11	585.611,60	9.014.878

3	566.723,60	9.009.158	12	588.375,60	9.008.740
4	563.071,80	9.019.840	13	601.342,80	9.000.416
5	567.419,50	9.026.129	14	598.869,10	8.996.643
6	565.914,50	9.030.841	15	597.637,30	8.991.372
7	569.478,50	9.033.404	16	597.913,50	8.991.709
8	569.860,60	9.040.776	17	598.466	8.991.777
9	581.004,10	9.036.959	18	600.300,30	8.993.383

2.1.9 Title and Reference of Methodology (VCS, 3.1)

Type (methodology, tool, module)	Reference ID (if applicable)	Title	Version
Methodology	VM0015	VM0015 Methodology for Avoided Unplanned Deforestation	1.1
Tool	Non-Permanence Risk Tool	AFOLU Non-Permanence Risk Tool	4.2

2.1.10 Double Counting and Participation under Other GHG Programs (VCS, 3.23; CCB, G5.9)

2.1.10.1 No Double Issuance

Is the project receiving or seeking credit for reductions and removals from a project activity under another GHG program, or any other form of community, social, or biodiversity unit or credit?

☐ Yes ☒ No

2.1.10.2 Registration in Other GHG Programs

Is the project registered or seeking registration under any other GHG programs?

☐ Yes ☒ No

2.1.10.3 Projects Rejected by Other GHG Programs

Has the project been rejected by any other GHG programs?

☐ Yes ☒ No

2.1.11 Double Claiming, Other Forms of Credit, and Scope 3 Emissions (VCS, 3.24)

2.1.11.1 No Double Claiming with Emissions Trading Programs or Binding Emission Limits

Are project reductions and removals or project activities also included in an emissions trading program or binding emission limit? See the VCS Program Definitions for definitions of emissions trading program and binding emission limit.

☐ Yes ☒ No

2.1.11.2 No Double Claiming with Other Forms of Environmental Credit

Has the project activity sought, received, or is planning to receive credit from another GHG-related environmental credit system? See the VCS Program Definitions for definition of GHG-related environmental credit system.

☐ Yes ☒ No

2.1.11.3 Supply Chain (Scope 3) Emissions

Do the project activities affect the emissions footprint of any product(s) (goods or services) that are part of a supply chain?

☐ Yes ☒ No

2.1.12 Sustainable Development Contributions (VCS, 3.17)

One of the objectives of the RESEX Rio Preto-Jacundá REDD+ Project is to promote sustainable development in the region through the socio-environmental activities carried out by the project, which are structured around 11 pillars (Governance and adaptive management, Health, Income improvement, Education, Youth and women, Environment, Social organization, Communication, Infrastructure, Financial mechanism, Zoning and Monitoring), as well as activities directly related to the climate. The initiatives are implemented based on Work Plans prepared annually by the proponents together with the community, contributing to local development and resulting in the contribution to the United National Sustainable Development Goals (Table 2).

Table 2: Sustainable Development Contributions

Row number	SDG target	SDG indicator	Net impact on SDG indicator	Current project contributions	Contributions over project lifetime
1)	3.8	3.8.1 Coverage of essential health services.	Implemented activities to increase	An ambulatory was built to promote access to healthcare for riverside families. Monthly consultations were offered by a doctor from the municipality of Machadinho D'Oeste to the 33 benefiting families. Additionally, a pediatrician was sent to the project area to consult children in the communities, providing care in May and September of 2021 (20 and 27 children, respectively) and in August of 2022 (19 children).	Two outpatient clinics were built in the project area, one in the Community Complex in the mainland and the other for riverside families. Consultations with a general practitioner were offered monthly to the 33 benefiting families. Pediatric consultations were also offered to children in the Community three times. Consultations were only possible after the construction of the outpatient clinics.

2)	4.4	4.4.1 Proportion of youth and adults with information and communications technology (ICT) skills, by type of skill.	Implemented activities to increase	5 courses and training within the project's thematic axes were held on the monitoring period for the project's communities.	Since the beginning of the project, several trainings and courses were implemented by the Project, such as : 6 modules of the administrative and financial management course on 2020, training for the formation of biodiversity monitors on 2020, basic training in botanical identification conducted on 2020, Management of Socio-Environmental Conflicts course taught by World Wildlife Fund on 2018 and the participation in the II National Workshop of the Network of Mosaics of Protected Areas on 2019, in addition to the activities carried out during this monitoring period (computer course, botanical identification training, workshop on the use and handling of GPS and lecture on climate change and REDD+) for the 33 benefiting families.
3)	5.5	5.5.2 Proportion of women in managerial positions.	Implemented activities to increase	In this monitoring period 3 women were elected for managerial positions at Asmorex board.	6 women have been in leadership positions at Asmorex board since de beggining of the project
4)	7.1	7.1.1 Proportion of population with access to electricity.	Implemented activities to increase	A solar photovoltaic energy was installed in the home of one of the riverside families in this monitoring period.	Since the beginning of the project, solar photovoltaic energy has been installed in the homes of 8 riverside and 2 mainland families.
5)	11.1	11.1.1 Proportion of urban population living in slums, informal settlements or inadequate housing.	Implemented activities to increase	Adequate housing has been allocated for 3 families of the riverside community in this monitoring period.	Adequate housing has been allocated for 18 families, involving mainland and riverside communities since the beginning of the project.

6)	13.2	13.2.2 Total greenhouse gas emissions per year.	Implemented activities to decrease.	The project reduced the emission of 223,811 tCO2e of greenhouse gases during this monitoring period.	The project reduced the total of 1,741,201 tCO2e of greenhouse gas emissions since the beginning of the project.
7)	15.2	15.2.1 Progress towards sustainable forest management.	Implemented activities to increase.	During this monitoring period, 13 families joined the management of non-timber forest products, totaling 26 families that manage non-timber forest products.	Since the beginning of the project, 26 families joined the management of non-timber forest products.

2.2 Project Implementation Status

2.2.1 Implementation Schedule (VCS, 3.2; CCB, G1.9)

The main dates in the development and implementation of the Rio Preto-Jacundá REDD+ RESEX Project activities of this monitoring report are listed below. More details on these and other actions developed by the project can be found throughout the report.

Table 3. Summary of the milestone(s) in the development and implementation of the project.

Date	Project Activities of This Monitoring Period	Section
October/2020 and February/2021	Mechanized field assistance	4.3.1.3
May and September/2021	Medical services for children by pediatrician	4.3.1.2
December/2021	Botanical identification course by Ecoporé and RioTerra	4.3.1.4
December/2021	Construction of 3 houses in the Jatobá riverside community	4.3.1.9
May/2022	Mechanized field assistance	4.3.1.3
June/2022	Hiring of Asmorex's accounting and financial audit	4.3.1.10
July/2022	Workshop on the use and handling of GPS	4.3.1.4
August/2022	Final feedback to the community on the Diagnosis of Production Chains (manioc, açaí and Brazil nuts).	4.3.1.3
August/2022	Medical services for children by pediatrician	4.3.1.2
August/2022	Lecture on climate change and REDD+	4.3.1.4
September/2022	Construction of a community complex in the riverside sector with accommodation and an endemic disease laboratory	4.3.1.9

2.2.2 Baseline Reassessment (VCS, 3.2.6, 3.2.7)

Did the project undergo baseline reassessment during the monitoring period?

☐ Yes ☒ No

2.2.3 Methodology Deviations (VCS, 3.20)

Not applicable.

2.2.4 Minor Changes to Project Description (CCB Program Rules, 3.5.6)

Rio Preto-Jacundá RESEX Fund:

In the second monitoring period, there was only one change compared to what was foreseen in the PD, which was to change the use of the term "Fund" to refer to the financial governance tool, due to the legal

and financial obligations that would be attached to the term. The proponents therefore decided to rename the tool the "Jacundá REDD+ Financial Mechanism".

For this reason, throughout this document and the previous Monitoring Report, all the actions linked to this tool are named as "Financial Mechanism", and not "fund", as provided for in the PD. This change had no impact on the results obtained or on the additionality of the project, and as it mainly concerned the community scope, it was considered a minor change to the project description.

2.2.5 Project Description Deviations (VCS, 3.21; CCB Program Rules, 3.5.7 – 3.5.10)

In the first verification of the project, covering the period from 2013 to 2015, there were no deviations in the project description.

In the second verification, referring to the period from 2016 to 2020, the following deviations occurred:

Project Proponent - New Partner

In July 2021, Ambipar Participações e Empreendimentos S.A. completed the acquisition of 53.6% of the share capital of Biofílica, which underwent a nominal change and was renamed Biofílica Ambipar Environmental Investments S.A. The entry of a new partner (Ambipar) into Biofílica has not altered the company's corporate purpose, which is strongly related to the promotion and financing of activities for environmental conservation and has a positive effect in that the contribution of funds, expertise and gains in scale will allow Biofílica to advance more consistently and quickly in its activities for the environment and environmental preservation. Additionally, there are no contractual or other legal implications in the contract for the Rio Preto-Jacundá REDD+ RESEX Project, or any other project implemented by Biofílica prior to this transaction, due to the entry of a new Biofílica partner.

COOPEREX participation

COOPEREX (Cooperativa dos Extrativistas da Reserva Rio Preto Jacundá), formed by community members from the RESEX, had its participation considered in activities described in the Project's PD on the themes of administrative and financial management and social organization. The aim was for residents to be represented by the Cooperative in relation to commercial matters, with a separate board from ASMOREX. However, COOPEREX experienced legal and financial problems which led to the temporary suspension of its activities. Given the need for community members to be represented in commercial and financial matters, and by mutual agreement with CUC/SEDAM (the Conservation Unit's manager), the responsibilities previously assigned to COOPEREX were passed on to ASMOREX.

Regardless of COOPEREX's paralysis, the results of the project and its additionality were not affected, since the project implemented actions and tools to encourage the participation of all RESEX community members and none were excluded from receiving the benefits generated by the project. In addition, the protocol of ASMOREX's social statute in 2017 made it possible to establish its organizational constitutive norms, giving the association autonomy in the management of the territory and ensuring its authenticity as co-manager of the Rio Preto-Jacundá RESEX.

Governance and adaptive management - Management Collegiate

Initially, during the preparation of the project and with a view to participatory and transparent management, the community living in the Rio Preto-Jacundá RESEX opted to create a management/deliberation body called the "Colegiado Gestor". Its main duties were to monitor the project's goals and results, manage resources according to the Life Plan while respecting collective priorities and mediate conflicts. The Management Collegiate was divided into a management/deliberative body and an implementing body and would thus be directly related to the RESEX governance system.

With regard to the management and deliberative body, the following institutions were listed to make it up: Biofílica, CES Rioterra, CDREX, the State Secretariat for Environmental Development (SEDAM), the Federal University of Rondônia (UNIR) and the Rio Preto-Jacundá RESEX. The implementing body, which would be responsible for carrying out conservation activities, would be made up of ASMOREX, Biofílica and CES Rioterra. These entities were defined in participatory workshops, and during this process, it was stipulated that the most participatory member would be the RESEX itself, which would have a representative from each community (at the time Cabeça-de-boi, Jatuarana and Jatobá) and a member of the ASMOREX director.

Thus, the activity "holding quarterly meetings of the Management Collegiate" was proposed and an additional document was planned to be developed after the validation-verification of the project, which would better define the criteria governing the Management Collegiate. However, during the life cycle of the project, and given the difficulties encountered at the start of the proposed activities, the consolidation of the Management Collegiate never took place. In the end, the parties that would set up the implementing body were subsumed into the Executive Secretariat of the REDD+ Financial Mechanism and, consequently, are in charge of all the project's management, governance, execution and implementation.

It is important to note that ASMOREX represents the interests of the community, but that there is no representative from each community acting directly in the deliberations, as was foreseen in the composition of the Management Collegiate. Furthermore, the proposed document was not implemented either since it was not possible to establish the existence of the collegiate body. The other entities planned to be part of the Management Collegiate (SEDAM and CDREX) are very important for strengthening governance in the RESEX; regardless of the fact that the Management Collegiate has not been formalized, they operate as deliberative and resolute advisors and, in practice, are extremely important in fulfilling and monitoring the project's commitments.

Finally, even though the Management Collegiate was not implemented by the project, another tool was defined with the aim of carrying out collegiate management that is representative of and committed to community concerns, the REDD+ Financial Mechanism, which includes the participation of the aforementioned stakeholders (Biofílica, ASMOREX, CES Rioterra, SEDAM and CDREX). Thus, even though it is not possible to include this activity in the proposed indicator, the non-formation of the Management Collegiate had no impact on the implementation of the project's activities or on its additionality.

The following deviations in the project description, identified in the second verification, were maintained in this third one:

Community monitoring indicators

The activities carried out by the project were guided by the implementation of the Annual Work Plans developed by the Executive Secretariat of the REDD+ Financial Mechanism (Biofílica, ASMOREX and CES Rioterra), which are a tool that provides the community with the actions, the composition of investments

and the priority activities. The priorities are based on the Life Plan and the Benefit Sharing and Conflict Resolution Mechanism, which were drawn up in workshops with community members in 2014. Every Annual Work Plan drawn up is approved by the community through a General Assembly. Consequently, all the activities carried out and which have had an impact on the communities have been drawn up and implemented through this procedure, in other words, with the community being the decision-makers.

The results achieved within the community scope were presented according to their respective associated indicators. However, of the 10 indicators established in the PD for monitoring communities, 3 were not monitored, namely "Gross revenue from each land use within the RESEX", "Family income" and "Agricultural production". The failure to account for these indicators did not negatively influence the implementation of the project, nor its additionality or the generation of benefits for the community, since all the other indicators were answered and mainly demonstrated improvements in the quality of life and well-being of the community members. In addition, the project has sought to establish initiatives related to improving community income through investments in agricultural production, in line with community demand.

It's worth noting that the families plant and allocate their production individually. There is no organized allocation of production or extraction of non-timber products from the forest. For this reason, these indicators are difficult to monitor.

Thus, although some indicators were not surveyed, the activities implemented by the Project so far have promoted short-, medium- and long-term benefits, as indicated in Sections **Erro! Fonte de referência não encontrada.**, **Erro! Fonte de referência não encontrada.** and **Erro! Fonte de referência não encontrada.**, the last of which relates to the section that meets the criteria for the Gold Seal of Communities.

Biodiversity Monitoring

- *"Monitoring the impact of the project on the main taxa/species that are indicators of conservation in the area"; "Monitoring natural clay pits in the RESEX area" and "Monitoring the Ateles chameck (Blacked-face black spider monkey), comparing areas with and without forest management":*

In view of all the activities planned in the project and the priorities listed for investment with the available resources, in the second and third monitoring periods it was decided to give priority to activities associated with community development. For this reason, biodiversity monitoring activities entered the project's schedule in 2019, when a Term of Reference was launched for hiring an outsourced team for fauna monitoring, which was carried out in 2020. In 2021 and 2022, monitoring was not carried out due to other activities listed as priorities for the community's quality of life. Biodiversity monitoring was resumed by the REDD+ Project in 2023.

Thus, the activity "Monitoring the impact of the project on the main conservation indicator taxa/species in the area", scheduled to take place annually from the first verification, was started in 2020 and resumed in 2023. The activity "Monitoring natural clay pits in the RESEX area", planned to take place every two years from the first verification, was not started. Strategies to include this activity in future monitoring will be worked on by Biofílica, ASMOREX and CES Rioterra.

In 2020, in a context of a global pandemic, isolation and restrictions on face-to-face activities, it was decided by mutual agreement with ASMOREX, CES Rioterra and SEDAM that the fauna monitoring prepared by ECOPORÉ would be carried out on the same transects installed by SEDAM for the Monitora Program. In view of this, primate monitoring was only possible in managed areas (transects already in place) due to the

context at the time, which made it difficult to install sampling units in places that had not undergone interventions or had not been managed. So, in order not to lose the ideal interval for data collection, it was decided to use only the stations that had already been opened.

Thus, the activity "monitoring Ateles chameck (Blacked-face black spider monkey) comparing areas with and without forest management" was only carried out in the Zones where forest management activities had taken place (Multiple Use Zone and Forest Management Zone). However, even though the activity was not carried out in its entirety inside RESEX, the transects represented the "worst case" scenario because they are already exploited sites and, even so, the sighting rates of the species were at an adequate level, showing that the status of the species and the conservation of the forest as a primate habitat are being maintained. Therefore, not carrying out the activity in unmanaged areas had no impact on monitoring the Blacked-face black spider monkey.

- *Accounting for the monitoring parameter of the Ateles chameck (Blacked-face black spider monkey)*:

It was planned that, during the project's life cycle, the monitoring of Ateles chameck, which is a project indicator, would be measured and procedures applied periodically with the local community throughout the year and once a year by a specialized team. However, although the local communities were involved in the biodiversity monitoring carried out by Ecoporé in 2020 and the Monitora Program carried out by SEDAM since 2019, they did not collect data on Blacked-face black spider monkey monitoring at any time on their own throughout the year. In addition, as mentioned in section **Erro! Fonte de referência não encontrada.** of t his document, biodiversity monitoring, which includes Ateles chameck, was only carried out in 2020 by a specialized team.

- *Counting the diversity of the plant community in the permanent plots:*

Permanent plots are an important tool for forest management, as they function as areas within the forest where quantitative and qualitative data on temporal changes in tree vegetation are collected periodically. This means that any variation in the plant community can be compared to the values obtained at these sites, making it an extremely important type of "control plot" for monitoring and maintaining a healthy and sustainable forest. It is worth noting that the project envisaged, as a medium/long-term activity, the adaptation of sustainable forest management to the Forest Stewardship Council (FSC) premises, so this parameter was designed so that over time it would be possible to compare the values of the forest management areas with the values from the permanent plots and, depending on the repercussions, seek mitigation measures.

With this in mind, and as a result of this predictability, the frequency of the established parameter was designed to occur one year before harvesting and at intervals of one, three and five years after harvesting the Annual Production Units (UPAs). This frequency is in line with the rules and principles of FSC forest certification, that is, in order to obtain the seal, it is necessary to comply with a series of procedures and, to date, the forest management that takes place within RESEX has not focused on complying with the certification premises. As a result, the forest inventory of the permanent plots and, consequently, the accounting of the diversity of the plant community, were only carried out one year before the UPAs were harvested, in the intervals afterwards they were not carried out.

This can be explained by the fact that low-impact forest management, according to the laws and regulations in force in the state of Rondônia, requires the evaluation of plots before the implementation of management

activities, while the monitoring of permanent plots after harvesting is only carried out if any visible alterations caused by exploitation are verified. According to MADREX, the company responsible for forest management, the resilience of the CU is extremely high, so it does not carry out the forest inventory of the permanent plots at the intervals stipulated in the parameter, making it impossible to calculate plant diversity at the frequency defined in the PD. Despite this, the indicator was counted a year before the UPAs were exploited and the project proponents believe that only the frequency associated with the indicator is being reported as a deviation in this section.

For this third verification, referring to the monitoring period of this document, the following deviations occur:

Change in the Project Area

The project is located in the Rio Preto-Jacundá State Extractive Reserve, created in 1996 by State Decree 7.336, with a territory of 95,300 hectares. In this region, there is a history of struggle for the rights of rubber tappers, which began with the occupation of the area and the establishment of two rubber plantations over 70 years ago. Extractive Reserves (RESEX) in Brazil are defined as Conservation Units aimed at the sustainable use of renewable natural resources by traditional populations. These reserves aim to reconcile the subsistence needs of local populations with the conservation of biodiversity. In this sense, the RESEX is a public territory, under the management of the state government.

However, despite being considered a public Conservation Unit, there is a complex land issue in this territory, which is the unpaid land titles of the so-called "Rubber Soldiers". The "Rubber Soldiers" were workers recruited during the Second World War to extract latex in the Amazon region of Brazil. However, after the decline of the rubber cycle, many remained in the old rubber plantations without government support. With the official policy of occupation and modernization of the Amazon from the 1960s onwards, the rubber soldiers were expelled from the rubber plantations, which were made available for official colonization projects. Later, after much demanding, the rubber soldiers were recognized as "heroes of the fatherland", and the settlement in former rubber plantations was part of the compensation policy aimed at this group, however, in the area defined by INCRA there was a high incidence of malaria, which caused the area to be abandoned and/or the plots to be sold (Nobrega, 2008). According to data from PLANAFLORO, these titles total 25,400 ha in the Rio Preto Jacundá RESEX and are under the responsibility of the state of Rondônia for regularization, with INCRA having certified the management right to SEDAM (Rondônia State Secretariat for Environmental Development), which is also the institution that manages the State Conservation Units.

Although the former "Rubber Soldiers" and their descendants no longer inhabit the region or claim such titles, this history has led to a process of land grabbing on the old titles. Currently, the region of the Rubber Soldiers' non-indemnified titles is invaded by illegal squatters and loggers, and since 2015 there has been evidence of notifications to the authorities about illegal actions in the area. Due to harassment by the invaders, there has been a lot of forest degradation and deforestation in recent years and, due to the high level of violence, RESEX residents do not access the region, which poses a threat to the safety of residents, as can be seen in the graph below:

Despite being aware of this context, when the project was being designed in 2012, it was decided to keep the entire official boundary of the Resex as part of the project, since there is a legal basis and governance over the entire territory. For example, the Rio Preto Jacundá RESEX Multiple Use Management Plan was drawn up by the project proponents and approved by SEDAM, which determines the sustainable management strategy for the entire Conservation Unit. In addition, right from the start, the project proposed actions aimed at monitoring signs of forest degradation and possible deforestation in the Conservation

Unit, in order to notify the inspection bodies in good time. These actions were carried out through various letters and conversations with the inspection bodies, which also received quarterly deforestation bulletins with the location of the most sensitive areas captured by Planet satellites, which were acquired over 3 years by the REDD+ Project, between July 2019 and July 2022. Even so, it was not possible to contain the high level of illegal deforestation practiced by the invaders.

Listed below are the documents sent by the project proponents to the inspection bodies to notify them of the invasions and illegal activities found in the RESEX:

2015	Letter from the Rondônia Rubber Tappers' Organization to SEDAM and the Machadinho D'Oeste District Attorney's Office (August 2015)
2017	Public Civil Inquiry at the Rondônia Public Prosecutor's Office through the Machadinho D'Oeste Prosecutor's Office (August 2017)
2018	Letter from Asmorex to SEDAM and the Machadinho D'Oeste District Attorney's Office (May 2018)
	Meeting with IBAMA's General Coordination of Environmental Inspection (August 2018)
	Letter from Asmorex to IBAMA's General Coordination of Environmental Inspection (September 2018)
2021	Letter from Asmorex to the Conservation Units Coordinator (November 2021)
2022	Letter from Asmorex to the Ariquemes Public Prosecutor's Office (May 2022)
2023	Letter from Asmorex to the Ariquemes Public Prosecutor's Office, SEDAM and the Rondônia Court of Auditors (January 2023)
	Letter from Asmorex to the Ariquemes Public Prosecutor's Office, SEDAM and the Rondônia Court of Auditors (April 2023)
	Letter from Asmorex to SEDAM and the Coordination of Conservation Units (May 2023)
	Letter from Asmorex to the Coordination of Conservation Units (September 2023)

Figure 2 below shows the satellite image of the area in 2013 and 2023. It is possible to see the deforestation that took place on the site of the Rubber Soldiers' unregulated plots (area removed from the Project), as well as the clear advance of deforestation around the Rio Preto-Jacundá RESEX, highlighting the importance of the REDD+ Project. In other words, to the south and east of the RESEX the project has been able to contain the pressure of deforestation, but there is a clear loss of control in the conflictive region over the unregulated plots.

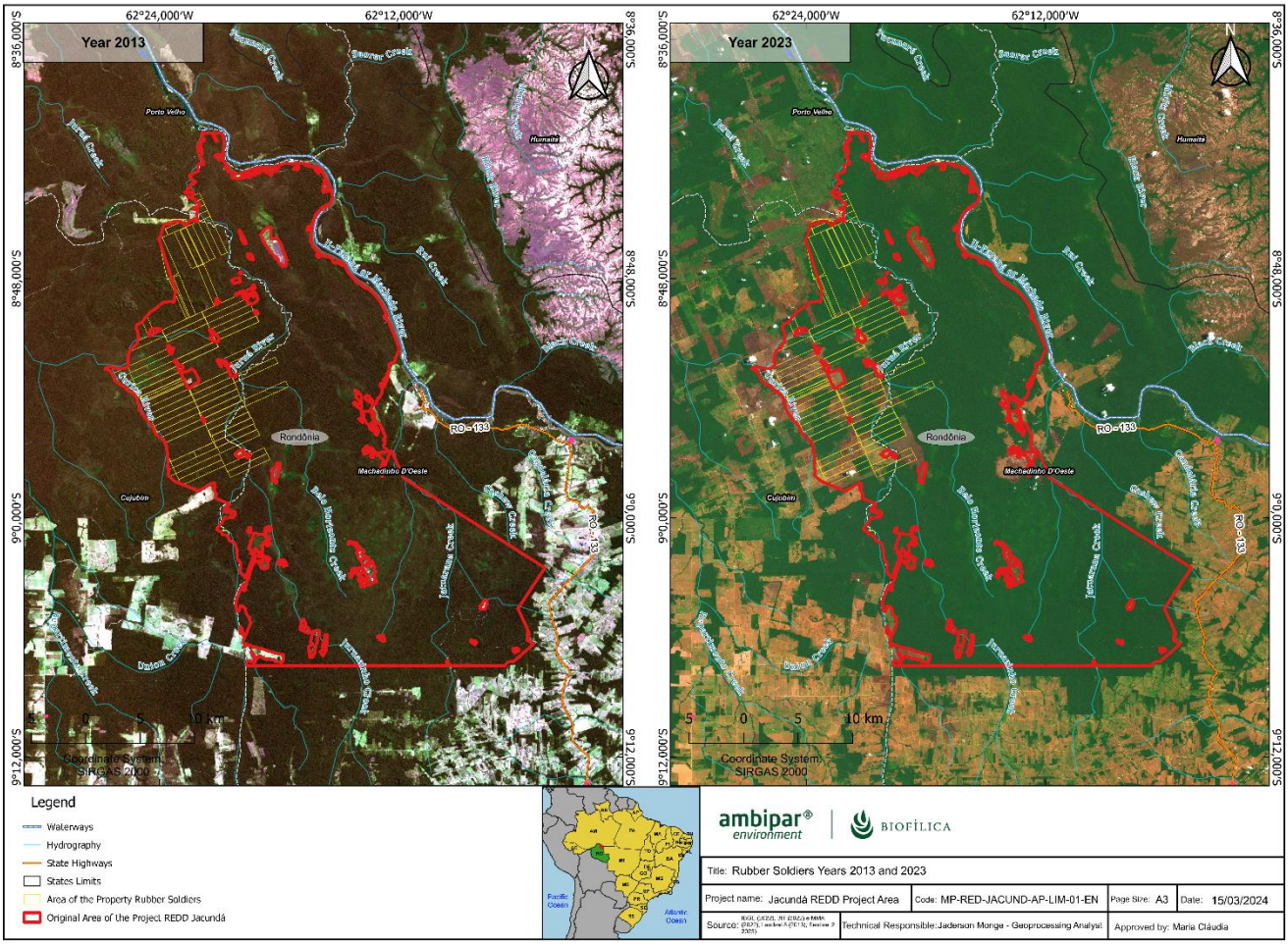

Figure 2. Satellite image of the area in 2013 and 2023.

It was therefore necessary to change the Project area, excluding the region under conflict, as the proponents no longer have control over this part of the territory, which although officially still part of the Conservation Unit, no longer represents the reality of the facts. The project's proponents continue to work with local institutions to mitigate the impacts, but they are no longer in a position to implement direct actions to reduce deforestation and curb illegal actions that have gotten out of hand in the region.

Figure 3 below shows the new project area, which no longer encompasses the region under conflict over unregulated titles that has been invaded and has now 68,255 ha.

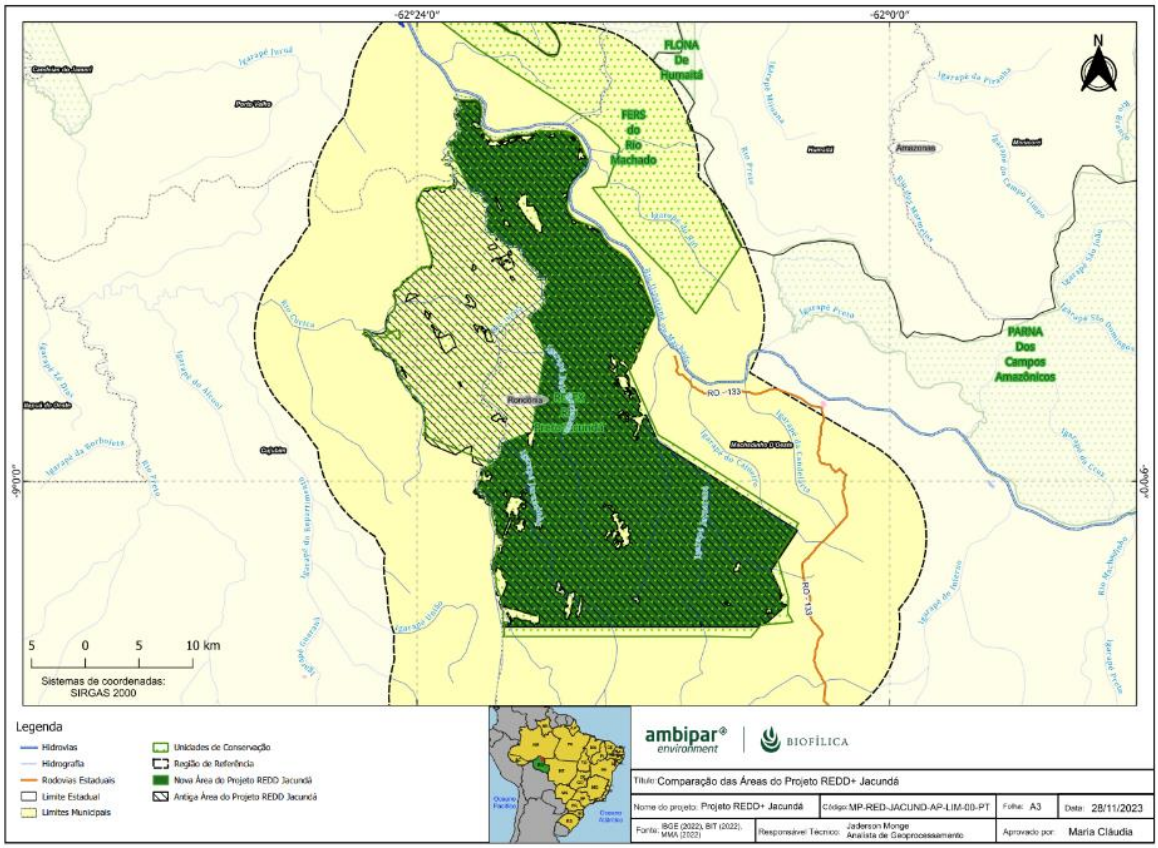

Figure 3. New Project Area.

The change in the Project Area was a significant deviation in the Project Description, therefore, it was addressed via update of the Project Description.

Optional Criterion: Climate Change Adaptation Benefits in the Project's Description:

During the evaluation of the results and impacts of the activities carried out by the project during the monitoring period, the proponents noted that, in addition to having long-term continuity planning, the actions carried out and their impacts provide significant support to help communities and biodiversity adapt to climate change. This approach meets the Gold Level requirements of the CCB standard. Therefore, in this monitoring report, information is provided to demonstrate that the project meets the requirements of a Gold Level that was not included in the project description in the previous validation. The sections referring to the climate gold seal in the PDD template are presented below, and information on the activities implemented and adaptation monitoring is described in section **Erro! Fonte de referência não encontrada.**.

I) Climate change scenario (GL1.1)

The Amazon rainforest plays a vital role in the global environmental balance, providing a series of essential ecosystem services that benefit both the Amazon region and the planet as a whole. Even with all its importance, the region is a focus of concern when it comes to climate change due to the history of forest

degradation, caused by deforestation and the consequences generated at a regional and global level (ELLWANGER, et al., 2020[12]; PBMC, 2016[13]; FEARNSIDE, 2003[14]).

Deforestation is a common practice for changing land cover and land use, replacing native forest with livestock activities, large-scale monocultures or logging (OMETTO, 2014[15]). The state of Rondônia faces serious challenges related to deforestation. Illegal deforestation is a persistent practice in the region, where extensive areas of forest are cut down for timber extraction and land conversion to create pastures for cattle ranching (INPE, 2021[16]). The actions of land grabbers, who seek illegal appropriation of public lands, contribute to the opening up of areas and, consequently, to the advance of deforestation (Carrero et al., 2017[17]).

This practice intensifies the scenario of regional and global climate change by the emission of greenhouse gases through the burning and decomposition of biomass (FEARNSIDE, 2021[18]), affecting temperature and precipitation patterns. Increased soil exposure due to the removal of forest cover influences evapotranspiration, decreasing the amount of water released into the atmosphere and consequently reducing rainfall, impacting not only the Amazon region, but also adjacent areas (MARENGO et al., 2018[19]).

In addition to the reduction in rainfall, deforestation in the Amazon has been associated with changes in the frequency and intensity of extreme weather events, such as prolonged droughts. According to the latest *International Pannel on Climate Change* (IPCC - AR6 WGI, 2022[20]) the Amazon Rainforest was highly impacted by the previous droughts and higher temperatures observed in the years 1998, 2005, 2010, 2015 and 2016, attributed in part to climate change, resulting in high rates of tree mortality and reductions in forest productivity throughout the basin. Among the events observed were three major droughts in the years 2005, 2010 and 2016 and three major floods in the years 2009, 2012 and 2014, for the period of the last 17 years (MARENGO; ESPINOZA, 2016[21]; ZOU et al., 2015[22])

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[12] ELLWANGER, H. J. et al. Beyond diversity loss and climate change: Impacts of Amazon deforestation on infectious diseases and public health. 2020. **Anais da Academia Brasileira de Ciências**. 92 (1) doi: 10.1590/0001-3765202020191375.

[13] PMBC – PAINEL BRASILEIRO DE MUDANÇAS CLIMÁTICAS. Impactos Regionais, Adaptação e Vulnerabilidade ao Clima e suas Implicações para a Sustentabilidade Regional no Brasil. Vol. 2. Cap. 8. 2016. http://www.pbmc.coppe.ufrj.br/documentos_publicos/GT2/GT2_volume_completo_cap8.pdf

[14] EARNSIDE, P. M. A floresta amazônica nas mudanças globais. Manaus: INPA, 2003. 134 p. ISBN 85-211-0019-I

[15] OMETTO, J. P., et al. Amazon deforestation in Brazil: effects, drivers and challenges, Carbon Management. 2011. 2:5, 575-585, doi: 10.4155/cmt.11.48.

[16] INPE (Instituto Nacional de Pesquisas Espaciais). (2021). Projeto de Monitoramento do Desmatamento na Amazônia Legal por Satélite (PRODES).

[17] CARRERO, G. C., et al. (2017). Grilagem de Terras Públicas na Amazônia Legal Brasileira, Imazon.

[18] FEARNSIDE, P.M. 2020. Desmatamento na Amazônia brasileira: História, índices e consequências. p. 7-19. In: Fearnside, P.M. (ed.) Destruição e Conservação da Floresta Amazônica, Vol. 1. Editora do INPA, Manaus, Amazonas. 368 p. (no prelo).

[19] MARENGO, J.A., SOUZA JR, C. 2018. Climate change: impacts and scenarios for the Amazon.

[20] IPCC, Grupo de Trabalho II. Impactos, Adaptação e Vulnerabilidade. Ficha Informativa. América Central e do Sul. https://www.ipcc.ch/report/ar6/wg2/about/factsheets/.

[21] MARENGO, J. A., ESPINOZA, J. C. (2016). Extreme seasonal droughts and floods in Amazonia: causes, trends and impacts. International Journal of Climatology, 36(3), 1033-1050

[22] ZOU, Y., MACAU, E. E. N., SAMPAIO, G., RAMOS, A. M. T., AND KURTHS, J. (2015). Do the recent severe droughts in the Amazonia have the same period of length? Clim. Dyn. 46, 3279–3285. doi: 10.1007/s00382-015- 2768-x

Regional and global temperatures are also consequences of climate change. The warming caused by elevated temperatures in the Amazon region has been historically evidenced by various sources since 1950 (MARENGO, SOUZA JR, 2018[23]). Temperatures across the Amazon Basin have increased by 0.5°C since 1980, with the highest rates of warming observed during the dry season (August to November). The frequency and duration of heat waves in the region is expected to increase by up to 214 additional days by the 2090s. (WORLD BANK, 2021[24]), in addition to the increased risk of fires (IPCC b, 2022[25]).

In view of the above, in a scenario without the project, the events mentioned above would intensify, further impacting the global climate change scenario. In addition, regional impacts would also be intensified, such as problems faced by local communities in adapting to climate change, such as food insecurity, droughts, floods, energy crisis and health threats, as well as the continued loss of local biodiversity, increasing the list of endangered species of fauna and flora, impacting ecosystems, and bringing negative consequences for communities.

II) Impacts of climate change (GL1.2)

The rainforests in Rondônia, located in the Amazon region, represent not only a natural heritage of inestimable value, but also a vital ecosystem for biodiversity and local communities (FERREIRA et al., 2018[26]). However, increasing climate change has imposed significant challenges on this scenario, triggering a series of impacts that threaten the stability of these forests and their interactions. Among those most vulnerable to the effects of climate change in the Amazon are indigenous peoples, traditional communities, small producers, farmers, low-income people in urban areas, children, and the elderly (IPCC, 2022[27]).

Changing climate patterns, such as longer periods of drought and shorter, more intense rains, are inherent risks of climate change. The significant reduction in rainfall in the Amazon rainforest affects regional hydrology, increasing the vulnerability of ecosystem services for the population inside and outside the Amazon region, in addition, drought aggravated by lack of rain and logging increase the risk of forest fires (MARENGO et al., 2018[28]). These events directly impact land productivity, causing substantial damage to traditional farming practices and resulting in difficulties in the practice of agriculture (DAVIDSON et al., 2012[29]).

Deforestation has devastating impacts, including the loss of natural habitats vital to local biodiversity, which puts many species at risk of extinction (BARRETO et al., 2018[30]). This practice is directly related to the

[23] MARENGO, J.A., SOUZA JR, C. 2018. Climate change: impacts and scenarios for the Amazon.

[24] WORLD BANK. Climate Risk Profile: Brazil (2021): The World Bank Group. https://climateknowledgeportal.worldbank.org/country/brazil.

[25] IPCC b. Climate Change Information for Regional Impact and for Risk Assessment. https://www.ipcc.ch/report/ar6/wg1/chapter/chapter-12/.

[26] FERREIRA, J., et al. (2018). Amazon Mining. Annual Review of Environment and Resources, 43, 647-672.

[27] IPCC b. Climate Change Information for Regional Impact and for Risk Assessment. https://www.ipcc.ch/report/ar6/wg1/chapter/chapter-12/.

[28] MARENGO, J.A., SOUZA JR, C. 2018. Climate change: impacts and scenarios for the Amazon.

[29] DAVIDSON, E. A., et al. (2012). The Amazon Basin in Transition. Nature, 481(7381), 321-328.

[30] BARRETO, P., et al. (2018). Challenges for Sustainable Development in the Brazilian Amazon. Nature Ecology & Evolution, 2(6), 871-873.

decrease in biodiversity, since, in addition to devastating forest areas, it contributes to their fragmentation, making it difficult for various species to survive, especially those with specific habitat requirements. This loss is not only an intrinsic conservation concern, but also has practical implications for local communities, who depend on the forest for resources such as food, medicines, building materials and as a resource for their economy (AZEVEDO et al., 2017[31]).

In Rondônia, between 2021 and 2022, there was a 6% increase in the rate of deforestation alerts in the region. During this period, the state was responsible for 7% of the entire deforested area in Brazil, ranking seventh in the national deforestation ranking. In terms of deforestation events, Rondônia is in fifth place in the ranking with 4,533 events. Among the reasons for deforestation, farming and cattle ranching are the biggest drivers, followed by mining and urban expansion. This deforestation has not only occurred in private areas but has also affected preservation areas such as the Guajará-Mirim State Park and the Jaci-Paraná Extractive Reserve, which are among the ten Conservation Units with the largest deforested areas in 2022, with 6,834 hectares and 5,177 hectares of deforestation respectively. (G1 RO, 2022[32]). These events bring numerous negative impacts for the communities living in the region, mainly related to food insecurity and the economic situation, since many of them need natural resources for survival and income generation.

The health risks to local populations are also a consequence of this scenario. The association between climate change and various other factors generated by anthropogenic action in the Amazon rainforest, coupled with precarious social and environmental conditions, can give rise to the emergence of new infectious diseases, as well as the resurgence of existing diseases (ELLWANGER, et al., 2020[1]). The increase in the spread of vector-borne diseases, such as malaria and dengue fever, can have a direct impact on the health of local communities and put an even greater strain on the already limited health infrastructure (Patz et al., 2005[33]; IPCC, 2014[34]).

The low capacity of local populations to adapt structurally to climate change makes the situation even worse. Damage to community communication, often for emergencies, becomes evident, as does damage to transportation infrastructure, such as roads, bridges, and rivers, which are vital for connectivity and access to resources (AZEVEDO et al., 2017[35]). The lack of structure and communication makes the situation even more vulnerable in terms of health, food, and basic resources for survival.

In addition, extreme weather events have serious economic consequences, which can destabilize the order and functioning of the human communities affected by them, generating social instability, and weakening

[31] AZEVEDO, A. A., et al. (2017). Reducing Emissions from Deforestation and Forest Degradation (REDD+) in Brazil: Potential and Constraints. Land Use Policy, 63, 353-362.

[32] Disponível em: https://g1.globo.com/ro/rondonia/natureza/amazonia/noticia/2023/06/12/desmatamento-aumenta-em-rondonia-em-2022-e-estado-fica-entre-os-sete-piores-do-pais-aponta-mapbiomas.ghtml Acesso em: 23/11/2023

[33] PATZ, J. A., et al. (2005). Impact of Regional Climate Change on Human Health. Nature, 438(7066), 310-317.

[34] IPCC. (2014). Climate Change 2014: Synthesis Report. Contribution of Working Groups I, II, and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change. Geneva, Switzerland.

[35] AZEVEDO, A. A., et al. (2017). Reducing Emissions from Deforestation and Forest Degradation (REDD+) in Brazil: Potential and Constraints. Land Use Policy, 63, 353-362.

the public health system, which is already precarious in Amazonian areas, even in the absence of these events (ELLWANGER, et al., 2020[36]).

All the consequences of the events mentioned above affect the communities and the biodiversity of fauna and flora in the Rio Preto-Jacundá REDD+ RESEX Project region. The complexity and interconnectedness of these risks and impacts underscore the urgent need for comprehensive adaptation and mitigation strategies that not only address the causes of climate change, such as deforestation and carbon emissions, but also strengthen the resilience of local communities and preserve the rich biodiversity of the Amazon rainforest.

III) Measures needed and projected for adaptation **(GL1.3)**

As the impact of climate change intensifies, it becomes necessary to develop comprehensive strategies that not only mitigate the causes, but also strengthen the resilience of communities and biodiversity. In view of this scenario, it was found that the Rio Preto-Jacundá REDD+ RESEX Project comprises a series of activities and strategies with positive impacts to help communities and biodiversity adapt to climate change. The activities were grouped into five groups, namely:

Monitoring and combating deforestation, preventing the loss of forest cover in order to maintain the integrity of ecosystems, preserving biodiversity and mitigating greenhouse gas emissions, contributing directly to the fight against climate change.

Biodiversity monitoring of fauna and flora, which offers a more in-depth understanding of the dynamics of local species, allowing the formulation of effective strategic plans for conservation. Through adaptive management, the aim is to ensure the long-term perpetuation of wildlife, coupled with the prevention of unplanned deforestation, which, in turn, contributes to preserving natural habitats and reducing the loss of connectivity in the landscape. Although, during the period of this report, fauna monitoring did not occur with the resources of the REDD+ Project, the results of the fauna monitoring campaigns carried out by SEDAM with the help of RESEX community members were made available to the proponents, allowing the watching of biodiversity in the period.

Strengthening the community's extractive activities for non-timber forest products in order to diversify their sources of income, reducing dependence on deforestation and promoting sustainable practices.

Promoting environmental education and awareness, which is essential for changing behavior and ensuring the active participation of communities in environmental preservation.

Improving infrastructure and communication, carrying out maintenance on the communities' transportation routes, acquiring and improving communication equipment, which allows better access to resources, better health conditions, studies and housing, increasing the quality of life of traditional communities.

Finally, it is understood that the deviation does not impact the applicability of the methodology, the additionality, or the adequacy of the baseline scenario, since the activities that justify obtaining the Gold Level have already been incorporated into the Project since its conception.

[36] ELLWANGER, H. J. et al. Beyond diversity loss and climate change: Impacts of Amazon deforestation on infectious diseases and public health. 2020. **Anais da Academia Brasileira de Ciências**. 92 (1) doi: 10.1590/0001-3765202020191375.

Extension of Project Longevity Period

The project longevity period was extended to 40 years, as stated in the updated AFOLU Non-Permanence Risk Tool v4.2 released in October 2023 and evidence will be presented to the VVB during the audit.

2.2.6 Grouped Projects (VCS, 3.6; CCB, G1.13-G1.15, G4.1)

Not applicable, as this is not a grouped Project.

2.2.7 Risks to the Project (CCB, G1.10)

The risk assessment was conducted by applying the VCS-approved tool "AFOLU Non-Permanence Risk Tool, v4.2". The probable natural and man-made risks to climate benefits were verified, reported in the Non-Permanence Risk Report of the RESEX Rio Preto-Jacundá REDD+ Project.

During the monitoring period, the likely risks to the expected climate, community, and biodiversity benefits during the Project's life cycle were identified, as well as their respective mitigating measures, listed below.

Identified Risk	Potential impact of risk on climate, community and/or biodiversity benefits	Actions needed and designed to mitigate the risk
Illegal activities	Illegal activities such as invasions and wood theft are rampant in the RESEX, causing degradation, loss of forest cover and the expulsion of communities.	The mitigation of this risk was linked to the involvement and efforts of the proponents to increase interaction with the environmental inspection body (Rondônia State Secretariat for Environmental Development - SEDAM), specifically focused on strengthening the fight against illegal activities taking place in the RESEX. Throughout the monitoring period, annual (PRODES) and quarterly (PLANET) deforestation reports were produced using satellite images. By analyzing the reports, it was possible to provide the proponents with a better basis for filing complaints with the competent authorities (detailed in section 3.1), demonstrating the need for more active patrols in the RESEX. In addition, as a result of complaints, and with the financial support of the project, several operations were carried out in the RESEX to contain agents of deforestation.
Non-involvement of timber management	The non-involvement of timber management in the REDD+ Project, where its planning and execution activities could have negative	At the start of the project, the involvement of timber management was discreet and permeated the project's issues in an indirect way, such as in the community zoning of the RESEX and in estimating the carbon stock.

in the REDD+ Project	impacts on the project's benefits.	During the course of the project, there were training and capacity-building activities to empower the community's management in this activity, as well as improvements through the adoption of best management practices, both in the planning and harvesting phases. In addition, forest management now makes up part of the income received by ASMOREX, which demonstrates the increased importance of this activity in the area. These actions allow community members and ASMOREX to have greater influence and management over sustainable forest management activities, making it possible to control and reduce the environmental impacts of this activity on the forest and, consequently, on carbon stocks, in line with the project's main climate objectives.
Problems in the marketing of carbon credits	Problems in the marketing of carbon credits, due to variations in the price of credits and the absence of a regulated market, and consequent lack of resources to finance the proposed activities.	Biofílica, the project's proponent, has a sales department exclusively responsible for developing materials to publicize the project, participating in national and international events related to REDD+ and carbon credits in order to publicize, establish and expand the network of business contacts with potential buyers of carbon credits. In addition, Biofílica is always looking for funding alternatives, such as donations and partnerships for the direct implementation of the project's activities (not necessarily linked to the sale of credits).
Lack of involvement and empowerment of the community	The lack of involvement and empowerment of the community, maintaining the current state of lack of technical capacity of residents to manage the project and financial resources, and insufficient governance and exploitation of the community.	During the monitoring period, there were significant and routine investments in training to strengthen governance internally and to train residents in matters relating to the project and administrative and financial management, described in more detail in sections 2.3.14 and 4.3.1 of this document. In addition, there are internal alignments between proponents and partners, assemblies and ordinary and extraordinary meetings that serve as a space for articulation and, consequently, improvement of adaptive management in line with the results of the project (the presentation of available financial resources, annual work plans and accountability for the previous year are made

		not only to the residents of RESEX, through the Assemblies, but also to CDREX, at ordinary meetings). In addition, through the REDD+ Financial Mechanism, the proponent ASMOREX, along with the other members of the Executive Secretariat, receives support for managing the financial resources from the sale of credits, which gives the institution credibility and confidence in the search for transparency and the equitable sharing of benefits. It is worth noting that these spaces (meetings and assemblies) are used for feedback on the project. Another point worth highlighting is ASMOREX's role as a leader among the extractivist communities, perceived by the other extractivist associations in the region as an entity capable of managing its own resources economically and efficiently.
Non-involvement of public management bodies	The non-involvement of public management bodies and the bodies responsible for inspecting the area.	These bodies were involved in all the actions relating to the RESEX inspection processes. As this is a state conservation unit, the project proponents made several attempts to liaise with SEDAM and, eventually, IBAMA. In this sense, by sending letters, official letters, complaints and meetings, support was sought to curb illegal deforestation in the RESEX, especially after the identification of large areas of deforestation on the boundaries of the RESEX, which became increasingly frequent in subsequent years (as shown in section 3.1).
Increase in interest from outsiders to live in the extractive reserve.	It is expected that in the scenario with the Project there will be an increase in interest from outsiders to live in the extractive reserve.	As a mitigation measure, two main mechanisms have been put in place: the selection of new families, assessing whether their production profile is compatible with the one in force at the RESEX, and the implementation of an approval process for these families by the communities already present at the RESEX. These mechanisms are addressed in AMOREX's Social Statutes, specifically in Article 7 of Chapter 3, which states that when people from outside the RESEX wish to take up residence in the RESEX, they must be approved by all the members at the General Assembly, where all the community members have the right to evaluate

		decisions involving the management of the RESEX. After approval by the community, the entry of new members or families is analyzed by SEDAM, and only after its approval are new residents allowed to enter RESEX. This last stage of mitigation was confirmed by the coordinator responsible for the conservation units in the state of Rondônia, during the audit meeting for the monitoring period prior to this one.

2.2.8 Benefit Permanence (CCB, G1.11)

To maintain and enhance the benefits for the climate, community, and biodiversity, beyond the duration of the project, the following measures are listed:

REDD+ Financial Mechanism:

The structuring, implementation and monitoring of the Mechanism began on November 8, 2016, with a meeting attended by ASMOREX, Biofílica, CES Rioterra and SEDAM. Since then, several other meetings have been held with the aim of building collectively and validating the terms of the agreement between the parties. These meetings resulted in a mechanism guided by collegiate management, representative of and committed to community concerns, transparency, and publicity for all its actions, the application of benefits and resources exclusively for the RESEX community, the representative participation of community members, credibility and legality, and environmental conservation. With the aim of financially supporting the RESEX, it is the right instrument for sharing benefits, mainly from REDD+ Project resources.

The REDD+ Financial Mechanism has been implemented since the sale of carbon credits began and has proved to be a successful tool in the process of managing and sharing benefits. The document celebrating the agreement to set up the Jacundá REDD+ Financial Mechanism was approved at a community assembly and signed in February 2023 by ASMOREX, Biofílica and Rioterra, lacking the signature of CDREX (Deliberative Council of Extractive Reserves of the Vale o Anari) for its legal effectiveness only to legally formalize the good practices that have already been applied by the project proponents and that should continue until the end of the Project.

Greater scientific knowledge on Biodiversity and the Maintenance of High Conservation Value Attributes:

The first biodiversity study carried out during the design of the project served as the basis for the implementation of the long-term monitoring plan for Biodiversity and HCVAs, which began in 2018. In the monitoring carried out in 2020, it was shown that the forests in the Project Area have a high degree of conservation and balance even in areas where there has been Sustainable Forest Management, revealing their status as conserved forest. In this survey, not all the species found in the initial biodiversity study were found due to methodological differences, however, it does not indicate that the species no longer occurs on site, only that it was not found in the survey.

The need for continuous monitoring of biodiversity over the years is well known and, in order for this activity to take place at this frequency, the proponents believe that there are three possible paths: hiring specialized companies, formalizing agreements with local higher education institutions that can contribute

to making the activity effective and encouraging community members to act as biodiversity monitoring agents, such as the training already carried out with residents by specialists.

During the monitored period, due to budgetary priorities related to improving the quality of life of community members, fauna monitoring was carried out by ARPA – Amazon Protected Areas Program, with support from RESEX residents. In 2022, the proponents began articulating with universities in the region to carry out biodiversity monitoring in RESEX, as well as updating the socioeconomic diagnosis, however, only the diagnosis was selected to be carried out by the University of Rondônia, fauna monitoring was decided to be carried out by a specialized company, which was resumed by the REDD+ Project in 2023.

Improvement in asset surveillance procedures:

Asset surveillance actions and the monitoring of areas using satellite images have been taking place since the project was validated. This long period of activities has led to the need to improve these actions, especially with regard to the effectiveness of patrolling the RESEX. The proponents understand that in order for this activity to be viable and directly influence the maintenance of the REDD+ Project, strategies must be developed with the RESEX management body, SEDAM/CUC, so that the project contributes with infrastructure to SEDAM surveillance agents and, when necessary, the police force or other competent bodies, in order to effectively and progressively inhibit the action of invaders. These negotiations with SEDAM have been going on for many years and the project's proponents have a clear position of support for these actions, since it is understood that without constant physical action in the region, forest conservation could be extremely jeopardized.

2.3 Stakeholder Engagement & Safeguards

2.3.1 Stakeholder Identification (VCS, 3.18, 3.19; CCB, G1.5)

No new stakeholders were identified since validation.

2.3.2 Stakeholder Access to Project Documents (VCS, 3.18, 3.19; CCB, G3.1)

During the monitoring period, the Rio Preto-Jacundá REDD+ RESEX project implemented three methods of communication with the parties involved, with the aim of guaranteeing access to documents and all other project information in written, virtual, and oral form, as described below.

Written: a printed and digital version of the project design document (PDD) and the summary of the monitoring reports were made available for consultation at ASMOREX headquarters and at CUC/SEDAM (in the city of Porto Velho). Materials for publicizing the project were made available to interested parties in banner/folder format. It is important to note that all the material is in a language that is accessible and applicable to the local reality.

Virtual: Documents related to the project were made available online on the Verra and Biofílica websites. News and updates on the project were published in the Biofílica newsletter via social media such as Facebook, LinkedIn and Instagram, which can be accessed at this link.

Oral: Information and news about the project is transmitted orally at the internal alignment meetings held by ASMOREX and at the Ordinary and Extraordinary Assemblies carried out with the residents of RESEX, as well as other opportunities for contact between the interested parties and the project's proponents.

2.3.3 Dissemination of Summary Project Documents (VCS, 3.18, 3.19; CCB, G3.1)

Documents related to the project were made available online on the Verra and Biofílica websites. News and updates on the project were published in the Biofílica Newsletter via the social media Instagram and LinkedIn. In addition, all information and news about REDD+ was reported orally through meetings between communities and in assemblies via the project's proponents and other stakeholders. All relevant information and evidence regarding the dissemination of project documents was made available for analysis by VVB.

2.3.4 Informational Meetings with Stakeholders (VCS, 3.18, 3.19; CCB, G3.1)

The Proponents of the Project (ASMOREX and Biofílica Ambipar) and partners (specifically CES Rioterra) frequently hold internal meetings to monitor and plan activities and actions related to the REDD+ Project. ASMOREX, in accordance with its mission and the attributes set out in its Statute, informs and raises awareness among its members and the general public, through communication vehicles, lectures, training and other means, about citizens' rights and duties, especially with regard to the effective exercise of its activities. In this sense, its entire operation is guided by its internal regulations and by normative orders issued at general meetings. Therefore, all internal coordination and the passing on of relevant information to interested parties is done through ordinary and extraordinary general assemblies. It should be noted that meetings attended by RESEX residents, especially when it comes to information related to the Project, are conducted in appropriate language, in keeping with the audience and using mediation techniques (among the various functions performed by CES Rioterra in the Project, is that of advising on the holding of community assemblies).

The ordinary general assemblies are conducted by the association's president, who is assisted by the secretary, who is responsible for secretarize these meetings, drawing up minutes and publishing all the news of the activities. In essence, ordinary assemblies seek to elect and induct the members of ASMOREX's board of directors, decide on the convenience of its assets and discuss and approve the association's accounts and financial balance sheet. Administrative management practices are also adopted, which are necessary and sufficient to prevent individuals or groups from gaining personal benefits and advantages as a result of participating in decision-making processes. In order for the meeting to take place, it must be posted at the institution's headquarters and/or published in the local press or in a widely circulated newspaper at least fifteen days in advance.

As for extraordinary general assemblies, these are held whenever the interests of ASMOREX require a statement from the members or in order to hold a new election when there has been a resignation due to inadequate performance. Such a meeting must also contain a notice of convocation to be published in a widely circulated newspaper and/or posted at the association's headquarters fifteen days in advance. It should be noted that this meeting may be called by the board of directors or supervisory board and/or by one-fifth of the members who are in good standing, in accordance with article 60 of Law 10.406/2002. In this way, these assemblies are considered a space for interested parties to discuss and propose possible clarifications on any information, activity or subject, ensuring that the project is built in a participatory way over time. A tangible example of these spaces, described in this document, were the last Ordinary and Extraordinary Assemblies, which took place on 15/03/2024, to elect the ASMOREX board of directors and present and validate the 2024 work plan, respectively, and which will be further detailed in section **Erro! Fonte de referência não encontrada.**.

In addition, these assemblies take place with a majority of members on the first call and any number on the second. That said, the assemblies are strong instruments for collaborative construction between proponents and the community, where appropriate and relevant information about costs, risks and potential benefits to communities is provided, remembering that participation in the project is voluntary and the decision to participate or not is not final or results in any kind of restriction.

Another way of making information available to interested parties is through informal communication mechanisms. In this sense, ASMOREX acts as a central pivot in the dialog between the parties, being a physical and accessible support for collecting feedback and suggestions, measuring dissatisfaction, and managing any discontent and displeasure related to the personal issues of the parties involved and/or the Project's activities.

2.3.5 Risks from the Project and No Net Harm (VCS, 3.18, 3.19)

No risks resulting from project activities were identified in this monitoring period, including risks to stakeholder participation, working conditions, safety of women and girls, and safety of minority and marginalized groups including children.

2.3.6 Community Costs, Risks, and Benefits (CCB, G3.2)

Prior and informed consultation with extractivists is dealt with both under international law, in ILO Convention No. 169 on Indigenous and Tribal Peoples, and in Brazilian law, Law No. 9.985, of July 18, 2000, which established the National System of Conservation Units (SNUC). From the outset, we sought to generate knowledge and opinions about the project through a transparent and independent process, seeking to reveal the real interests of the RESEX residents.

These actions are reinforced throughout the monitoring period, as described in previous topics, by conducting certain strategies to address potential risks, costs and benefits with the communities and other stakeholders, ensuring effective involvement in the process and free, prior, and informed consent.

The Assemblies, as well as informal communication channels, are the main ways in which community members participate, get involved, give their consent, and approve actions.

The community elects ASMOREX's Board of Directors and Supervisory Board at an Ordinary General Assembly (as mentioned in section **Erro! Fonte de referência não encontrada.**), which act directly in the i mplementation of the REDD+ Project. The ASMOREX board, together with Biofílica and CES Rioterra, hold frequent meetings to plan and carry out activities, which are based on the Life Plan drawn up by the community members themselves during the project's conception phase. With the Life Plan in mind, annual Work Plans are drawn up, which include the activities (and their respective budgets) to be carried out over the course of a year. This Work Plan is presented at the Ordinary Assembly and must be approved by the community. At the end of the period of implementation of this Work Plan, through an Assembly, the community is also presented with the Accountability Report for the previous year (which must also be unanimously approved). In addition, during the Assemblies, the suppliers who will provide the services included in the Work Plan are also discussed and approved. It's important to note that all outsourced suppliers participate in a call for tenders, submitting their proposals and budgets.

Thus, it is at Assemblies that information is passed on, questions are resolved, opinions are given and plans for activities, accountability and those responsible for providing services are approved. It is a space for dialog, joint construction, and engagement between stakeholders.

The communication channels, described in section **Erro! Fonte de referência não encontrada.** aim to p reserve and stimulate rapid dialog (without having to wait for Assemblies to be held), providing a space for consultation, complaints, suggestions and for all interested parties. Face-to-face communication is the most common and is based on transparency between residents and "face-to-face" dialog. Another communication strategy implemented was the creation of a group with residents on a chat application (via the internet). The stakeholders in the projects therefore have open channels for dialog, construction and adaptation, based on transparency and collectivity.

2.3.7 Information to Stakeholder on Verification Process (VCS, 3.18.6, 3.19; CCB, G3.3)

The REDD+ Project adopted different strategies for communicating the verification process. These strategies were aimed at local partners and institutions, stakeholders involved in the project's activities and society in general. In this way, considering all stakeholders, three main channels of communication were developed, as described below:

Remote (communication with partners and local institutions): Official letters along with project folders were sent to CUC/SEDAM, the Court of Auditors and the City Hall in order to communicate and contextualize the verification process. All the communities, families, and residents of the RESEX were informed through WhatsApp. In addition, contact was made with other interested parties (other community members and key leaders of the surrounding RESEX, those responsible for Forest Management and the surrounding areas). The whole process was conducted by ASMOREX, with the support of Biofílica and CES Rioterra, with the aim of informing the parties and giving them the opportunity to express themselves about the project.

Remote (communication with society in general): the verification process was publicized online via the social networks, websites, and email addresses of Biofílica, CES Rioterra and ASMOREX. Invitations were sent directly to all parties involved, meaning universities and researchers in the area, stakeholders living around the project area and other institutions interested in finding out more about the project and the activities carried out.

Presential (communities in the project area and stakeholders): The community members were informed about the verification process at the Asmorex Extraordinary Assemblies on February 8 and March 15, 2024, with the presence of all the RESEX community residents to collect feedback, questions and suggestions and informe about the Project verification process.

2.3.8 Site Visit Information and Opportunities to Communicate with Auditor (VCS, 3.18.6, 3.19; CCB, G3.3)

Prior communication with the stakeholders about the auditors' visit to the project area took place through the three main channels mentioned in Section **Erro! Fonte de referência não encontrada.**. In order to f acilitate communication between the stakeholders and the auditors, the proponents provided the auditors with a contact list of the main players in the project's area of influence or who might have an interest in it.

To this end, during the assemblies, which is described in more detail in **Erro! Fonte de referência não e ncontrada.**, the communities were informed about the audit process and the on-site visit by the auditors.

At this event, the current context in which the project finds itself was explained, referring to the public consultation process and the reason why it is necessary to carry it out, as well as explaining how the audit activities would take place, the field visit by the auditors and its importance for the continuity of the project. Stakeholders were also informed of the possibility of communicating with the auditors.

2.3.9 Stakeholder Consultation (VCS, 3.18; CCB, G3.4)

Ongoing consultation	The main communication tool and the official space for dialog and articulation between the communities and other interested parties are, in general, linked to ASMOREX itself since, in addition to being a proponent of the project, it is made up of extractivist residents who live in the RESEX and literally understand the reality and context of the place because they live there. As a result, all information and demands relating to the project's activities and impacts can be discussed during the assemblies or reported directly to the ASMOREX board of directors, which is always available at its headquarters or via social networks through WhatsApp. The results of all the other project's activities are also disseminated and discussed through these channels, facilitating the collection of feedback and comments. In this way, the Assemblies are the most direct adaptive management tools proposed by the project. In addition to this, another important communication channel, where ASMOREX and stakeholders have the opportunity to discuss ideas and proposals for activities, are the workshops and training sessions offered by CES Rioterra and other partners, which will be described in more detail in section **Erro! Fonte de referência não encontrada.** of this document.
Date(s) of stakeholder consultation	During the monitoring period, 3 assemblies were held by ASMOREX (see section 4.3.1.1) 15-Jan-2021 10-Sep-2021 18-Fev-2022 The stakeholder communication prior to verification was held by ASMOREX through na Extraordinary Assembly in: 15-March-2024

Communication of monitored results	The consultation and the decision-making processes, as well as the various activities related to the project, are open to community participation and are encouraged. As already mentioned, involvement in the design, implementation, monitoring, and evaluation of the project takes place through ordinary and extraordinary assemblies and internal meetings and/or with partners (SEDAM, CDREX, CES Rioterra) in which all interested communities have the opportunity to participate, being democratic spaces and open to the interested public. The monitoring results were communicated through the assemblies held by ASMOREX in the end of each year for the accountability of REDD+ Project Investments.
Consultation records	The outcomes of the stakeholder consultation were documented in the minutes of the assemblies, which report the participation, suggestions and questions of all the interested parties present.
Stakeholder input	No input or suggestions were presented by interested parties during the consultation.

2.3.10 Continued Consultation and Adaptive Management (VCS, 3.18; CCB, G3.4)

The main channel for ongoing consultation and adaptive management were the assemblies, internal meetings and in an informal way directly with the ASMOREX board of directors, which is the official space for dialog and articulation between communities and other stakeholders.

During the last monitoring period, the project proponents identified the need to strengthen communication channels, since community members still had doubts and are often shy about expressing their opinions. So, a first step in this direction has already been taken by ASMOREX, which started a WhatsApp group with RESEX residents. The invitation to join the group was open to all residents who have access to the channel, which has so far been used to exchange information and warnings.

It is worth noting that all the families living in the RESEX, both on land and on the riversides, currently have access to electricity and can access the internet in strategic areas of the RESEX. This structure will make it possible to improve communication channels in the long term and will be an important ally in the necessary adaptations that will be made in the future.

In this monitoring period, no comments were received by stakeholders.

2.3.11 Stakeholder Consultation Channels (CCB, G3.5)

The project's activities are designed and implemented taking into account the wishes, characteristics and limitations of each community, as defined and verified during internal meetings and assemblies, which are publicized in a newspaper with wide circulation in the state and are open to everyone, as explained in

Sections **Erro! Fonte de referência não encontrada.** and **Erro! Fonte de referência não encontrada.**. This co mmunication and accessibility for discussion on the progress of the project's activities between the stakeholders and the proponents occurs continuously throughout the duration of the project, especially after the implementation of the guidelines established by the REDD+ Financial Mechanism, which focuses on collegiate, representative management committed to community concerns.

Additionally, the channels mentioned above, together with external meetings with the RESEX management institution (SEDAM) and participation in CDREX meetings, demonstrate how transparent and credible the project and the proponents involved are when it comes to carrying out activities and making decisions. These spaces of exchange are the main channels for consultation with stakeholders outside the RESEX and play a decisive role when it comes to the use of project resources in the area.

2.3.12 Stakeholder Participation in Decision-Making and Implementation (VCS, 3.18, 3.19; CCB, G3.6)

The processes related to decision-making and implementation, as well as the various activities linked to the project, are open to community participation with the help of the information meetings described in Section **Erro! Fonte de referência não encontrada.**, in which all residents are encouraged and have the o pportunity to participate. It's worth saying that the involvement of RESEX residents has grown over time, and that great efforts have been needed to engage them, which is natural given that REDD+ and its concepts are complex issues and require continuous adaptation on the part of all stakeholders. Local engagement is carried out through ASMOREX, which in turn communicates with other residents and government actors with the help of CES Rioterra.

In this sense, it is worth mentioning that the residents' engagement increases with each period monitored and it is important to emphasize the peculiarity of the project, which is that, in addition to being located in a public area, the Residents' Association is part of the implementing body of the project and, consequently, is made up of residents who represent the extractive and cultural interests of the local community.

Additionally, when it comes to the participation of other actors who influence decision-making within RESEX, mainly SEDAM and CDREX, the main spaces for exchanging information and decision-making are external meetings, ordinary and extraordinary assemblies. The participation of the proponents in these spaces, representing the community, has been reinforced mainly with the establishment of the REDD+ Financial Mechanism, which has these external actors as one of the focal points for influencing decision-making on the use of project resources.

2.3.13 Anti-Discrimination Assurance (VCS, 3.19; CCB, G3.7)

CES Rioterra, a non-profit civil entity, is respected for its work in the state of Rondônia developing projects for the sustainable use of the forest with traditional communities. It is governed by specific legislation and a statute, which states that its activities comply with the principles of legality, impersonality, morality, publicity, economy, and efficiency, as well as non-discrimination on the grounds of race, color, gender, or religion.

ASMOREX, governed by the 2017 statute, has rules for its operation, including non-discrimination on political, social, racial, or religious grounds, as well as the rights and duties of its members. The number of members is unlimited, with a maximum of no fewer than 10 individuals and no more than 70% of the same gender. The Fiscal Council is responsible for overseeing the association's operations, activities, and

services. It is worth noting that the president of the Residents Association is currently a woman, which is evidence of such anti-discrimination actions in practice.

Biofílica Ambipar Environmental Investments S/A was founded in 2008 and, in accordance with its rules and conduct, does not allow any kind of discrimination based on race, color, nationality, ethnic origin, age, religion, gender, sexual orientation, marital status, political party option and mental or physical disability, humiliating attitudes, moral or sexual harassment, intimidation, persecution and physical or psychological aggression. In addition, the Ambipar Group has a code of ethics and conduct based on strict ethical principles and respect for the laws that represent all the Group's companies. The document serves as a primary instrument to guide the conduct of all parties involved in adopting good practices in relationships and business, in order to achieve the highest standards of integrity, transparency and reliability, guiding attitudes of respect for diversity and combating any form of prejudice.

2.3.14 Grievances (VCS, 3.18.4; CCB, G3.8)

At the start of the project, in an appropriate workshop, the residents of the Rio Preto-Jacundá RESEX decided on a conflict resolution procedure that was established in line with the traditional methods already practiced, in which it was decided that the ASMOREX Assemblies would serve as a space for dialog and the exposure of dissatisfactions, doubts and suggestions. These complaints and conflicts are mediated by ASMOREX and are mostly raised in person by the people involved. In addition, there are informal communication channels such as WhatsApp groups for reporting possible demands to the Association. In contrast to such unwanted situations, whenever possible, grievances are addressed and resolved in the best possible way, ensuring the well-being and satisfaction of all the families in the project area.

In this monitoring period, no grievances were raised.

2.3.15 Worker Training (VCS, 3.19; CCB, G3.9)

The qualification and empowerment of local actors is essential to ensure the quality of the implementation of the proposed actions, as well as to guarantee the permanence of the results and positive impacts in the long term. It is understood that, in order to ensure the effective implementation of the REDD+ Project, it is essential to work on generating local human capital, focused mainly on the responsible management of natural resources.

As established in the Life Plan, many of the activities planned in the Project are associated with training for the residents of the Rio Preto-Jacundá RESEX. The aim of this training is to create or improve skills with regard to the extractivist and riverine way of life and the governance of the area. The community's own idea is that special attention should be paid to women and young people, as they have great potential for development in the community but are still under-represented in ASMOREX's leadership and management positions.

During this monitoring period, courses and training were held to social strengthen on the subjects of botanical identification and the use and handling of GPS, both with the main focus on people who work with forest inventory and timber forest management. ASMOREX's board of directors received specific training in administrative and financial management, such as drawing up cash flows and work plans, with the support of Rioterra. Rioterra also gave a talk on climate change and REDD+ to RESEX residents, specifically young people.

In addition, in September 2019 computer classes began in the computer room (tele center) built in the Community Complex through the actions of the Project, which lasted until November 2022. This course was created primarily with the training of RESEX youth in mind, but older residents have also taken the course.

It is important to point out that, apart from training, courses and lectures, meetings are considered a form of training for those involved, since the exchange of information between stakeholders in this environment generates learning for the participants.

2.3.16 Community Employment Opportunities (VCS, 3.19.13; CCB, G3.10)

Among the principles of the entities implementing the project is non-discrimination of any kind. However, it is known that the structural model of society has been built in an unrepresentative way, leaving men with leadership positions, as well as opportunities to study and work. In view of the recognition of the need to change this model of society and of gender equality, as well as the need to offer opportunities to the younger residents of RESEX, these groups have been included and encouraged to take part in courses and training, to stand for election to board positions, as well as to take part in paid activities linked to the Project.

During the monitoring period, the residents were able to take part in the forest inventory of the permanent plots and the exploitation of the UPAs carried out in Sustainable Forest Management.

In addition to these specific activities, 5 residents have carried out ongoing activities in the project in positions of managing activities, implementing, and advising on activities, financial management and teaching computer classes, through formal hiring via ASMOREX. Of these permanent positions, 4 have been or are being held by women.

2.3.17 Occupational Safety Assessment (VCS, 3.19; CCB, G3.12)

Forestry activities, along with activities related to agriculture and hunting, are the main cause of accidents in the Amazon (NOGUEIRA et al., 2010). Considering the activities proposed by the Project, the greatest risks to health and safety are associated with agro-extractivist activities (conducted in a traditional manner), forest management and technical extension work.

Based on studies by Goés (2013), the Project's PD considered that the main occupational risks are linked to chemical, physical, biological, and ergonomic risks:

- Chemical risks: related to the use of possible chemical inputs, such as fertilizers and herbicides. The residents, as noted in the project design, continue not to use chemical fertilizers and/or herbicides.

- Physical risks: related to the flow of energy, such as noise, vibrations, temperatures, and radiation. This risk remains absent at RESEX, which only has conventional and alternative electricity, via photovoltaic panels (installed during this monitoring period).

- Biological risks: related to living forms or products and substances derived from living forms, such as insects, viruses, bacteria, fungi, protozoa, poisons, and animal hair. The main actions taken to minimize these risks are done informally, by passing on local knowledge among community members, not only among RESEX residents, but also to visitors.

- Ergonomic risks: related to inappropriate postures when carrying out tasks, unsuitable furniture, inappropriate or excessive working hours, incorrect and unsafe storage of products and equipment. The

activities promoted by the project take into account occupational health and safety standards and labor laws. In this sense, courses and training, as well as meetings and Assemblies, have always been held in spaces with appropriate furniture, at appropriate times and with breaks for meals. The project's technical team, hired by ASMOREX, also works in suitable conditions, as do the outsourced workers who are hired to provide services. The Community Complex, which was completed during this monitoring period, contributes to the well-being not only of the residents, but also of the service providers and visitors to the RESEX, with accommodation, toilets, an auditorium, a computer room, a cafeteria, and an ambulatory. In addition, during Low Impact Forest Management activities, residents and other employees were instructed to wear personal protective equipment (PPE) throughout their working day.

2.4 Management Capacity

2.4.1 Required Technical Skills (VCS, 3.19; CCB, G4.2)

The main technical skills required for the implementation of the Jacundá REDD+ RESEX Project are knowledge of the development and management of forest conservation projects in the Amazon biome, experience in the implementation, development, and assistance of programs for communities, implementation of effective land security and asset surveillance. All the proponents and other entities involved in the project have the technical skills necessary for the successful completion of the project.

All the areas of knowledge and technical skills required to successfully implement the project and activities are described below, as well as the person responsible for each area.

Biofílica Ambipar Environmental Investments is a Brazilian company focused on the management and conservation of forest areas in the Amazon biome. Created in 2008, its aim is to create pioneering alternatives and make environmental conservation an economically attractive activity for forest owners, communities, and investors. Biofílica's mission is to reduce deforestation and carbon emissions into the atmosphere, preserve biodiversity and water resources and promote the social inclusion and development of communities through the sale of environmental service credits, the promotion and financing of scientific research activities and the development of sustainable business chains. The company has a specialized team and is a benchmark in the development of forest conservation projects, guaranteeing the quality and effectiveness of the REDD+ activities developed. (https://www.biofilica.com.br/).

Responsibilities in the project: general coordination of socio-economic and environmental diagnoses (DSEA) and baseline and carbon stock studies; development and financing of the PDD (Project Design Document) and MR (Monitoring Report); remote monitoring of forest cover and implementation/coordination of complementary actions aimed at reducing/mitigating greenhouse gas emissions; validation/verification and marketing of the credits generated; co-management of the Project throughout its duration and support in implementing conservation activities.

Association of Residents of the Rio Preto-Jacundá Extractive Reserve - ASMOREX is a non-profit civil association based in the municipality of Machadinho do Oeste, in the state of Rondônia, which aims to manage the Rio Preto-Jacundá RESEX in conjunction with the Rondônia State Environmental Development Secretariat - SEDAM. In this way, ASMOREX represents the extractivists and their families and other residents of the RESEX.

Responsibilities in the project: ASMOREX is responsible for developing and implementing the REDD+ project in a participatory manner, as well as ensuring the execution of the project and maintaining all the documentation necessary for the project to take place. In addition, it is responsible for monitoring and co-managing the REDD+ project and for engaging the residents of the Extractive Reserve in participating in the project's activities.

Deliberative Council of the State Extractive Reserves of Machadinho D'Oeste and Vale do Anari - CDREX
The purpose of the CDREX is to manage the RESEXs in the municipalities of Machadinho D'Oeste and Vale do Anari; to decide on social, economic, political and environmental activities of interest to the reserves and their communities; to seek self-sustainability for the unit through agreements and other means; to establish guidelines for drawing up programs, plans and projects aimed at the reserves; to monitor the actions of projects and to carry out cost-benefit and results analyses. CDREX is chaired by the Reserve's managing body, SEDAM, and is also made up of other bodies such as EMATER, Machadinho D'Oeste City Hall, INCRA and associations of rubber tappers and residents of extractive reserves.

Responsibilities in the project: participatory management of the RESEX, deliberation on activities of interest to the community and monitoring of the activities implemented in the RESEX.

Center for the Study of Culture and the Environment in Amazonia - CES Rioterra is an OSCIP created in 1999 with the aim of contributing to the formation of a critical society, aware of its socio-economic and environmental context and capable of proposing development models for the Amazon region that combine conservation and sustainability with improving the quality of life of local populations, with respect for their cultural differences, needs and the natural potential of the environments they use. Its mission is to defend Amazonian identity, value culture and the sustainable use of the environment and contribute to a fair, democratic and participatory society.

Responsibilities in the project: coordination of socio-economic and environmental studies; planning of conservation activities; support in the validation/verification of the project; execution and monitoring of REDD+ project activities; guidance, follow-up, and administrative, financial and managerial monitoring of activities inherent in the implementation of the Project; supervision of the accounting report; and support for political coordination.

2.4.2 Management Team Experience (VCS, 3.19; CCB, G4.2)

Biofílica Ambipar Environment

Plínio Ribeiro (Executive Director)

Plínio Ribeiro has a degree in Business Administration from the Instituto de Ensino e Pesquisa - INSPER and a master's degree in Public Administration and the Environment from Columbia University and the Earth Institute (USA). He has participated in various conservation projects on the lower Rio Negro through the Institute for Ecological Research (IPÊ) since 2005 and was one of the producers of Jean Michel Cousteau's documentary "Return to the Amazon". He has worked at Biofílica since 2008, where he has led Projects, Operations and Business Management. He is currently executive director and shareholder of the company.

Cláudio Pádua (Scientific Director)

Cláudio Pádua has a degree in Business Administration and Biology, a Master's in Latin American Studies and a PhD in Ecology from the University of Florida in Gainsville (USA). A retired professor from the University of Brasilia, Pádua is currently rector of the School of Conservation and Sustainability and vice-president of the Institute for Ecological Research (IPÊ). He is also a senior research associate at the Center for Environmental and Conservation Studies at Columbia University (USA) and international conservation director of the Wildlife Trust Alliance, as well as an advisor to the Brazilian Biodiversity Fund (FUNBIO) and WWF Brasil. Pádua represents Brazil on the International Consultative Group (ICG) of the G7 Pilot Program. In 2003, together with his wife, Suzana Pádua, he was named "Hero of the Planet" by Time Magazine for his activities in favor of biodiversity conservation. Between 1997 and 2007, he won six conservation awards, three national and three international. Pádua has published two books and more than 30 articles in national and international scientific journals. Since 2008 he has led Biofílica's involvement and scientific production as scientific director and advisor.

Soraya Pires (Operational Director)

Soraya Pires is an Agronomist with a degree from ESALQ-USP and a specialization in Strategic Management and Finance from FGV. She has 15 years' experience in agribusiness management and business development and a career developed in large multinational companies in the sugar-energy sector (Adecoagro, BP and BP Bunge). She has experience in agro-industries in activities associated with agro-industrial planning and control, management of indicators and performance, agro-industrial management and operations, strategic negotiations, and business development.

Caio Gallego (Intelligence Manager)

Caio Gallego is a Forestry Engineer with a degree from USP-ESALQ. He is a specialist in geoprocessing and remote sensing focused on environmental preservation, mapping, and analysis of changes in land use. He has knowledge related to Sustainable Forest Management, environmental modeling, and the use of GIS for forestry and agribusiness. He has advanced knowledge of using GIS software and analyzing changes in land use and land cover using software such as ArcGIS, QuantumGIS and DinâmicaEGO.

Laion Pazian (Commercial Manager)

Laion has a degree in Economics from the University of São Paulo (USP-ESALQ) and an MBA in Business Management from the Getúlio Vargas Foundation. He manages the carbon credits commercial team, key accounts and the commercial policy and strategy of Biofílica Ambipar. He also monitors and directs the analysis of carbon market intelligence and is responsible for the area's pricing policy and planning policy.

Maria Cláudia Martinelli Trabulsi Alves (Project Coordinator)

Maria Cláudia is a Forestry Engineer with a degree from UNESP - Botucatu, a master's degree in Energy in Agriculture from the same university and a specialization in Sustainability from UNESP - Rio Claro. She has more than 10 years' experience in auditing forestry, agricultural, sustainability and carbon credit projects.

Carolina Corrêa Cauzzo (Projects Analyst)

Carolina Corrêa Cauzzo is an Environmental Manager who graduated from the University of São Paulo (USP/ESALQ) and did an inter-university exchange program at the Institut Agro Montpellier in France, where she studied Sustainable Management of Natural Resources and Agroecology. During her studies, she

worked with forest restoration techniques in the Atlantic Forest and socio-environmental studies in rural settlements. She has experience with ecological restoration projects and geoprocessing tools. At Biofílica she works on monitoring and supporting REDD+ and ARR projects, preparing technical reports, assessing supplier diagnoses, developing project intelligence, and communicating with stakeholders.

Ricardo Cordeiro (Communication Coordinator)

An advertising executive with more than 14 years' experience in art direction (on and offline) and a degree in digital marketing from Anhanguera, he works in web project management and web design, digital marketing strategies, SEO, Google Ads, Social Ads, having worked in digital agencies, trade and live marketing. During his career he has coordinated teams on projects for major players such as: Açúcar União, Senac, Camil, Cosan, Hospital Oswaldo Cruz, Gertec, Avis, Abiquim, EBBA (Maguary and DaFruta), VTEX, Mercado Bitcoin. At Biofílica Ambipar he leads the communication team with a focus on performance, branding, content marketing and endomarketing.

Renan Martins (Communication Analyst)

A designer who graduated from FAM with extensive experience in creation and the advertising market, he has worked on the development of campaigns for brands such as Mercado Bitcoin, Lycée Pasteur and the creation of online and offline materials for Hospital Oswaldo Cruz, Gertec, Sociparques and Dreamworks (Universal). At Biofílica Ambipar he works in the creative department alongside the marketing department on campaigns and institutional materials.

Fabio Souza (Geoprocessing Coordinator)

Geographer, master in the use and conservation of natural resources, specialized in climate analysis, technologist in big data and analytical intelligence, he has worked in environmental diagnostics, development of geotechnology services and management of geoprocessing teams. He is a specialist in PostGIS database modeling, webgis platform development, business intelligence and automation of geoprocessing processes. He is currently part of Biofílica's operational team as geoprocessing coordinator.

Réginal Exavier (Geoprocessing Analyst)

Réginal Exavier is an Environmental and Sanitary Engineer who graduated from the Izabela Hendrix Methodist University Center, has a master's degree in Geography from the Federal University of Mato Grosso (UFMT) and is studying for a PhD in Physical Geography at the University of São Paulo (FFLCH-USP). He has experience in Land Use and Land Cover changes using geoprocessing and remote sensing tools, geocomputing, data analysis and environmental monitoring. At Biofílica he is responsible for baseline analysis and feasibility studies for projects.

Jaderson dos Santos Monge (Geoprocessing Analyst)

Environmental and Sanitary Engineer and Geoprocessing Technologist. As a geoprocessing analyst, he has worked with the creation and management of GIS, standardization and quality control of georeferenced data, publication of geographic data in a web environment, spatial analysis, data analysis, PostGIS database, geodatabase, topological rules, remote sensing , multipurpose technical registration. As an environmental and sanitary engineer, he has worked on preparing environmental studies for environmental

licensing of public and private projects (RAP, EAS, EIA-RIMA, PGR), reports, environmental projects and environmental licensing.

ASMOREX

Denise Viana Borges (President)

Denise Viana Borges has a degree in Geography from the University of Northern Paraná (UNOPAR). In her last professional experiences and during her undergraduate studies, she worked with environmental education, sustainability, climate change and also as a school transport monitor. She currently represents the families of the communities of the Rio Preto-Jacundá State Extractive Reserve and teaches the computer course in the community complex of the Conservation Unit. She has been working in the Association's management support area since 2019, has experience in forest inventory and basic computer teaching.

José Pinheiro Borges (Technical and Financial Assistant)

José Pinheiro Borges, self-employed, has experience in social organization and has been working with associations since 2005 in the extractivism sector. He was president of the Rio Preto-Jacundá RESEX Residents' Association for three terms, during the 2008-2011, 2014-2018 and 2018-2021 administrations. His curriculum includes various courses, such as: forest inventory, biodiversity monitoring, açaí, Brazil nut and manioc production chains, social organization, among others. He currently works as ASMOREX's technical and financial assistant on the RESEX Rio Preto-Jacundá REDD+ project and is responsible for the RESEX's forest inventories as a forestry technician.

2.4.3 Project Management Partnerships/Team Development (VCS, 3.19; CCB, G4.2)

The purpose of the partner institutions is to provide support in carrying out the project's activities, mainly focused on supporting the implementation of the project's activities and improving the well-being of the communities. In this sense, CES Rioterra is the local partner with expertise and is responsible for carrying out studies, supporting technical assistance actions and providing training to community members, with the aim of encouraging participation and improving community members' knowledge on various topics.

2.4.4 Financial Health of Implementing Organization(s) (CCB, G4.3)

Biofílica Ambipar Environmental Investments is a Brazilian company with 15 years of experience in the environmental services market in Brazil, through the generation and commercialization of carbon credits from nature-based solutions (NBS), with a diversified line of business and investors who support the company's business.

ASMOREX is a social organization created in 2001 to legally represent the residents of the Rio Preto-Jacundá State Extractive Reserve. It fights for its members in the sense of supporting them with public policies, as well as seeking resources through projects that provide a more dignified life and ensure the rights of those it represents. ASMOREX is a benchmark for the extractive sector in the region where it is based.

The documents proving the financial health of both proponents are classified as Commercially Sensitive Information and were shared with the audit team on a confidential basis.

2.4.5 Avoidance of Corruption and Other Unethical Behavior (VCS, 3.19; CCB, G4.3)

Biofílica Ambipar supports annual financial auditing processes ensuring that its resources are allocated responsibly and free from corruption. Financial statements and minutes of meetings related to the company are published on the website of JusBrasil, the largest open legal community in Latin America.

With regard to the Association of Residents of the Rio Preto-Jacundá Extractive Reserve (ASMOREX), according to its current social statute registered in a notary's office on 09/2017, its article 3 provides for mechanisms to prevent corrupt acts and unethical conducts:

“Article 3: In carrying out its activities, ASMOREX shall observe the principles of legality, impersonality, morality, publicity, economy and efficiency, and shall not discriminate on the grounds of race, color, gender or religion." In this sense, the Association does not tolerate any kind of embezzlement in its activities, and practices that do not comply with these principles and are associated with unethical and corrupt conduct are considered unlawful.

CES Rioterra, like Biofílica, is guided by the highest standards of integrity, preventing any acts of bribery, corruption, and conflicts of interest. The Study Center has a "Code of Ethics" which is publicly available and can be found on its website. Accordingly, CES Rioterra, in accordance with its article 13:

“Art. 13: Wherever it operates, it repudiates the practice of corruption and bribery, whether active or passive, either through acts or omissions, or by creating and/or maintaining situations of favoritism through facilitation of payments or other irregularities." In this sense, the institution has a program with its employees, suppliers, partners, and beneficiaries that includes meetings, training and workshops and the development of communication materials that will be disseminated through its website and social networks, in order to promote the alignment and aggregation of these principles by the aforementioned actors and the community. In addition, CES Rioterra provides effective and confidential reporting channels by calling +55 69 3223-6191 and e-mailing ouvidoria@rioterra.org.br.

2.4.6 Commercially Sensitive Information (VCS, 3.5.2-3.5.4; CCB Program Rules, 3.5.13 – 3.5.14)

Some information required by the VCS and CCB standards is considered confidential or commercially sensitive and cannot be published by the project's proponents. All this information will be provided to the auditors during the verification process and will be attached to the monitoring report but will not be included in the public version.

The information below is considered commercially sensitive and has been made available only to VVB, treated confidentially and not made publicly available:

- Project's budget;
- Financial projections;
- ASMOREX's financial statements;
- Biofílica's financial statements;
- Agreements and contracts signed between the parties involved;

- Service provider contracts;
- All documentation relating to the sustainable forest management activities;
- All documentation relating to patrol operations carried out by SEDAM;
- REDD+ Financial Mechanism draft.

2.5 Legal Status and Property Rights

2.5.1 National and Local Laws (VCS, 3.1, 3.6. 3.7, 3.14, 3.18, 3.19; CCB, G5.6)

Regarding REDD+ activities, there has been a history of initiatives despite the construction and negotiation of this concept through agreements and meetings at the United Nations Framework Convention on Climate Change (UNFCCC). In December 2015, Brazil's National REDD+ Strategy (ENREDD+) was established by MMA Ordinance No. 370, as a document that formalizes for Brazilian society and UNFCCC signatory countries how the Brazilian government has structured its efforts and intends to improve them by 2020, contributing to climate change mitigation by controlling deforestation and forest degradation, promoting forest recovery, and fostering sustainable development. In this context, in Brazil, Decree No. 11,548 of June 5, 2023, established the National Commission for REDD+ (CONAREDD+) in order to coordinate, follow up, monitor and review the National Strategy for REDD+ and guide the development of requirements for access to payments for results of REDD+ policies and actions in the country. It should be noted that Biofílica Ambipar is part of CONAREDD+, representing the entire private sector before the Federal Government.

At the same time, and of a highly relevant nature, Bill 572/2020 is being analyzed, which "provides for the national system of reduction of emissions from deforestation and degradation, conservation, sustainable forest management, maintenance and increase of forest carbon stocks (REDD+) and makes other provisions". At the moment, the text is being processed in the Chamber of Deputies.

As for the carbon market, there is Bill No. 412 of 2022, currently before the Chamber of Deputies, after approval by the Federal Senate, which aims to establish the Brazilian Greenhouse Gas Emissions Trading System (SBCE) and amends Laws No. 12.187 of December 29, 2009, No. 12.651 of May 25, 2012, and No. 6.385 of December 7, 1976. The promotion and interoperability between the voluntary market and the future regulated market is provided for in the proposal, which is also the result of legislative provision under the Law establishing the National Climate Change Policy (Law No. 12.187, of 29/12/2009) and is a recommendation of the Kyoto Protocol, an international treaty ratified by Brazil that provides for the reduction of the concentration of GHG on the planet and the Paris Climate Agreement of 2015.

The main relevant legislation and regulations at federal and state level are listed and detailed below. In addition, there is a brief analysis of the international climate agreements that have been driving the creation and development of REDD+ initiatives around the world.

Applicable Federal Law:

- Law No. 9.985, of July 18, 2000, which established the National System of Conservation Units (SNUC). The Project is in line with this law by contributing to the objectives of the SNUC - Art. 4 - as it protects endangered species, natural landscapes, water resources, promotes the sustainable development of natural resources, among others. It is in line with Art. 18, which provides for the Extractive Reserve category,

as it protects the livelihoods and culture of traditional extractive populations and ensures the sustainable use of natural resources.

• Law No. 11.284, of March 2, 2006, provides for the management of public forests for sustainable production and establishes the allocation of public forests to local communities, under the terms of Article 6. The project is in line with this law because its activities contribute to the effectiveness of the principles of public forest management, while it carries out activities that promote the efficient use and conservation of forests, contributing to the fulfillment of local, regional and nationwide sustainable development goals.

• Decree No. 6.040 of 2007, which instituted the National Policy for the Sustainable Development of Traditional Peoples and Communities. The project contributes to this National Policy because the activities developed are in harmony with the objectives - Art. 3 - such as guaranteeing adequate infrastructure for the socio-cultural realities and demands of traditional communities.

• Law No. 12.187 of December 29, 2009, which instituted the National Policy on Climate Change. The Project contributes to the National Policy because the activities carried out are in line with the objectives: the Project helps to reduce the impacts of anthropogenic actions on the climate system - Art. 3 -, contributes to the reduction of anthropogenic greenhouse gas emissions and the conservation of environmental resources - Art. 4 -, among others.

• Law No. 5.197, of January 3, 1967, provides for the protection of fauna. The biodiversity scope of the project contributes to this law since the activities carried out help to protect the local fauna through the conscious use of natural resources, preserving the natural habitat of the species present in the project area. In addition, the zoning made it possible to discourage predatory hunting and fishing by implementing a specific zone for hunting and fishing.

• Law No. 9.605, of February 12, 1998, provides for criminal and administrative sanctions arising from conduct and activities harmful to the environment. Through the project's activities, such as asset surveillance, this law is complied with as soon as the appropriate legal measures are taken with regard to environmental crimes, illegal exploitation of natural resources and hunting and fishing that is predatory and/or outside the specific zone within the project area.

• Decree No. 6.514, of July 22, 2008, provides for environmental infractions and administrative sanctions. As proposed in Law No. 9.605/98, through surveillance activities and the assistance of community members in these activities, the appropriate legal measures are taken in the context of illegal activities involving the exploitation of natural resources.

Some applicable state laws are linked to the federal laws mentioned above. These are:

• Decree-Law No. 1.144, of 2002, which provides for the Rondônia State System of Nature Conservation Units - SEUC/RO and makes other provisions;

• State Decree No. 7.336 of 1996 - creation of the Rio Preto-Jacundá State Extractive Reserve;

• State Law No. 4.437, of 2018 - Establishes the State Policy for Climate Governance and Environmental Services - PGSA and creates the State System for Climate Governance and Environmental Services - SGSA, within the scope of the State of Rondônia and makes other provisions.

• State Decree No. 11.016, of 2004, creates the Deliberative Council of the Extractive Reserves of Machadinho D'Oeste and Vale do Anari.

2.5.2 Relevant Laws and Regulations Related to Worker's Rights (VCS, 3.18, 3.19; CCB, G3.11)

It is guaranteed that all employees of ASMOREX, Biofílica and service providers are hired legally, in accordance with Brazilian labor legislation. In addition, international agreements ratified by Brazil and issues related to worker welfare are respected. Every year, Biofílica's compliance with labor standards and laws is checked through an audit since the company is a limited liability company. In addition, the financial statements are published on the website of Jus Brasil, the largest open and legal community in Latin America.

After they are hired and before they start working, they receive training and qualification in technical procedures and empowerment in relation to their rights and applicable laws. Moreover, employees are instructed to join the institution responsible for their rights, the respective trade unions for their area of work.

The relevant laws and regulations that protect workers' rights in Brazil, as well as the international agreements ratified by Brazil on labor issues, are listed below.

Federal legislation and regulations:

− Decree-Law No. 5.452, of May 1, 1943: Approves the Consolidation of Labor Laws.

− Law 6.514, of December 22, 1977: Amends Chapter V of Title II of the Consolidation of Labor Laws, relating to occupational safety and medicine, and makes other provisions.

International agreements ratified by Brazil:

− International Labor Organization Convention No. 29 of 1930, ratified by Brazil on April 25, 1957: Provides for the abolition of forced labor.

− International Labor Organization Convention No. 87 of 1940: Provides for freedom of association.

− International Labor Organization Convention No. 97 of 1949, ratified by Brazil on June 18, 1965: provides for migrant workers.

− International Labor Organization Convention No. 98 of 1949, ratified by Brazil on November 18, 1952: provides for the right to unionization and collective bargaining.

− International Labor Organization Convention No. 100 of 1951, ratified by Brazil on April 25, 1957: Provides for equal pay for men and women.

− International Labor Organization Convention No. 105, ratified by Brazil on June 18, 1965: Provides for the abolition of forced labor.

− International Labor Organization Convention No. 111 of 1958, ratified by Brazil on March 1, 1965: Provides for discrimination in respect of employment and occupation.

– International Labor Organization Convention No. 131 of 1970, ratified by Brazil on May 4, 1983: Provides for the fixing of minimum wages, especially in developing countries.

– International Labor Organization Convention No. 138 of 1973, ratified by Brazil on June 28, 2001: Provides for the minimum age for admission.

– International Labor Organization Convention No. 142 of 1975, ratified by Brazil on November 24, 1981: Provides for the development of human resources.

– International Labor Organization Convention No. 143 of 1975: Provides for immigration under abusive conditions and the promotion of equal opportunities for migrant workers.

– International Labor Organization Convention No. 155 of 1981, ratified by Brazil on May 18, 1992: Provides for the safety and health of workers.

– International Labor Organization Convention No. 169 of 1989, ratified by Brazil on July 25, 2002: Provides for indigenous and tribal rights.

– International Labor Organization Convention No. 182, ratified by Brazil on February 2, 2000: Provides for the prohibition of the worst forms of child labor and immediate action for their elimination.

2.5.3 Human Rights (VCS, 3.19)

The recognition, respect and protection of the rights of Local Communities and customary rights holders, in accordance with international human rights law, the United Nations Declaration on the Rights of Indigenous Peoples and ILO Convention 169 on Indigenous and Tribal Peoples, is already described in this document in the following sections: 2.5.2, 2.5.5 and 2.5.8.

2.5.4 Indigenous Peoples and Cultural Heritage (VCS, 3.18, 3.19)

There are no Indigenous Peoples in the Project Area.

2.5.5 Recognition of Property Rights (VCS, 3.7, 3.18, 3.19; CCB, G5.1)

Disputes over rights to territories and resources	The disputes over rights to territories and resources are described in section 2.5.10.
Respect for property rights	Several letters were sent by ASMOREX to the bodies responsible for RESEX. Furthermore, when any non-compliant situation or illegal activity is seen, residents themselves contact the police authorities, as described in sections 3.1.3.3 and 2.2.5.

Art. 18 of Law No. 9.985 of 2000 establishes that the subsistence of traditional extractivist populations is based on extractivism and, complementarily, on subsistence agriculture and small animal farming, and that the commercial exploitation of timber resources will only be allowed on a sustainable basis and in special situations that complement the other activities carried out in the extractive reserve (§ 7), not including environmental services.

However, free enterprise, as the foundation of the Brazilian economic order, is the freedom of initiative within which it is up to extractive communities to choose to develop the economic activity they want, subject to the constitutional and legal limits imposed on them, especially those relating to the environment and conservation units.

From this perspective, any intervention within extractive reserves, whether economic or environmental, cannot fail to involve the participation of the local community, especially when it directly or indirectly affects their way of life. Individually, the extractivists who inhabit the extractive reserves are the holders of the rights to use environmental resources and services. Thus, in the process of defining, implementing, and executing any intervention, there must be community integration as a means of strengthening participatory democracy and giving legitimacy to the decisions taken.

The free choice and prior and informed consultation of extractivists is a point also dealt with at length in ILO Convention 169 on Indigenous and Tribal Peoples. In this sense, it is forbidden for private initiative and the state, even though the latter is the creator of the conservation units and holder of the lands that are in the public domain, to impose the means to be used to maintain and improve the living conditions of the populations residing within them. This can be seen from the literal wording of Articles 7 and 8 of ILO Convention 169 on Indigenous and Tribal Peoples.

The respect for community interests, participation and traditional ways of life refers to the implementation of another transnational provision: the Convention on Biological Diversity (CBD), which stipulates that each contracting party (signatory countries) must:

> *"j) In accordance with their national legislation, respect, preserve and maintain the knowledge, innovations and practices of local communities and indigenous peoples with traditional lifestyles relevant to the conservation and sustainable use of biological diversity and encourage their widest application with the approval and participation of the holders of such knowledge, innovations and practices; and encourage the equitable sharing of benefits arising from the utilization of such knowledge, innovations and practices;* (art. 8)."

It should be emphasized that third parties are not responsible for imposing, limiting, or deciding on the economic activities to be carried out in extractive reserves. Any initiative that affects the livelihoods of these communities must be subject to prior and informed consultation, observing their right to free initiative and participation.

2.5.6 Benefit Sharing Mechanism (VCS, 3.18, 3.19)

Summary of the benefit sharing plan	From participative workshops held in 2014, it was decided on the mission, characteristics, form of conflict resolution, governance, among other things, of a financial mechanism that should guide the distribution of the benefits of the REDD+ Project to the existing communities within the Rio-Preto Jacundá RESEX. As mentioned in section **Erro! Fonte de referência não encontrada.**, this mechanism came to be called t he "Jacundá REDD+ Financial Mechanism". The diagram shown in the Figure was created and approved in plenary to represent the flow of the Project's investments.

Figure 4. Structure of the Rio Preto-Jacundá RESEX Fund.

The Financial Mechanism is managed collegially, with representatives committed to community concerns, transparency, and publicity of all actions. Benefits and resources are applied exclusively for the RESEX community, with representative participation of community members. The Mechanism prioritizes credibility, legality, and environmental conservation. The purpose of this instrument is to provide financial support to the RESEX and share the benefits primarily derived from the resources of the REDD+ Project.

As mentioned in section **Erro! Fonte de referência não encontrada.**, every year, prior to t he current year, a decision-making process is carried out to choose the activities considered to be priorities according to the community's vision, based on the Life Plan and other suggestions or demands that arise from the communities. The process is run by the Executive Secretariat of the REDD+ Financial Mechanism (made up of Biofílica, ASMOREX and CES Rioterra), to understand the current situation, considering the needs and social context of the communities and the financial context of the project, in order to list the priority activities to be carried out in a given year.

As a result of this process, the Work Plan is created, which consists of prior planning for the project's activities in the current cycle. As stipulated in ASMOREX's Social Statute, this plan is presented to the RESEX community and approved by them via an Extraordinary General Assembly. In order to involve a greater number of community members in the decision-making process, the notice announcing the Assembly is published in a widely circulated newspaper at least 15 days in advance. In addition, community members are given logistical support to travel to the auditorium in the community complex where the Assembly takes place. Six months after approval, the Annual Work Plan can be evaluated and revised, with the possibility of adjusting if necessary, and the revision is subject to deliberation by the community, via a General Assembly to be held extraordinarily.

Benefit sharing during the monitoring period	Currently, the document that celebrates the agreement for the constitution of the Jacundá REDD+ Financial Mechanism is finalized and awaiting signature by CDREX, however the activities described in the tool have been in practice in the project since the start of carbon credit sales, in fact this documentation will only serve to legally formalize the good practices described above that are already applied by the project proponents.

2.5.7 Free, Prior, and Informed Consent (VCS, 3.18, 3.19; CCB, G5.2)

Consent	Prior and informed consultation with extractivists is dealt with both under international law, in ILO Convention No. 169 on Indigenous and Tribal Peoples, and in Brazilian law, Law No. 9.985 of July 18, 2000, which established the National System of Conservation Units (SNUC). The aim was to generate knowledge and opinions about the project through a transparent and independent process, seeking to reveal the real interests of the RESEX residents. After ASMOREX expressed its interest and voluntarily approached Biofílica, with the intermediation of CES Rioterra, several meetings were held to understand and pass on information about REDD+ projects before the partnership contract was signed. The first meeting was held with the entire community in September 2011. On this occasion, there was an initial presentation about Biofílica and what a REDD+ project would be (carbon in language facilitation). From then on, ASMOREX, with the support of CDREX and the mediation of CES Rioterra, gave due publicity to the issue among RESEX residents, seeking understanding and acceptance of the possible project. It is correct to say, however, that after the partnership contract was signed, understanding of the aspects of the REDD+ project improved significantly among the community, a process in which the project was framed and constructed. Some moments prior to signing the contract were formalized by the following documents: 1. Cooperation agreement: aimed at combining efforts to implement conservation and sustainable development actions in the Rio Preto-Jacundá RESEX, signed in March 2012. 2. Memorandum of understanding: aimed at regulating the terms, premises and general conditions that will guide the development and

	implementation of the project Carbon for the Parties, signed in May 2012. On May 15, 2012, the residents of the Rio Preto-Jacundá RESEX consented to a partnership to develop a carbon project in the area. Subsequently, in October 2012, the contract between the parties was signed, formalizing the partnership, and regulating the various aspects of the project. After signing the contract, it was sent to the Public Prosecutor's Office for the Environment of the state of Rondônia, in order to give maximum transparency to the process and inform the next steps. From then on, all communication and decision-making regarding the project is carried out only with the participation and consent of all the parties involved in the project. The Prior Informed Consent (of the communities present in the RESEX where the project is located and government representatives in all areas) has been applied since the implementation period of the Rio Preto-Jacundá REDD+ RESEX Project. With regard to social and biodiversity monitoring activities, no activity has been carried out without the free, prior and informed consent of the parties involved. For more details, see sections 2.3.4 and 2.3.9.
Outcome of FPIC	No project-related activities have resulted in the involuntary removal or relocation of community members from their lands or territories, nor have they forced them to relocate activities that are important to their culture or subsistence, since no party has been negatively affected by the project and no restitution or compensation of any kind has been required. In addition, all stakeholders who could be directly or indirectly affected in any way by the RESEX Rio Preto-Jacundá REDD+ Project were consulted. These consultations continue throughout the project's life cycle.

2.5.8 Property Right Protection (VCS, 3.18, 3.19; CCB, G5.3)

The right to the land they inhabit, guaranteed by ILO Convention No. 169 and by the SNUC Law (National System of Nature Conservation Units - Law No. 9.985, of July 18, 2000), based on the Constitution of the Republic, must be interpreted in conjunction with issues inherent to the fulfillment of the social function of property and the ownership of the properties that make up the extractive reserves. The destination of the lands traditionally inhabited by extractivists gives them the right to carry out activities aimed at their sustainable development, including the commercialization of environmental services.

The Individual and Collective Rights and Duties set out in Article 5 of the Constitution of the Republic are the foundation of local communities' right to access the land. The establishment of extractive reserves seeks to contribute to the implementation of these rights, as well as to the determination set out in Article 4 of ILO Convention 169 on Indigenous and Tribal Peoples, according to which "special measures shall be

adopted as may be necessary to safeguard the persons, institutions, properties, cultures and the environment of the peoples involved".

The establishment and transfer of the use of land in sustainable use conservation units is emphasized in terms of ownership and possession in articles 14 and 15 of the same Convention, in the following terms:

> *"Article 14*
>
> *1. The peoples concerned should be recognized as having ownership and possession rights over the lands they traditionally occupy. Furthermore, in appropriate cases, measures should be adopted to safeguard the right of the peoples concerned to use lands that are not exclusively occupied by them, but to which they have traditionally had access for their traditional and subsistence activities. In this regard, special attention should be paid to the situation of nomadic peoples and itinerant farmers.*
>
> *2. Governments shall adopt such measures as may be necessary to determine the lands traditionally occupied by the peoples concerned and to guarantee the effective protection of their rights of ownership and possession.*
>
> *3. Appropriate procedures should be established within the national legal system to resolve land claims formulated by the peoples concerned.*
>
> *Article 15*
>
> *1. The rights of the peoples concerned to the natural resources existing on their lands should be specially protected. These rights include the right of these peoples to participate in the utilization, administration and conservation of the aforementioned resources."*

Regarding the land rights of extractivist communities, Decree No. 6.040 of February 7, 2007, which deals with the National Policy for the Sustainable Development of Traditional Peoples and Communities (PNPCT), in its article 3, establishes among its specific objectives the guarantee to traditional peoples and communities of their territories and access to the natural resources they traditionally use for their physical, cultural, and economic reproduction".

The right to property, as specified above in art. 5 of the Constitution of the Republic, as an individual freedom, is limited by its social function. This limitation is imposed on both private and public owners. The Constitution treated the social function of property as a fundamental right (item XXIII of art. 5) and as a fundamental principle of economic activity (item III of art. 170), to be complied with in urban and rural property (articles 182 and 184).

In the specific case of extractive reserves, the social function will only be achieved when the properties that make up these conservation units are destined for the sustainable development of the communities that inhabit them. In this sense, compliance with the social function of the lands included in extractive reserves stems from their very conception as an instrument for the sustainable development of local communities.

The ownership of extractive reserves is dealt with in art. 18, § 1, of Law 9.985 of 2000, which states that the extractive reserve is "public domain, with use granted to traditional extractive populations in accordance

with the provisions of art. 23 of this Law and specific regulations, and the private areas included in its boundaries must be expropriated, in accordance with the provisions of the law".

Article 23 of the aforementioned law establishes that the ownership and use of areas occupied by traditional populations in extractive reserves will be regulated by contract, as provided for in the law's regulations. The management of extractive reserves for environmental purposes is also dealt with in art. 23 of Law 9.985, of 2000, in its § 1, according to which local communities "are obliged to participate in the preservation, recovery, defense and maintenance of the conservation unit". In the same vein, §2, in addition to prohibiting actions contrary to environmental conservation, establishes that the use of natural resources by local populations will obey the rules established in the legislation, in the management plan for the conservation unit and in the concession contract for the real right of use.

Decree No. 4.340, of August 22, 2002, regulates Law No. 9.985, of 2000, but it does not provide any news or further information regarding the use of natural resources in extractive reserves, and merely establishes, in its art. 13, that the concession contract for the real right of use and the term of commitment signed with traditional populations in extractive reserves must be in accordance with the Management Plan.

The concession of use is a real right, and can be granted to local communities under the following terms:

> *"A concession for the use of public or private land, paid or free of charge, for a fixed or indefinite period of time, as a resolvable real right, for specific purposes of land regularization of social interest, urbanization, industrialization, building, land cultivation, sustainable use of floodplains, preservation of traditional communities and their means of subsistence or other modalities of social interest in urban areas is established."*

In the case of extractive reserves, it is an administrative contract for the transfer of possession from the Government, the owner of the property, to the local communities, free of charge, limited to the use for which it was intended and with termination clauses for cases of: (a) damage to the environment; or (b) transfer of the concession inter vivos.

Possession is understood to be the exercise, full or not, of any of the powers inherent to property, such powers being the use, enjoyment, and disposal of the thing, linked to the right to recover it from anyone who unjustly possesses or detains it (art. 1.228). It is in this sense that we can separate the ownership of the properties that make up the extractive reserves, which is public, from their use, which is guaranteed to the local communities.

The term of the real right of use concession contract (CDRU) to be signed with the local community living in extractive reserves has not been regulated in a specific rule, which is why the term specified in analogous rules should be applied. In the specific case of the Rio Preto-Jacundá RESEX, the CDRU has not yet been signed. SEDAM, as the managing body of the State Extractive Reserves in Rondônia, expressly recognizes the legitimacy of ASMOREX as the representative of the RESEX communities.

With regard to the dismissal of the Rondônia Land Institute - ITERON, in 2000 (Law 882/00), and the institution responsible for granting the real use concession contract, it should be noted that according to the certificate issued by the National Institute for Colonization and Agrarian Reform - INCRA, in response to Official Letter 008/07/GAB/ASSEJUR/SEDAM, dated May 16, 2007, the Rio Preto-Jacundá Extractive

Reserve created by Decree 7. 336/96, was the object of a renunciation of use by the Federal Union, with SEDAM being assigned the right to manage the lands that make up this RESEX.

In addition, under the terms of Decree No. 8.982 of January 31, 2000, which sets out the basic structure and establishes the competencies of the State Secretariat for Environmental Development - SEDAM, it is responsible for, among other things, implementing land policy, promoting the description of vacant lands; implementing land regularization and colonization projects; and through the Conservation Unit Group (art.13): executing activities for the implementation, administration and management of Conservation Units.

Thus, according to the aforementioned rule, it is clear that SEDAM has the power to regularize the issues related to the Rio Preto-Jacundá RESEX, both environmental and land issues. In view of the above, both the rights of the community members and the competent body to carry out their regularization are duly protected by legislation, with only part of the formal procedures for concluding the CDRU still pending.

Additionally, the development of REDD+ Project's activities during the monitored period did not lead to the involuntary removal or relocation of any community members from their lands or territories, and activities that are important to the culture and subsistence of the communities living within the boundaries of the Project Area were respected and supported by the Project.

2.5.9 Identification of Illegal Activity (VCS, 3.19, CCB, G5.4)

Illegal deforestation is the main activity that can negatively impact the development of the Jacundá REDD+ RESEX Project, causing predatory hunting and the exploitation of other species of fauna and flora. This deforestation is caused by loggers, land squatters and small, medium, and large farmers for agricultural crops, pastures, and the demarcation of property boundaries.

These illegal activities commonly found in the region covered by the project were tackled through mitigation measures such as strengthening relations with the State Secretariat for Environmental Development (SEDAM) and the environmental agencies responsible for land inspection, as well as encouraging the engagement of actors and stakeholders, social inclusion, and regional socio-economic development through the generation of economic alternatives to deforestation. This has improved the well-being of the communities without causing a burden on the native forest and local biodiversity, as well as strengthening community governance in RESEX.

Table 4. Mechanisms and procedures for preventing illegal activities in the Jacundá REDD+ RESEX Project

MECHANISMS AND PROCEDURES FOR PREVENTING ILLEGAL ACTIVITIES	
Objective	- Prevent deforestation, forest fires or other acts of aggression against the environment; - Prevent the illegal extraction and trade of timber, other forest products and predatory hunting and fishing.
General Conditions	- Maintain a good relationship with the surrounding communities and other stakeholders; - Promote environmental education against predatory hunting and fishing; - Encourage the practice of alternative and sustainable economic activities; - Alerting the police authorities when non-compliant situations are identified within the RESEX;

	- Moving a team to the scene of the occurrence to investigate the situation and make photographic records; - Registering occurrences involving invasion of the Reserve, damage to the forest cover and illegal removal of forest products with the responsible bodies; - Accompanying and providing logistical support for inspection activities by the police and environmental authorities; - In situations involving land conflicts, confrontation between the parties is avoided, respecting the laws in force in the country and seeking the safety of RESEX residents;
Forms of registration	- Occurrence reports; - Photographic record of occurrences and inspection activities by the responsible bodies.

2.5.10 Ongoing Disputes (VCS, 3.18, 3.19; CCB, G5.5)

There are two situations to be highlighted:

The first, there is an irregular occupation with extensive farming activity on the banks of the Machado River, northwest of the reserve, totaling approximately 10 hectares. The historical record shows that the Public Prosecutor's Office has acted to issue measures against the farmers, requesting that they vacate the area within the RESEX boundaries.

The other is a land issue that has arisen in the RESEX territory since the project was set up. These are the unpaid titles of the so-called "Rubber Soldiers". The rubber soldiers were attracted to the region during World War II and after the decline of the rubber cycle many remained in the old rubber plantations. With the official policy of occupation and modernization of the Amazon from the 1960s onwards, the rubber soldiers were expelled from the rubber plantations, which were made available for official colonization projects. Later, after much demanding, the rubber soldiers were recognized as "heroes of the fatherland" and the settlement in former rubber plantations was part of the compensation policy for this group. However, in the area defined by INCRA there was a high incidence of malaria, which caused the area to be abandoned and/or the plots to be sold (Nobrega, 2008). According to PLANAFLORO data, these titles total 25,400 hectares in the RESEX and are under the responsibility of the state of Rondônia for regularization, with INCRA having certified the right of management to Sedam.

In this way, the proponents accompany SEDAM's action to seek answers regarding the situation and facilitate the land regularization agency's interlocution with the parties involved. The project has the support of the Organization of Rubber Tappers of Rondônia (OSR), which advocates for the rights of rubber tappers and their descendants. Figure 5 shows the advance of deforestation in the region of the "Rubber Soldiers".

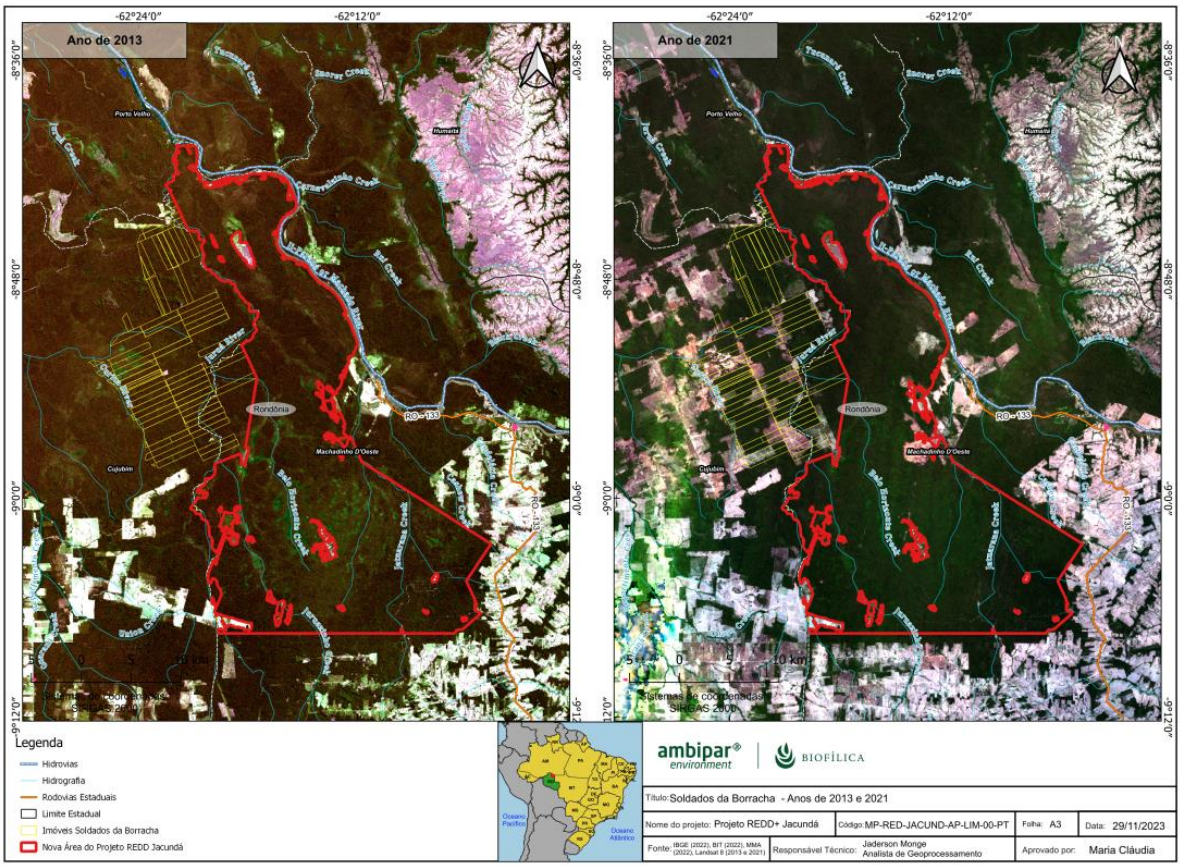


Figure 5. Map of the Rubber Soldiers area and deforestation between 2013 and 2021.

3 CLIMATE

3.1 Monitoring GHG Emission Reductions and Removals

3.1.1 Data and Parameters Available at Validation (VCS, 3.16)

Data / Parameter	Deforestation
Data unit	Hectare (ha)
Description	Maps of areas of forest cover converted into areas of non-forest cover.
Source of data	Measured using data from the PRODES/INPE project.
Value applied	2.1%/year on average (2000-2012)

Justification of choice of data or description of measurement methods and procedures applied	To map deforestation and produce the Forest Cover Excellence Mark Map, data from the PRODES Digital program (official deforestation mapping satellite for the Brazilian Amazon) was used. A total of 33 Landsat images were used during the analyzed period. The ISOSEG unsupervised classification method was used to classify the images in order to map the forest, non-forest vegetation, hydrography and deforestation classes.
Purpose of data	• - Determination of the baseline scenario • - Calculation of baseline emissions • - Calculation of project emissions • - Leakage calculation
Comments	See documents: - Câmara et al. 2006. Methodology for calculating the annual rate of deforestation in the Legal Amazon - Determining the Baseline and Deforestation Dynamics for the Rio Preto-Jacundá Resex project

Data / Parameter	Ctot
Data unit	tCO2e ha-1
Description	Average carbon stock per hectare in all carbon pools in the forest class used in the baseline scenario.
Source of data	Calculated using allometric equations, expansion factors from the literature and data measured in the field.
Value applied	458 tCO2e ha-1
Justification of choice of data or description of measurement methods and procedures applied	Above and below ground biomass estimates were made using forest inventory data and allometric equations developed in areas similar to the project area (SILVA, 2007). The dead wood reservoir was estimated based on forest inventory data and equations from Silva (2007).
Purpose of data	• - Determination of the baseline scenario • - Calculation of baseline emissions • - Calculation of project emissions • - Leakage calculation
Comments	See documents: - Câmara et al. 2006. Methodology for calculating the annual rate of deforestation in the Legal Amazon - Determining the Baseline and Deforestation Dynamics for the Rio Preto-Jacundá Resex project

Data / Parameter	DAP
Data unit	Cm
Description	Diameter at Breast Height (130 cm) for each tree with a DBH equal to or greater than 15 cm in each forest inventory plot
Source of data	Measured in the field by Hdom
Value applied	See spreadsheet with field data
Justification of choice of data or description of measurement methods and procedures applied	Requirement of VCS Methodology VM0015. Forest inventory data collected less than 10 years ago on multiple plots located over a wide spatial distribution
Purpose of data	• - Determination of the baseline scenario
Comments	- Calculation of baseline emissions

Data / Parameter	$BGBfw$= 0,0469xDAP2,4754 x$fc1$ $AGBfw$=2,2737$xDAP$1,9156 $xfc1$
Data unit	kg (fresh weight of biomass)
Description	Equation for converting DBH into fresh biomass
Source of data	SILVA, 2007
Value applied	$BGBfw$= 0,0469xDAP2,4754 x$fc1$ $AGBfw$=2,2737$xDAP$1,9156 $xfc1$
Justification of choice of data or description of measurement methods and procedures applied	Equation developed for forests with similar characteristics to those in the reference region.
Purpose of data	• - Determination of the baseline scenario • - Calculation of baseline emissions • - Calculation of project emissions • - Leakage calculation

Comments	-

Data / Parameter	CF
Data unit	T
Description	Carbon content in dry biomass
Source of data	Nogueira, E.; Fearnside, P.; Nelson, B., et al., 2008. Forest biomass estimates in the Brazilian Amazon: New allometric equations and biomass adjustments from wood volume inventories. Forest Ecology and Management, 256 (11), pp.1853-1867
Value applied	0,485
Justification of choice of data or description of measurement methods and procedures applied	Value found in scientific literature
Purpose of data	• - Determination of the baseline scenario • - Calculation of baseline emissions • - Calculation of project emissions • - Leakage calculation
Comments	-

Data / Parameter	44/12
Data unit	Cm
Description	Diameter at Breast Height (130 cm) for each tree with a DBH equal to or greater than 15 cm in each forest inventory plot
Source of data	Measured in the field by Hdom
Value applied	See spreadsheet with field data

Justification of choice of data or description of measurement methods and procedures applied	Requirement of VCS Methodology VM0015. Forest inventory data collected less than 10 years ago on multiple plots located over a wide spatial distribution
Purpose of data	• - Determination of the baseline scenario
Comments	- Calculation of baseline emissions

Data / Parameter	Area opening for management infrastructure
Data unit	Percentage
Description	Open area for the construction of necessary infrastructures for sustainable forest management activities, such as patios, primary and secondary roads.
Source of data	Post-exploration report and specialists' opinion
Value applied	8%
Justification of choice of data or description of measurement methods and procedures applied	Data is collected in the field after the harvesting activity. Post-exploration reports
Purpose of data	• - Determination of the baseline scenario • - Calculation of baseline emissions • - Calculation of project emissions
Comments	-

3.1.2 Data and Parameters Monitored (VCS, 3.16)

Data / Parameter	**Deforestation in the Project Area and Leakage Belt (ABSLPAicl,t)**
Data unit	Hectare (ha)
Description	Areas of forest cover converted into areas of non-forest cover and in the leakage belt within the Resex Rio Preto-Jacundá REDD+ Project Area

Source of data	Calculated using LANDSAT8 satellite images used by PRODES, corresponding to the orbits/points: 231/66 and 231/67
Description of measurement methods and procedures to be applied	Forest cover in the monitored areas was monitored by overlaying the PRODES vector data with the boundaries of the Resex Rio Preto-Jacundá REDD+ Project Area. The polygons mapped as deforested in 2021 and 2022 were selected for quantification of the deforested area and subsequent field verification activities.
Frequency of monitoring/recording	Annual
Value monitored	<table><tr><td></td><td>$ABSLPA_{icl,t}$ (ha)</td><td>$ABSLLK_{icl,t}$ (ha)</td></tr><tr><td>2021</td><td>95</td><td>62</td></tr><tr><td>2022</td><td>10</td><td>501</td></tr></table>
Monitoring equipment	Remote sensing images from digital processing programs, geographic information systems and navigational GPS.
QA/QC procedures to be applied	Images with a spatial resolution of 30m or more were used for mapping, with a minimum mapping unit of 1ha. The minimum accuracy of the classification of soil use and coverage was 97%. classification of soil use and coverage was 97%.
Purpose of the data	• - Calculation of project emissions - Leakage calculation
Calculation method	Where unplanned deforestation was detected, the Forest Cover Mark Reference Map was updated by map algebra.
Comments	• - PRODES project: http://www.dpi.inpe.br/prodesdigital/prodes.php - Further information on quality control and assurance is available at: Câmara et al. 2006. Methodology for calculating the annual rate of deforestation in the Legal Amazon.

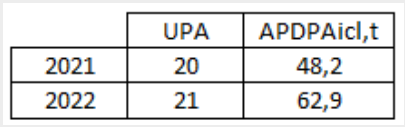
Data / Parameter	Ctot
Data unit	$tCO_2e\ ha^{-1}$

Description	Average carbon stock per hectare in all carbon pools in the forest class used in the baseline scenario.
Source of data	Calculated using allometric equations, expansion factors contained in scientific literature and data obtained in the field by the inventory team.
Description of measurement methods and procedures to be applied	Above- and below-ground biomass estimates are developed using forest inventory data and allometric equations developed in areas similar to those of the project (SILVA, 2007).
Frequency of monitoring/recording	Forest inventory data collected over periods of up to 10 years, in multiple plots.
Value monitored	Not applicable
Monitoring equipment	Not applicable
QA/QC procedures to be applied	Mandatory monitoring in accordance with Methodology VM0015. Forest inventory data collected over periods of up to 10 years in multiple plots.
Purpose of the data	• - Calculation of baseline emissions • - Calculation of project emissions • - Leakage calculation
Calculation method	Comparisons between the average value of total carbon stock contained in the forest class used in the baseline scenario, according to the Forest Carbon Stock Estimate for the Resex Rio Preto-Jacundá REDD+ project.
Comments	• Mandatory requirement of Methodology VM0015 for areas with logging, to be carried out at least every 10 years.

Data / Parameter	**DBH**
Data unit	cm
Description	Diameter at Breast Height (diameter of the tree at 130cm from the ground). Measured on all trees with a DBH over 15cm, in all forest inventory plots.
Source of data	Calculated from the circumference at breast height ("CBH") measured in the field by the inventory team.

Description of measurement methods and procedures to be applied	The circumference at breast height is taken from each tree measured in the field. The DBH is obtained by transforming the circumference into diameter using a mathematical calculation.
Frequency of monitoring/recording	Forest inventory data collected over periods of up to 10 years, in multiple plots.
Value monitored	Figures contained in the pre-exploration forest inventory spreadsheets for UPAs 20 and 21.
Monitoring equipment	Calculated from breast circumference (CBH) data, measured in the field using a measuring tape.
QA/QC procedures to be applied	Mandatory monitoring in accordance with Methodology VM0015. Forest inventory data collected over periods of up to 10 years, in multiple plots.
Purpose of the data	• - Calculation of baseline emissions • - Calculation of project emissions • - Leakage calculation
Calculation method	DBH is calculated from the circumference at breast height (CBH) data of each tree measured in the field. The calculation consists of dividing the obtained DBH value by the constant "Pi (π)".
Comments	-

Data / Parameter	**Planned Deforestation for Forest Management Infrastructure (APDPAicl,t)**
Data unit	Hectare (ha)
Description	Survey and mapping of forest cover areas converted into non-forest cover areas due to the construction of roads, pathways, and patios necessary for sustainable forest management.
Source of data	Post-exploratory reports for UPAs 20 and 21.
Description of measurement methods and procedures to be applied	Based on the calculation methodology applied in the description of the project, the information on the effective areas of the UPAs, identified in the post-exploratory reports, was used and these were multiplied by the rate of 8%, which is a reasonable percentage of openness accepted in conventional forest management in the extractive reserves of the Amazon, according to experts previously consulted.

Frequency of monitoring/recording	During the management year of each UPA (Annual Production Unit).
Value monitored	
Monitoring equipment	Forest management documents ("post-exploratory reports")
QA/QC procedures to be applied	The mapping of planned deforestation areas for the implementation of sustainable forest management infrastructures was carried out using forest management documents.
Purpose of the data	• - Calculation of project emissions
Calculation method	The effective areas of the UPAs, identified in the post-exploratory reports, were multiplied by the rate of 8%.
Comments	-

Data / Parameter	$\Delta CabBSLLK_t$
Data unit	tCO_2e
Description	Changes in the total carbon stock in the area of the leakage belt.
Source of data	Calculated
Description of measurement methods and procedures to be applied	• - Leak prevention activities listed; • - Prepared the map showing areas of intervention and the type of intervention; • - Identified the areas in which leak prevention activities impact the carbon stock • - Identified the classes of non-forest cover existing in these areas in the case of the baseline; • - Measured the carbon stock in the identified classes; • - Reported in Table 30.b of Methodology VM0015 the changes in the carbon stock of the leakage management areas under the project scenario; • - Calculated the net changes in carbon stock caused by leakage prevention measures during the fixed baseline period and, alternatively, during the project crediting period;

	- Reported the results of the calculations in Table 30.c of methodology VM0015.
Frequency of monitoring/recording	Annual
Value monitored	<table><tr><th></th><th>$\Delta CabBSLLK_t$</th></tr><tr><td>2021</td><td>0</td></tr><tr><td>2022</td><td>6.401,5</td></tr></table>
Monitoring equipment	Remote sensing images from the digital processing program and calculation tables.
QA/QC procedures to be applied	Images with a spatial resolution of 30m or more were used for mapping, with a minimum mapping unit of 1ha. The classifications were assessed using data collected in the field using GPS navigation. The minimum accuracy of the soil use and cover classification map was 97%.
Purpose of the data	• - Leakage calculation
Calculation method	Evaluation of ex-post estimates in the Leakage Belt in relation to the project's ex-ante estimate (Table 35 of VM0015).
Comments	-

3.1.3 Monitoring Plan (VCS, 3.16, 3.20)

3.1.3.1 Organizational structure, responsibilities, and competencies

The monitoring plan for the Rio Preto-Jacundá REDD+ RESEX Project is a combination of three components: climate, community, and biodiversity.

Biofílica is responsible for coordinating the monitoring processes throughout the project's life cycle. It is also responsible for monitoring climate aspects, with the support of ASMOREX, SEDAM and CES Rioterra.

Climate monitoring was carried out mainly by Biofílica, through the annual monitoring of deforestation in the project's areas of interest (project area, leakage belt and reference region). In addition, quarterly monitoring of the project area and the leakage belt was carried out using high-resolution images. In addition, SEDAM carried out patrols and monitoring activities, as well as the support received from community members themselves in monitoring and reporting invasions and illegal activities.

The monitoring of community attributes was carried out mainly by ASMOREX and CES Rioterra (details in section **Erro! Fonte de referência não encontrada.** on Community). Also worth mentioning is the diagnosis o f the Brazil nut, açaí and manioc flour production chains in the RESEX carried out by Pacto das Águas (section **Erro! Fonte de referência não encontrada.**). The Multiple Use Management Plan was carried out by C

ES Rioterra, while the activities of the Community Forest Management Plan in a Sustainable Yield Regime (PMFS) were carried out by the company MADREX.

Competencies and responsibilities:

Biofílica: is a Brazilian company focused on the management and conservation of forest areas in the Amazon biome. It was created in 2008 with the objective of creating pioneering alternatives to make environmental conservation an economically interesting activity for forest owners, communities, and investors. In line with these objectives, its mission is to reduce deforestation and carbon emissions into the atmosphere, conserve biodiversity and water resources, and promote the social inclusion and development of communities living in the Amazon biome through the sale of credits for environmental services, the promotion and financing of scientific research activities and the development of sustainable business chains.

Responsibilities: general coordination of the socio-economic and environmental diagnosis (SEED) and baseline and carbon stock studies; development and financing of the Project Design Document ("PDD"); remote monitoring of forest cover and implementation/coordination of additional actions aimed at reducing/mitigating greenhouse gas (GHG) emissions; validation/verification and marketing of credits; co-management of the project for its entire duration.

Association of Residents of the Rio Preto-Jacundá Extractive Reserve - ASMOREX: is a non-profit civil association based in the municipality of Machadinho do Oeste, in the state of Rondônia, which aims to manage the Rio Preto Jacundá RESEX in conjunction with the Rondônia State Environmental Development Secretariat - SEDAM. In this way, ASMOREX represents the extractivists, their families and other residents of the RESEX. As the project developer, it manages the financial resources and guarantees the appropriate use of these resources and the impacts generated by the project's activities.

Responsibilities: ASMOREX is responsible for developing and implementing the REDD+ project in a participatory manner, as well as ensuring the execution of the project and maintaining all the documentation necessary for the project to take place. Additionally, it is responsible for monitoring and co-managing the REDD+ project.

Center of Studies of the Culture and Environment of the Amazon - CES Rioterra: is an OSCIP created in 1999 with the aim of contributing to the formation of a critical society, aware of its socio-economic and environmental context, capable of proposing a development model for the Amazon region that combines conservation and sustainability with improving the quality of life of local populations, with respect for their cultural differences, needs and the natural potential of the environments they use. Its mission is to defend Amazonian identity, value culture and the sustainable use of the environment and contribute to a fair, democratic and participatory society.

Responsibilities: coordination of socio-economic and environmental studies; planning of conservation activities; support for project validation/verification; execution and monitoring of REDD+ project's activities.

3.1.3.2 Internal audit/ Procedures for dealing with internal audit and non-conformities.

Biofílica Ambipar Environmental Investments supports the annual financial audit processes, ensuring that its resources are allocated responsibly and free from corruption. The financial statements and minutes of

meetings related to the company are published on the website of JusBrasil, the largest open legal community in Latin America.

ASMOREX does not tolerate any kind of bribery or embezzlement against the popular economy, and people who commit this kind of act are considered ineligible for board positions. In addition, Asmorex undergoes an annual accounting audit from 2021 onwards.

CES Rioterra, like Biofílica, is guided by the highest standards of integrity, preventing any acts of bribery, corruption, and conflicts of interest. CES Rioterra also has a "Code of Ethics". In addition, a communication channel is provided, called the "Internal Ombudsman's Office", which, among other functions, receives reports and complaints. Reports and complaints are forwarded and resolved correctly (Section **Erro! Fonte de referência não encontrada.** has more details).

3.1.3.3 Climate Impact Monitoring Plan

The Climate Impact Monitoring Plan contains the essential aspects for demonstrating the reduction in emissions from deforestation and degradation due to avoided unplanned deforestation (according to the methodology applied in VM0015). It provides information on the monitoring of reductions in greenhouse gas (GHG) emissions and changes in the carbon stock over the lifetime of the project resulting from changes in land use within the Project Area and the Leakage Belt.

There are two Tasks covered in the Climate Impact Monitoring Plan: 1) Monitoring carbon stock changes and GHG emissions for periodic checks; and 2) Revisiting the baseline projections established for the future fixed period. During this monitoring period, only Task 1 was carried out.

TASK 1: MONITORING CARBON STOCK CHANGES AND GHG EMISSIONS FOR PERIODIC CHECKS

1. Monitoring of the current changes in carbon stock and GHG emissions within the project area:

a) Technical description of the monitoring tasks

Monitoring of carbon stock changes and GHG emissions within the project area was carried out by analyzing avoided unplanned deforestation. In order to avoid unplanned deforestation, Biofílica Ambipar acted on monitoring REDD+ activities, verifying the areas of forest cover using satellite images, while SEDAM carried out field checks in the Project Area.

b) Data to be collected

Table 5. Data collected for monitoring changes in carbon stock and GHG emissions for periodic checks.

Parameter	Description	Unit	Source	Frequency
$AUDPA_{icl,t}$	Areas of unplanned deforestation in forest class icl in year t in the Project Area	Hectares (ha)	Calculated using remote sensing images, technical maps and data, field and post-exploratory management information	Annual

$\Delta CUDdPA_t$	Total decrease in carbon stock due to unplanned and un-avoided deforestation within the Project Area in year t	Ton of carbon dioxide equivalent (tCO2-e)	Calculated	Annual
$APDPA_{icl,t}$	Planned deforestation areas in forest class icl in year t in the Project Area	Hectares (ha)	Calculated	Annual
$\Delta CPLdPA_t$	Total decrease in carbon stocks due to planned harvesting activities in year t in the Project Area	Ton of carbon dioxide equivalent (tCO2-e)	Calculated	Annual
$ACPA_{icl,t}$	Annual area within the Project Area affected by catastrophic events in class icl in year t	Hectares (ha)	Not applicable	Each time a catastrophic event occurs
$\Delta CUCdPA_t$	Total decrease in carbon stocks due to the occurrence of catastrophic events in year t in the Project Area	Ton of carbon dioxide equivalent (tCO2-e)	Not applicable	Each time a catastrophic event occurs
$AUFPA_{icl,t}$	Annual area within the Project Area affected by forest fires in the icl class in year t	Hectares (ha)	Calculated	Each time a forest fire event occurs
$\Delta CUFdPA_t$	Total decrease in carbon stocks due to forest fires in year t in the Project Area	Ton of carbon dioxide equivalent (tCO2-e)	Calculated	Each time a forest fire event occurs
$\Delta CPSPA_t$	Total change in the project's carbon stock in the Project Area in year t	Ton of carbon dioxide equivalent (tCO2-e)	Calculated	Annual

c) Summarized description of data collection procedures

Monitoring changes in land use and cover:

Monitoring of unplanned deforestation in the project area was based on data processed by the PRODES project, identifying areas of land use conversion. The procedures carried out to collect and process the data are described in Section **Erro! Fonte de referência não encontrada.**.

The monitoring of planned deforestation caused by forest management activities used the premises considered when calculating the project's baseline, where information on the effective areas of the UPAs, identified in the post-exploratory reports, was used and these were multiplied by the rate of 8%, which is a reasonable percentage of openness accepted in conventional forest management in extractive reserves in the Amazon, according to experts previously consulted.

Monitoring carbon stocks and non-CO2 emissions:

Non-CO2 emissions from forest fires were monitored by mapping satellite images, identifying the affected area, and calculations were carried out in accordance with the methodology described in VM0015 (Section 6.2 - Baseline non-CO2 emissions from forest fires). Details in item 1.4 of this section.

d) Quality control and assurance procedures

The methodology used in validation is to perform an accuracy analysis. The minimum accuracy required by VM0015 in classifying land use and land cover is 80%.

In this way, the accuracy analysis was carried out by comparing each class on the map with a set of 397 points randomly distributed in the Project Area and Leakage Belt. The reference data used in this step came from the visual interpretation of a Planetscope high spatial resolution image mosaic (October 2022) obtained from the Planet plugin via Qgis. With the random points and the Planet image, it was possible to evaluate the performance of the PRODES 2022 mapping together with the MapBiomas Alerts through the analysis of the error matrix.

e) Data archiving

All the data and reports produced by the Rio Preto-Jacundá REDD+ RESEX Project are stored by Biofílica Ambipar Environmental Investments in digital files throughout the project's life cycle. The original reports and collected field records produced by the forest management activity are stored by ASMOREX and MADREX. All documents relating to the monitoring of the Project are collected in physical and/or virtual files and made available to the verification body at each verification event.

1.1. Project Implementation Monitoring:

When it comes to the "climate" component, the actions contemplated for monitoring the activities of the Rio Preto-Jacundá REDD+ RESEX Project have the main objectives of preventing deforestation and the emission of GHG into the atmosphere. As such, the description of the activities below contemplates these objectives.

The implementation of REDD+ activities is monitored through financial spreadsheets, annual planning, social management reports, vegetation cover maps, follow-up meetings, meeting minutes/reports,

quarterly and annual monitoring bulletins, letters and reports of property invasions and other relevant documents.

Political articulation with government environmental and inspection institutions:

In order to avoid risks to the climate benefits predicted by the project scenario, as well as to prevent unplanned deforestation, attempts were made by the project proponents to contact SEDAM and, eventually, the Public Prosecutor's Office and the Court of Auditors of the State of Rondônia, within the scope of the political articulation activity with government environmental and inspection institutions. In this sense, through letters, official letters, denunciations and meetings, we sought support to mitigate and contain illegal deforestation.

On November 1st, 2021, CUC/SEDAM was asked by official letter about the status of the process of transferring Extractive Reserves from the Federal Government to the State of Rondônia, seeking to understand the obstacles to issuing the Concession of Real Right of Use (CDRU) to the community of RESEX Rio Preto-Jacundá, in order to resolve the finding of the last verification audit. There was no response from the agency.

On May 30, 2022, ASMOREX asked the Ariquemes Public Prosecutor's Office for information on Public Civil Action No. 7009535-38.2020.8.22.0002 and on the eviction and repossession order that had been suspended due to the covid-19 pandemic. No response was received to the request.

In the last monitoring period, the proponents contacted CUC/SEDAM through official letters, requesting proof of the operations carried out in RESEX during the monitored period. However, after a period of waiting, we received a response informing us that it was impossible to pass on the information in full due to the existence of personal data relating to the infraction notices, which are protected by the General Data Protection Law (LGPD), established in Law 13.709/2018.

In a conversation with the CUC coordinator, we agreed to receive information on operations in summary form, and for the years 2020 and 2021, as it was not possible to collect information on previous years due to the difficulties involved in filing and registering past documentation with the agency. As a result, referring to the last monitored period, 22 inspection missions were carried out in 2020. Those responsible for the CUC made it clear the possibility of demonstrating the data collected to the VVB on a confidential basis.

Regarding the current monitoring period, CUC/SEDAM was also requested through letter, to provide a report with information on the inspection missions carried out. 79 environmental operations by police officers were recorded from August 2020 to September 2022.

Because the RESEX is in the public domain, it is more susceptible to invasions and illegal deforestation. The support of SEDAM and other public actors, when strategically placed together with patrols of the region, help to prevent trespassers and other illegal activities, such as unplanned deforestation. The presence of public entities in the area helps to keep agents of deforestation away. In addition, the social activities have contributed to the empowerment of community members, helping them to engage and communicate with public agencies, which consequently brings them closer to the context of the project.

Monitoring deforestation using satellite images:

As part of its deforestation monitoring activity using satellite images, Biofílica Ambipar regularly monitored the forest coverage, specifically the Project Area and the Leakage Belt, which are the areas of interestof the REDD+ Project.

To cover the entire monitoring period, which was from August 2020 to September 2022, data from the Brazilian Amazon Forest Satellite Monitoring Program (PRODES), by the National Institute for Space Research (INPE) were used together with data from MapBiomas Alert, produced by MapBiomas itself, with subsequent analysis of the accuracy of the combined product, using high-resolution images from the Planet satellite. Data from Prodes 2021 and 2022 covered the period from August 2020 to July 2022, and for the months of August and September 2022, data from MapBiomas was used, as Prodes 2023 was not yet available.

Prodes has been monitoring deforestation in the Legal Amazon annually since 1988. It currently uses satellite images from LANDSAT 8/OLI (30 meters of spatial resolution and 16-day revisit rate), CBERS 4 and IRS-2, in a combination that seeks to minimize the problem of cloud coverage and guarantee interoperability criteria (PRODES-INPE, 2022[37]). PRODES estimates are considered reliable by national and international scientists (Kintish, 2007[38]). The project has the collaboration of the Ministry of the Environment (MMA) and the Brazilian Institute of the Environment and Renewable Natural Resources (IBAMA).

The images used for PRODES monitoring are made available by providers already orthorectified, with system geometric correction refined through the use of control points and digital terrain elevation models. This corresponds to the highest level of geometric correction and means that the images are ready to be used without the need for additional processing (SOUZA et. al., 2019[39]). The annual PRODES monitoring period runs from August 1st of the previous year to July 31st of the current year.

The methodology used by PRODES to identify deforestation polygons in the Legal Amazon is divided into three main stages:

1- Image selection phase: Image selection takes place from August onwards and seeks images with less cloud cover and acquisition date closer to the dry season in the Amazon.

2- Deforestation polygon mapping phase: Trained specialists photointerpret the images, identifying and delimiting the polygons of deforested areas. They observe three main points in the image to help identify the affected areas: tone, texture and context.

3- Phase of calculating the annual deforestation rate: The annual rate of deforestation occurring within the year monitored by PRODES is estimated.

MapBiomas is an initiative of SEEG/OC (Greenhouse Gas Emission Estimation System of the Climate Observatory) and is produced by a collaborative network of co-creators formed by NGOs, universities and

[37] PRODES – INPE, 2022. Monitoramento do Desmatamento da Floresta Amazônica Brasileira por Satélite. Disponível em: http://www.obt.inpe.br/OBT/assuntos/programas/amazonia/prodes. Acesso em: 13 de março de 2024.

[38] KINTISCH, Eli. Improved monitoring of rainforests helps pierce haze of deforestation. Science, v. 316, n. 5824, p. 536-537, 2007.

[39] SOUZA, Arlesson et al. Metodologia utilizada nos projetos PRODES e DETER. INPE: São José dos Campos, Brazil, 2019.

technology companies organized by biomes and transversal themes (MAPBIOMAS, 2024[40]). And MapBiomas Alerta[41], a by-product of MapBiomas, is a system for validating and refining native vegetation deforestation alerts in all Brazilian biomes with high-resolution images. It consists of a system for compiling alerts from different deforestation detection systems in Brazil based on remote sensing, aggregating, validating and refining these alerts with high-resolution images, and publishing them on a single open-access platform. To publish these deforestation alert polygons, they necessarily go through some preliminary steps:

1. The alerts from the various detection systems for Brazilian biomes are compiled;

2. The polygons undergo automatic pre-validation and false alert polygons are eliminated. At this stage, satellite images from before and after the alert detection date are also selected;

3. There is validation and refinement of alerts according to high-resolution images and interpretation by experienced analysts.

4. Refinement of deforestation polygons carried out by a biome-specific technical supervisor;

5. Publication of data on the platform.

Planet images, with a spatial resolution of 4.77m obtained by a constellation made up of hundreds of Dove satellites, were used to carry out the accuracy analysis. These images are free and made available by the Norwegian Government. It is the result of a partnership between the Norwegian Ministry of Climate and Environment with Kongsberg Satellite Saervices (KSAT) and its partners Airbus and Planet, to provide universal access to high-resolution satellite monitoring of the tropics to support efforts to stop the destruction of the world's tropical forests (Planet[42]).

Accuracy assessment: The PRODES data was validated by comparing each map class with a set of 397 points randomly distributed in the Project Area and Leakage Belt, of which 341 points were in the Forest class, 50 in the Deforestation class, 4 in the Hydrography class and 2 in the Non-Forest class. The reference data used in this stage came from the visual interpretation of a mosaic of high spatial resolution Planetscope images (October 2022) obtained from the Planet plugin via Qgis. Using the random points distributed in the monitored area and the Planet image, it was possible to assess the performance of PRODES 2022 mapping with MapBiomas Alerts by analyzing the error matrix. Figure 6 shows the methodology used to assess mapping accuracy.

[40] **MAPBIOMAS – 2024. Disponível em: https://brasil.mapbiomas.org/quem-somos/. Acesso em: 14 de março de 2024.**

[41] MapBiomas Alerta. Metodologia. Disponível em: https://alerta.mapbiomas.org/metodo?tab=vis%C3%A3o-geral. Acessado em: 13 de março de 2024.

[42] PLANET. **Norway's International Climate and Forests Initiative Satellite Data Program.** Disponível em: https://assets.planet.com/docs/NICFI_UserGuidesFAQ.pdf?_gl=1*f8lcme*_gcl_au*MTMxNzUwMDI3NC4xNzEwNDQxMDcy. Acesso em: 12 de março de 2024.

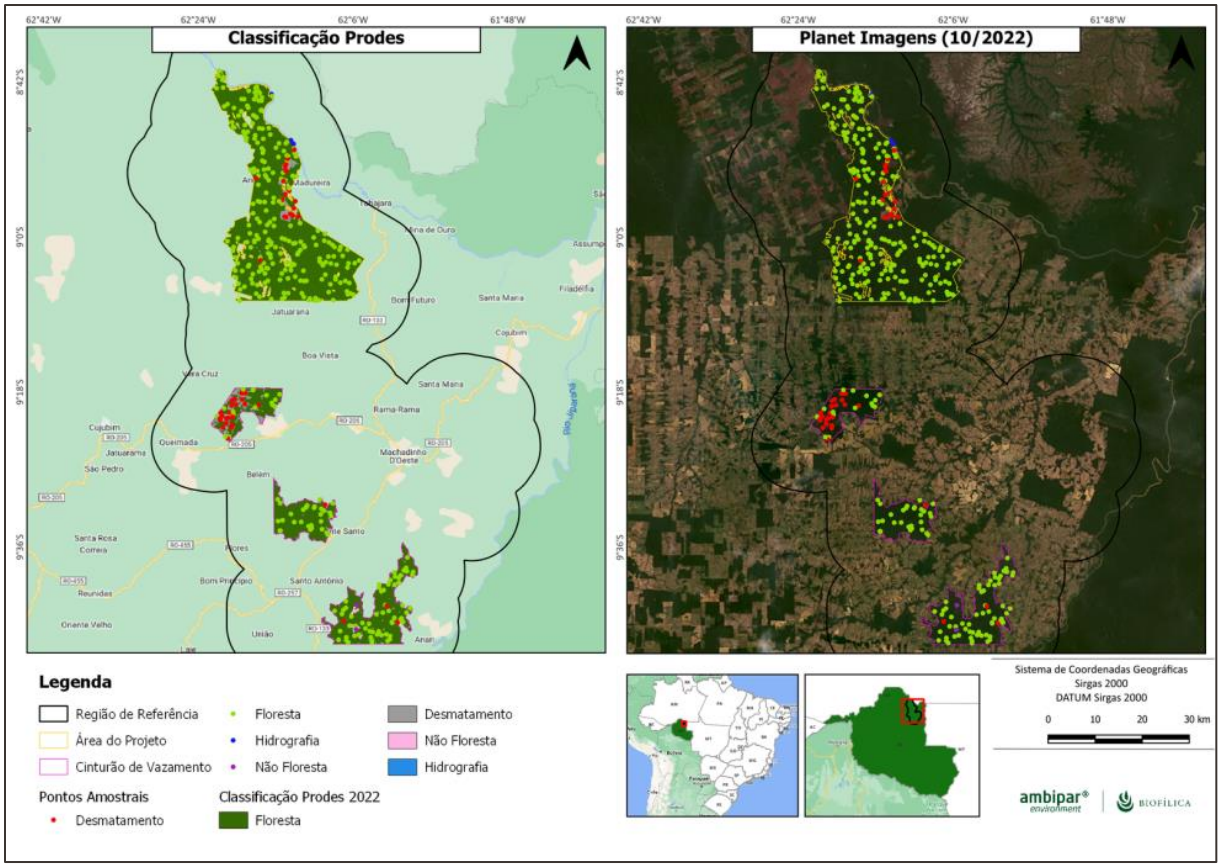


Figure 6. Map of the assessment of accuracy points. Source: Biofílica, 2023.

According to Congalton and Green (2019)[43], the global accuracy of monitoring data for land use and land cover classes was 97.98%, with user and producer accuracy equal to 98% and 99% for forest and 98% and 89% for deforestation, respectively (Table 6). The results are in accordance with the global accuracy required by VM0015, which should be above 80%.

Table 6. Confusion matrix for the monitored period

		PRODES x PLANET						
		Reference				Total	User Accuracy	Omission error
		Forest	Deforestation	Non-forest	Hydrography			
Ranked	Forest	335	6	0	0	341	98.24%	1.76%
	Deforestation	1	49	0	0	50	98.00%	2.00%
	Non-forest	0	0	2	0	2	100.00%	0.00%
	Hydrography	1	0	0	3	4	75.00%	25.00%
Total		337	55	2	3	397		

[43] CONGALTON, Russell G.; GREEN, Kass. Assessing the accuracy of remotely sensed data: principles and practices. CRC press, 2019.

Producer's accuracy	99.41%	89.09%	100.00%	100.00%			
Omission error	0.59%	10.91%	0.00%	0.00%			
Accuracy map							97.98%

During the monitored period, Biofílica generated annual monitoring bulletins, which include the coordinates of the areas deforested during the year analyzed. The 2020, 2021 and 2022 monitoring bulletins were produced in 2021, 2022 and 2023 respectively. The shortfall in time is mainly due to the fact that PRODES data takes around a year to be published for the retroactive year.

Within the same scope, quarterly monitoring was carried out with PLANET data that is generated daily, making constant monitoring possible. The license for the PLANET images was acquired from July 2018 to July 2022. The license to use the Orbital images was provided by Santiago & Cintra Consultoria (SCCON), the exclusive distributor of Planet products in Brazil. A total of 13 bulletins were produced during the monitored period.

The methodology used for monitoring with PLANET images is detailed below:

Historical deforestation is located based on PRODES data by downloading the consolidated and recent vector and matrix data corresponding to orbit/point 231/66 and 231/67 of the LANDSAT 8 satellite, with a resolution of 30 meters, which covers the monitored area. The data is cut out and extracted for the monitored area (project area and leakage belt), so it is possible to know the location of historical deforestation in the area, thus making it possible not to double count an area that has already been deforested in previous years.

By accessing the Planet/SCCON Web Platform, the updated data for the analysis period is obtained. The images with the best quality and visibility within the observed month are selected, a filter is applied for cloud cover (maximum cover of 10% - for rainy months this index can be higher) and then the WMS links are downloaded to access the matrix images generated by the Planet sensor through the ArcGis or QGis geoprocessing software plugins.

Geoprocessing software is used to assemble the mosaic of images obtained and to cut out the mosaic at the boundaries of the monitored areas, compositing the bands and adjusting the brightness and contrast for better visualization of the images. Once the images have been selected, the process of classifying the deforested areas begins. A vector file is created with the identification of the monitored month, and with the support of the historical mapping carried out by PRODES and the mapping done on the Planet images from previous months, polygons are demarcated where it is possible to locate the change in soil use during the analyzed period.

Once the mapping is complete, the areas are calculated in the software and spreadsheets are generated with the data collected. Finally, the deforestation data is combined to generate a history of the monitored areas. From this, in each quarterly bulletin, an individual analysis was made of the monthly deforestation results generated, both in the project area and in the leakage belt. Additionally, central coordinates are generated for deforestation polygons identified that are larger than 2 hectares, for later support in patrol activities in the RESEX.

Physical patrolling:

In order to improve the efficiency of patrols in the RESEX, various contacts were made with public bodies to provide the necessary support for the activities. In this regard, it is important to mention that SEDAM already patrolled the region and other CUs on an unsystematic and sporadic basis.

The Rio Preto-Jacundá REDD+ RESEX Project patrolled the area with the support of SEDAM, through complaints and assistance from the residents themselves, in order to curb illegal deforestation, invasions, maintain forest cover and, consequently, maintain the benefits for the climate. To this end, various inspection and patrolling activities were carried out during the monitored period.

By physically patrolling the area in conjunction with the monitoring bulletins prepared, it is possible to prevent illegal activities and take appropriate measures in the event of atypical occurrences. Good relations with stakeholders, in line with the activities carried out by Biofílica, ASMOREX, Rioterra and SEDAM, the monitoring by satellite images that help make patrols effective and even the residents themselves making denunciations and supporting patrol activities, help to inhibit invaders and, consequently, prevent unplanned deforestation in the project area.

Improvement in management practices:

As described in the PD (section 2.2 and 6), although the REDD + Rio Preto-Jacundá RESEX Project does not actually carry out management activities, the project proponents understood that supporting the activities that already exist in the area by improving practices improves the governance of the area, consequently helping in the conservation of the forest. Furthermore, according to the Project Developer's Guide to VCS REDD Methodologies (CI, 2013), in a scenario where "the project developer involves communities in authorized sustainable forest management for the commercial production of timber in the forest area as an alternative subsistence activity compatible with forest conservation", as in the case of the project, forest management activities should be permitted.

In this sense, forest management activities, when carried out on a sustainable basis, are recognized by many experts as a tool for conserving forest cover, maintaining forest carbon stocks and reducing deforestation rates (PORTER-BOLLAND et al., 2012; VERÍSSIMO et al., 1992; BARRETO et al., 1998; HOLMES et al., 2002 apud SABOGAL et al., 2006; PUTZ et al., 2008; SPATHELF et al., 2004), in this vision, emissions due to planned logging activities were not considered, and emissions from planned deforestation (patios or terraces, camping, dragging of trails and roads) were calculated. Therefore, the project is in line with methodology VM0015, since it accounts for emissions due to planned deforestation (section 3.2.1.1). Furthermore, most importantly in terms of the benefits generated for the climate, the presence of management activities in an area helps to contain the entry of invaders and the consequent illegal logging and deforestation.

The main objective of the Sustainable Forest Management Plan (PMFS) is to manage the renewable natural resources available in the forest, maximizing their use and conserving their productive capacity. In this sense, the management activities were based on the Annual Operation Plans (POA), which are based on the original PMFS. In addition, the Project monitors the impact of forest management, since the forest management areas are within the REDD+ Project area, making monitoring necessary.

For all the Annual Production Units (UPAs), POAs, pre-exploratory reports and post-exploratory reports were drawn up. In all the POAs, guidelines are defined for planning the logging system, with plans for opening roads, stockyards, as well as felling trees, hauling, and laying out logs. In the POAs, the pre- and post-exploratory silvicultural treatment plans were drawn up, with guidelines for cutting down lianas before

logging, as well as guidelines for felling trees to avoid the formation of clearings, with felling in the direction of the dragging trails, reducing damage.

The results obtained from the post-exploration reports for each UPA provide data on the patios or terraces, dragging trails and roads opened for the activity in question. This data can then be used to calculate the planned deforestation included in the VM0015 methodology (section 7.1.1). Section **Erro! Fonte de referência não encontrada.** therefore presents the results obtained from forest management activities.

Strategic occupation of the territory:

As a way of containing deforestation, it was planned to strategically allocate some of the communities and families living in the RESEX. Given the instability and violence of the sites, which are under great pressure from invasion and illegal loggers, it was felt that relocating the existing communities would be unfeasible for the safety of the families, which is why it didn't happen. Further details are described in section **Erro! Fonte de referência não encontrada.**.

In this sense, new community members are located closer together to avoid risks. The maintenance of community members, as well as the strategic location of new community members, the entry of new families and the activities carried out by them, increase the governance of the area and inhibit the entry of invaders, thus reducing the risks of emissions, since the area is kept conserved, increasing the climate benefits.

Multiple and Sustainable Use of the Forest's Products:

In 2017, as a way of bringing benefits to the climate, SEDAM approved the Multiple Use Management Plan (PMUM), drawn up by CES Rioterra, together with Ecoporé and ASMOREX, and with financial support from FUNBIO. The PMUM sets out a series of procedures aimed at minimizing the negative impacts associated with biodiversity and avoiding overexploitation.

The approval of the PMUM brought about a spatial organization of the territory (zoning) and also guidelines for the sustainable exploitation of natural resources, training RESEX residents in the conscious use of non-timber forest products and caring for the forest. The main benefit of the PMUM is the conservation of biodiversity and the maintenance of forest cover, thereby avoiding deforestation. In this sense, the PMUM's guidelines for the use of natural resources, as well as the activities that have been carried out based on these guidelines, help to maintain climate benefits.

Activities to draw up the PMUM began in July 2015, with inventories of fauna and flora, environmental characterization, and a socio-economic study of the RESEX. After this, participatory planning was carried out with the community, with the aim of systematizing the demands and needs of the community members living in the RESEX. In this sense, the RESEX areas were zoned, guaranteeing the preservation of natural environments and biodiversity. Programs and sub-programs were also defined with the aim of effectively managing and improving the socio-economic and environmental conditions of the RESEX.

In PMUM, more specifically in section IV, the RESEX Utilization Plan was drawn up, which contains rules of use and the rights and duties of residents, with the aim of serving as a guide for residents to take care of nature's resources. It also deals with extractive and agropastoral interventions, new interventions in the forest, and provides guidance on the extraction of forest products and their subsequent commercialization. In addition, guidelines were provided on interventions in fauna, focusing on hunting and fishing for

commercial purposes and interventions in the common use area. Finally, guidance was given on inspections and penalties for non-compliance with the Utilization Plan.

The PMUM products were delivered in four parts: inserts I, II, III and IV. All the documents referring to the PMUM were delivered to the VVB. Section **Erro! Fonte de referência não encontrada.** contain more details o n zoning.

Leak management activities:

As described in the PD, although the activities that take place outside the boundaries of the project area are not under the control of the proponents, satellite image monitoring has been carried out in the areas of the leakage belt and leakage management, with the consequent generation of quarterly and annual bulletins, as described above.

This activity is one of the main ones carried out to contain the deforestation identified in the PD (Logging and Illegal Allotments and Livestock and Agricultural Production), since the analysis of satellite images is the main source of input for the inspection rounds carried out by the environmental agencies responsible, making it possible to survey the "warning area" of invasions within the RESEX and helping proponents and partners to make denunciations and complaints to the agencies responsible.

On the other hand, the activities carried out within the Rio Preto-Jacundá RESEX have brought about the engagement of other Extractive Reserve associations in the region, thus stimulating good practices and interest in maintaining forest cover for the preparation of REDD+ projects by community members from these other reserves to bring benefits just like those achieved by the Rio Preto-Jacundá RESEX.

1.2. Monitoring changes in land use and cover within the Project Area:

The monitoring of unplanned deforestation was carried out by mapping the forest cover of the project area using the data provided annually by PRODES. Later, the mapping was validated by assessing its accuracy using a mosaic of images with good visualization and low cloud cover from the PLANET satellite.

The monitoring of planned deforestation for the implementation of forest management activity infrastructures was carried out using information on the effective areas of the UPAs contained in the post-exploratory reports of the exploited UPAs which, following the premises considered in the calculation of the project's baseline, were multiplied by the rate of 8%, which is a reasonable percentage of openness accepted in conventional forest management in extractive reserves in the Amazon, according to experts previously consulted.

Data from deforestation events were compared to the baseline scenarios. The values of reduced emissions in the period of deforestation were derived from the comparison between predicted and actual deforestation.

1.3. Monitoring carbon stock changes:

Within the Project Area:

Although the ex-ante estimate of carbon stock by forest class was not expected to change during the baseline period, the VCS VM0015 Methodology calls for monitoring the carbon stock in the Project Area

when it is subject to a significant reduction in carbon stock in the project scenario - with reference to the ex-ante assessment. This reduction can occur in areas subject to planned deforestation, resulting from planned forest management activities, or in areas subject to an unplanned decrease in carbon stock, such as in cases of catastrophic events or forest fires.

The total change in carbon stock due to unplanned and un-avoided deforestation within the Project Area was calculated using the following equation:

$$\Delta \text{CUDdPA}_t = \sum_{y=1}^{t} \left(\sum_{icl=1}^{icl} AUDPA_{icl,y} * \Delta Ctot_{icl,t-y} - \sum_{fcl=1}^{fcl} AUDPA_{fcl,y} * \Delta Ctot_{fcl,t-y} \right) \quad (1)$$

Where:

ΔCUDdPAt: Total decrease in carbon stock due to unplanned and unavoided deforestation within the Project Area in year t.

AUDPAicl,y: Unplanned deforested area in the initial forest class icl in year t within the Project Area in the scenario with the project.

ΔCtoticl,Ac: Loss of carbon stock in the initial forest class icl at the time of change Ac (number of years after the change in soil use and cover (LU/LC)).

AUDPAfcl,y: Final non-forest class area fcl at time t within the Project Area after unplanned deforestation in the scenario with the project.

ΔCtotfcl,Ac: Carbon stock gain in the final non-forest class fcl at the time of change Ac (number of years after the change in soil use and cover (LU/LC)).

All carbon stock reductions from forest management activities were reported in the verification processes by Table 29 of the VCS VM0015 Methodology.

Within the Leakage Management Areas:

Under the Project scenario, no area is subject to the planned decrease in carbon stock within the Leakage Management Areas, whether these are located inside or outside the boundaries of the Rio Preto-Jacundá RESEX.

1.4. Monitoring non-CO2 emissions from forest fires:

Emissions from burning biomass are not computed in this project. According to the VM0015 Methodology, non-CO2 emissions can be conservatively omitted, since, as scientific research has shown, the occurrence of natural fires is rare in the Amazon region, with a predominance of anthropogenic fires related to human occupation (SCHROEDER et al, 2009). Furthermore, not only does the project not encourage activities that involve burning, but it also promotes actions to mitigate the deforestation caused by these agents, represented mainly by the strengthening of surveillance efforts carried out by SEDAM and with the support of the community members themselves, who, as well as being located in strategic places within the RESEX

and, due to their physical presence, inhibit the agents of deforestation, are great allies in reporting denunciations.

However, from 2017 onwards, extremely high rates of deforestation were identified around the project area. In view of these rates and during the photointerpretation of the PLANET images used to monitor deforestation in the RESEX, starting with the latest monitoring report, it was decided to check more thoroughly for forest fires in the project area in order to understand the dynamics of the use and occupation of these areas, as well as to help identify priority areas and strategies for controlling and combating invasions and deforestation within the RESEX.

Biomass burning directly affects the carbon cycle and can cause emissions and losses for the project. Therefore, an analysis of burned areas within the boundaries of the Project Area and Reference Region was carried out. MapBiomas fire scar mapping was used, which is based on mosaics of Landsat satellite images with a spatial resolution of 30 meters. In this way, the existence of possible forest fire scars during the monitoring period was verified. By checking the data for this interval, it was possible to recognize the existence of scars resulting from fires in the Project Area, especially in 2021.

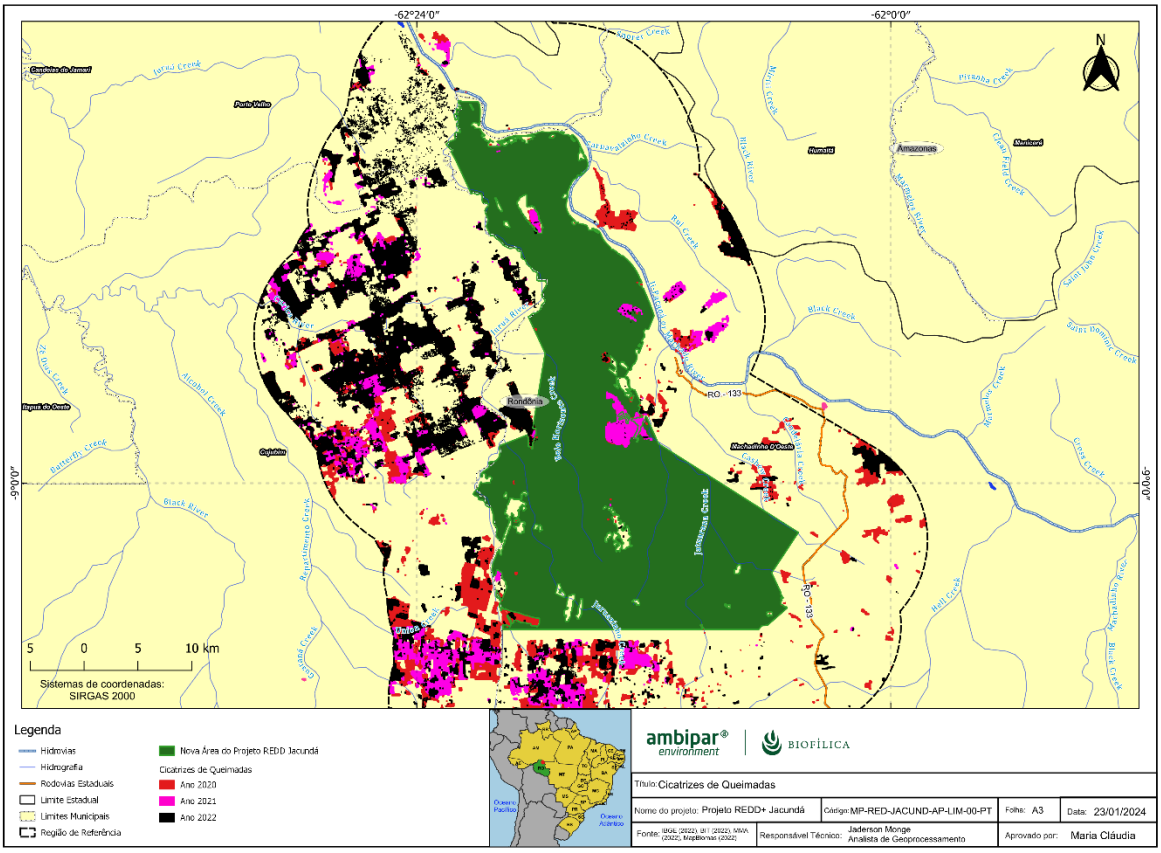


Figure 7. Location of forest fire scars mapped by MapBiomas during the monitoring period for analysis of non-CO2 emissions. Source: IBGE (2022), BIT (2022), MMA (2022), MapBiomas (2022).

After detecting those burned areas that resulted in fire scars, the non-CO2 emissions associated with these fires were calculated, as well as the significance of these emissions. The result of these calculations

indicated that the non-CO2 emissions for the period were not significant (<5%). The calculation spreadsheet was made available to VVB.

The following formulas presented in VM0015, version 1.1 (Section 6.2) were used to calculate non-CO2 emissions from forest fires:

$EBBtoticl,t = EBBN2Oicl,t + EBBCH4icl,t$ (2)

Where:

EBBtoticl,t: Total GHG emissions from biomass burning in forest class icl in year t (tCO2-e.ha-1);

EBBN2Oicl,t: N2O emissions from biomass burning in the icl forest class in year t (tCO2-e.ha-1);

EBBCH4icl,t: CH4 emissions from biomass burning in the icl forest class in year t (tCO2-e.ha-1);

$EBBN2Oicl,t = EBBCO2icl,t * 12/44 * NCR * ERN2O * 44/28 * GWPN2O$ (3)

$EBBCH4icl,t = EBBCO2icl,t * 12/44 * ERCH4 * 16/12 * GWPCH4$ (4)

Where:

EBBCO2icl,t: CO2 emissions per hectare from burning biomass in the " cut and burn practice" in forest class icl in year t (tCO2-e.ha-1);

EBBN2Oicl,t: N2O emissions per hectare from burning biomass in the " cut and burn practice" in forest class icl in year t (tCO2-e.ha-1);

EBBCH4icl,t: CH4 emissions per hectare from biomass burning in the " cut and burn practice" in forest class icl in year t (tCO2-e.ha-1);

NCR: Nitrogen to carbon ratio (IPCC default value = 0.01) (dimensionless); ERN2O: N2O emission rate (IPCC default value = 0.007);

ERCH4: CH4 emission rate (IPCC default value = 0.012);

GWPN2O: Global Warming Potential for N2O (IPCC default value = 310 for the first commitment period);

GWPCH4: Global Warming Potential for CH4 (IPCC default value = 21 for the first commitment period);

$EBBCO2icl,t = Fburnticl * \sum (Cp,icl,t\ p\ p=1 * Pburntp,icl * CEp,icl)$ (5)

Where:

EBBCO2icl,t: CO2 emissions per hectare from burning biomass in the " cut and burn system" in forest class icl in year t (tCO2-e.ha-1);

Fburnticl: Proportion of forest area burned during the historical reference period in the icl forest class (%);

Cp,icl,t: Average carbon stock per hectare in the carbon pool p burned in the forest class icl in year t (tCO2-e.ha-1);

Pburntp,icl: Average proportion of mass burned in the carbon pool p in the forest class icl (%);

CEp,icl: Average combustion efficiency of the carbon pool p in the forest class icl (dimensionless);

p: Carbon reservoir that can burn (above-ground biomass, dead wood, leaf litter);

icl: 1, 2, 3, ... Forest classes icl (pre-deforestation);

t: 1, 2, 3... t, one year of the credit period of the proposed project (dimensionless);

1.5. Monitoring the impacts of natural disturbances and other catastrophic events:

The reduction in carbon stock and increase in GHG emissions caused by natural disturbances or catastrophic events were ascertained through satellite monitoring of forest cover using the same methods applied to monitoring forest cover in the Project Area.

Emissions caused by natural disturbances or catastrophic events are estimated by multiplying the mapped area of forest loss by the average forest carbon stock. During this monitoring period no significant reduction in carbon stock due to natural disturbances or catastrophic events was identified in the Project Area during the monitoring of forest cover.

2. Leak monitoring:

a) Technical description of the monitoring areas

The Rio Preto-Jacundá REDD+ RESEX Project involves two monitoring activities of leakage sources:

i. Monitoring the reduction in carbon stocks and/or the increase in GHG emissions associated with leakage prevention measures if project proponents implement activities such as tree planting, agricultural intensification, fertilization, fodder production and/or other measures to improve agricultural areas and cattle ranching.

When these activities cause a reduction in carbon stocks and/or an increase in GHG emissions in the Leakage Management Areas, these changes in carbon stocks and/or GHG emissions are estimated by Biofílica Ambipar. During the monitored period, the project proponents did not carry out any of the aforementioned interventions. Therefore, the changes in carbon stock and GHG emissions associated with prevention and leakage activities were not accounted for.

ii. Forest cover monitoring in the Leakage Belt using satellite images, carried out by Biofílica Ambipar.

Biofílica Ambipar monitored the forest cover in the Leakage Belt using satellite images to account for the reduction in carbon stock and the increase in GHG emissions due to the displacement of leaks.

b) Data collected

Table 7. Data collected for monitoring the leak at the Rio Preto-Jacundá REDD+ RESEX Project.

Parameter	Description	Unit	Source	Frequency
$ABSLLK_{fcl,t}$	Final area of forest class fcl (post-deforestation) deforested in year t within the Leakage Belt in the baseline case	Hectare (ha)	Calculated	Annual
$\Delta CLPMLK_t$	Decrease in carbon stock due to leak prevention measures	Ton of carbon dioxide equivalent (tCO2-e)	Not applicable	Annual
$EgLK_t$	Emissions from grazing animals in the leakage management area in year t	Ton of carbon dioxide equivalent (tCO2-e)	Not applicable	Annual
$ELPMLK_t$	Total annual increase in GHG emissions due to leakage prevention measures in year t	Ton of carbon dioxide equivalent (tCO2-e)	Not applicable	Annual
$\Delta CabBSLLK_t$	Total carbon stock changes in the Leakage Belt area	Ton of carbon dioxide equivalent (tCO2-e)	Calculated	Annual

c) Summarized description of data collection procedures

Carbon stock changes and GHG emissions monitoring associated with leak prevention activities:

There was no decrease in the carbon stock due to activities carried out in the Leakage Management Areas, since no activities to improve cultivation or pasture management that could alter carbon stocks and increase GHG emissions, in relation to the baseline scenario, were implemented or encouraged during the monitored period.

However, if it is decided that these activities are necessary, then the ex-ante changes in the carbon stock and associated GHG emissions will be estimated through step 8 of the VM0015 methodology. Sequentially, if significant, emissions will be monitored and data will be provided to the verification body at each verification event through tables 30b, 30c, 31, 32 and 33 of the VM0015 methodology, version 1.1.

In the event that leakage prevention activities are implemented in the AMV, some main activities will be carried out to collect and process data to monitor changes in the carbon stock:

- Leak prevention activities will be listed;

- A map showing the areas and the type of intervention will be prepared;

- The areas where leakage prevention activities impact the carbon stock will be identified;

- Non-forest classes existing within these areas in the baseline case will be identified;

- Carbon stocks will be measured in the identified classes or conservative literature estimates will be used;

- Changes in carbon stock in the leakage management areas under the project scenario will be reported using table 30b of VM0015;

- The changes in the net carbon stock that leakage prevention measures cause during the fixed baseline period and optionally the project crediting period will be calculated;

- The results of the calculations will be reported in table 30.c of VM0015.

Monitoring the decrease in carbon stock and increase in GHG emissions due to leakage displacement:

Activity data for the Leakage Belt area was determined using the same methods applied to monitoring deforestation in the Project Area (item 1.1).

If during the monitoring process a deforestation event greater than that expected for the baseline scenario is identified in the leakage belt, being greater than zero, and such deforestation is attributed to deforestation agents in the Project Area, the losses in the carbon stock will be accounted for and reported using Tables 22c and 21d, as recommended by item 1.2 - Leakage Monitoring, of VCS VM0015.

d) Quality control and assurance procedures

Monitoring changes in carbon stock and GHG emissions associated with leak prevention activities:

No leak prevention activities were implemented during the monitoring period. Should any activity occur, the procedures specific to the activity will be determined.

Monitoring the decrease in carbon stock and increase in GHG emissions due to the displacement of leakage:

Procedures used for control and quality assurance were the same as those applied to monitoring deforestation in the Project Area (item 1).

e) Data archiving

All the data and reports produced by the Rio Preto-Jacundá REDD+ RESEX Project are stored by Biofílica Ambipar in digital files throughout the project's life cycle. All documents relating to the monitoring of the Project are collected in physical and/or virtual files and made available to the verification body at each verification event.

2.1. Monitoring changes in carbon stock and GHG emissions associated with leak prevention activities:

There was no decrease in the carbon stock associated with activities carried out in the Leakage Management Areas, since no activities to improve agricultural techniques, or the management of pasture

areas, which could alter carbon stocks and increase GHG emissions compared to the baseline scenario, were implemented during this monitoring period.

However, if it is decided that these activities are necessary, the ex-ante changes in carbon stocks and GHG emissions associated with these activities will be estimated through Step 8 of the VM0015 methodology. If significant, the activities and associated emissions will be monitored and the data will be made available to verifiers through tables 30b, 30c, 31, 32 and 33 of the VM0015 methodology, version 1.1.

The following activities can reduce carbon stocks or increase GHG emissions in Leakage Management Areas:

• Changes in the carbon stock due to activities implemented in the Leakage Management Areas;

• Nitrous oxide (N2O) emissions from nitrogen fertilization are always considered insignificant, according to the latest version of the VCS -VM0015 standard. The consumption of fossil fuels is always considered insignificant in the AUD of project activities and should not be taken into account.

Furthermore, as noted above, no activities were carried out that would cause a significant increase in CH4 and N2O emissions. Therefore, Tables 31 and 32 of VM0015 were not applied.

2.2. Monitoring the decrease in carbon stock and increase in GHG emissions due to leakage displacement:

Activity data for the Leakage Belt area was determined using the same methods applied to monitoring deforestation in the Project Area (item 1). The total change in carbon stock due to unplanned and unavoided deforestation within the Leakage Belt area was calculated as follows:

$$\Delta CBSLLK_t = \sum_{y=1}^{t}\left(\sum_{icl=1}^{icl} AUDLK_{icl,y} * \Delta Ctot_{icl,t-y} - \sum_{fcl=1}^{fcl} AUDLK_{fcl,y} * \Delta Ctot_{fcl,t-y}\right) \quad (6)$$

Where:

ΔCBSLLKt Total change in carbon stock due to unplanned and un-avoided deforestation within the Leakage Belt area in year t.

AUDLKicl,y Area of unplanned deforestation in the forest class icl in year t within the Leakage Belt area in the scenario with the project.

ΔCtoticl,Ac Loss in carbon stock in the initial forest class icl at the time of change Ac (number of years after the change in soil use and cover (LU/LC)).

AUDLKfcl,y Non-forest class area fcl at time t within the unplanned post-deforestation Leakage Management Belt area in the project scenario.

ΔCtotfcl,Ac Gain in carbon stock in the final non-forest class fcl after deforestation in the period of change Ac (number of years after the change in soil use and cover (LU/LC)).

2.3. Total leakage estimated ex-post:

The results were presented to the verification body in Table 35 of VM0015 Methodology.

3. Ex-post net reductions of GHG:

a) Technical description of monitoring tasks

In the verification processes, the results were presented using Table 36 of the approved Methodology VM0015 version 1.1, together with the spatial data (deforestation maps).

b) Data collected

Table 8. Data collected for monitoring net ex-post GHG reductions for the Resex Rio Preto-Jacundá REDD+ Project.

Parameter	Description	Unit	Source	Frequency
$\Delta REDD_{,t}$	Reduction in net GHG emissions attributable to Project activities in AUD in year t	Ton of carbon dioxide equivalent (tCO2-e))	Calculated	Annual
$VCU_{,t}$	Quantity of Verified Carbon Units (VCUs) to be made available for trading in year t	Ton of carbon dioxide equivalent (tCO2-e)	Calculated	Annual

c) Summarized description of data collection procedures

The calculation of the number of Verified Carbon Units (VCUs) produced by the activities of the Resex Rio Preto-Jacundá REDD+ Project in 2021 and 2022 was done using equations 19 and 20 of the VM0015 Methodology version 1.1.

d) Quality control and assurance procedures

All the tasks and tools indicated in part 2 of the approved Methodology VM0015 were used to ensure that the data is suitable for the verification process and the number of Verified Carbon Units is reliable.

e) Data archiving

All the data and reports produced by the Rio Preto-Jacundá REDD+ RESEX Project are stored by Biofílica Ambipar in digital files throughout the project's life cycle. All documents relating to the monitoring of the Project are collected in physical and/or virtual files and made available to the verification body at each verification event.

3.1.4 Dissemination of Monitoring Plan and Results (VCS, 3.18; CCB, CL4.2)

As already described in Section **Erro! Fonte de referência não encontrada.**, the Rio Preto-Jacundá REDD+ R ESEX Project has three methods of communication - oral, written, and virtual - in order to guarantee access to the documents and all other project information for the communities and other stakeholders.

The results were disseminated in a printed version, where each document related to the project's conception and monitoring was made available for consultation at ASMOREX's headquarters and at CUC/SEDAM (in the city of Porto Velho), in a virtual version where the documents related to monitoring were made available through Verra's website and website, Biofílica's newsletter and social media, and orally, through the internal alignment meetings held by ASMOREX and at the Ordinary and Extraordinary General Assemblies held with the RESEX residents.

3.2 Quantification of GHG Emission Reductions and Removals

3.2.1 Baseline Emissions (VCS, 3.15)

The carbon stock estimates for the surface and below ground considering the average values calculated for managed forest and primary forest were 114,196 tC/ha for the above ground biomass pool and 15.84 tC/ha for the below ground biomass pool considering a confidence level of 5% and 7% respectively for each pool. For the purposes of calculating carbon credits, this stock was multiplied by carbon dioxide equivalent (CO2e). Methodological details can be found in the Final Technical Report (Hdom Engenharia e Projetos Ambientais LTDA, 2013). Table 9 shows the average carbon stock values per hectare for all the soil use and cover classes in the baseline scenario present in the Project Area, the Leakage Belt, and the Leakage Management Areas.

Table 9. Carbon stocks per hectare for the initial class icl existing in the Project Area and in the Leakage belt.

Initial forest class *icl*							
Name:	Forest						
ID_{icl}	1						
Average carbon stock per hectare + 90% CI							
Cab_{icl}		Cbb_{icl}		Cdw_{icl}		$Ctot_{icl}$	
C stock	± 95% CI	C stock	± 95% CI	C stock	± 95% CI	C stock	± 95% CI
$tCO_2e\ ha^{-1}$	$tCO_2e\ ha^{-1}$	$tCO_2e\ ha^{-1}$	$tCO_2e\ ha^{-1}$	$tCO_2e\ ha^{-1}$	$tCO_2e\ ha^{-1}$	$tCO_2e\ ha^{-1}$	$tCO_2e\ ha^{-1}$
418,7	21	58,1	4	0,0	0,0	476,8	24,6

Where:

Cabicl = Average equivalent carbon stock per hectare for the aboveground biomass pool for the initial forest class (tCO2-e/ha);

Cbbicl = Average equivalent carbon stock per hectare for the below-ground biomass pool for the initial forest class (tCO2-e/ha);

Cdwicl = Average equivalent carbon stock per hectare for the dead biomass pool for the initial forest class (tCO2-e/ha);

Ctoticl = Average equivalent carbon stock per hectare for the total biomass pool for the initial forest class (tCO2-e/ha).

To calculate the baseline, the number of hectares of each forest class that could be cleared in the absence of the project was extracted from the soil use and cover maps. The results of the baseline projections show deforestation between 2021 and 2022 of 808 hectares in the Project Area (Table 10) and 687 hectares in the Leakage Belt (Table 11).

Table 10. Annual areas of unplanned deforestation from the baseline in the Project Area for the 2021-2022 monitored period.

Area estabiliseh after deforestation per zone within the project area		Total baseline deforestation in the project area	
IDz>	1	ABSLPA t annual	ABSLPA cumulative
Name>	Zone 1		
Project year t	ha	ha	ha
2021	523	526	523
2022	284	284	808

Table 11. Annual areas of unplanned deforestation from the baseline in the Leakage Belt for the monitored period of 2021-2022.

Area estabiliseh after deforestation per zone within the leakage belt		Total baseline deforestation in the leakage belt	
IDz>	1	ABSLLK t annual	ABSLLK cumulative
Name>	Zone 1		
Project year t	ha	ha	ha
2021	193	193	193
2022	494	494	687

To calculate the changes in the baseline carbon stock in the Project Area (Table 12) and in the Leakage Belt (Table 13) for year t, method 1 of VM0015, version 1.1 was used, using equation 10 (included on page 72 of this VM0015), which was also used in the project description (VCS - p. 111) to calculate the total change in the baseline carbon stock in the project area and in the leakage belt, shown below:

$$\Delta CBSLPA_t = \sum_{p=1}^{P}\Bigg(\sum_{icl=1}^{Icl} ABSLPA_{icl,t} * \Delta Cp_{icl,t=t*} - \sum_{z=1}^{Z} ABSLPA_{z,t} * \Delta Cp_{z,t=t*} + \sum_{icl=1}^{Icl} ABSLPA_{icl,t-1} * \Delta Cp_{icl,t=t*+1} - \sum_{z=1}^{Z} ABSLPA_{z,t-1} * \Delta Cp_{z,t=t*+1} + \sum_{icl=1}^{Icl} ABSLPA_{icl,t-2} * \Delta Cp_{icl,t=t*+2} - \sum_{z=1}^{Z} ABSLPA_{z,t-2} * \Delta Cp_{z,t=t*+2} + \cdots + \sum_{icl=1}^{Icl} ABSLPA_{icl,t-19} * \Delta Cp_{icl,t=t*+19} - \sum_{z=1}^{Z} ABSLPA_{z,t-19} * \Delta Cp_{z,t=t*+19}\Bigg) \quad (7)$$

Where:

ΔCBSLPAt: Total variation of the baseline carbon stock within the project area in year t (tCO2-e);

ABSLPAicl,t: Area of initial forest class icl deforested in year t within the project area in the case of the baseline (ha);

ABSLPAicl,t-1: Area of the initial forest class icl deforested in year t-1 within the project area in the case of the baseline (ha);

ABSLPAicl,t=t-19: Area of the initial forest class icl deforested in year t-19 within the project area in the case of the baseline (ha);

ΔCpicl,t=t*: Average carbon stock variation factor for the fixed carbon pool of the initial forest class icl applied in year t (as per Table 20.a) (tCO2-e.ha-1);

ΔCpicl,t=t*+19: Average of the carbon stock variation factor for the fixed carbon pool of the initial forest class icl applied in year t=t*+19 (20th year after deforestation, as per Table 20.a) (tCO2-e.ha-1);

ABSLPAz,t: Area of zone z "deforested" in year t within the project area in the baseline case (ha); ABSLPAz,t-1: Area of zone z "deforested" in year t-1 within the project area in the baseline case (ha);

ABSLPAz,t-19: Area of zone z "deforested" in year t-19 within the project area in the case of the baseline (ha);

ΔCpz,t=t*: Average carbon stock variation factor for the z-zone fixed carbon pool applied in year t = t* (as per Table 20.b) (tCO2-e.ha-1);

ΔCpz,t=t+1: Average of the carbon stock variation factor for the z-zone fixed carbon pool applied in year t = t*+1 (2nd year after deforestation, according to Table 20.b) (tCO2-e.ha1);

ΔCpz,t=t*+19: Average carbon stock variation factor for the z-zone fixed carbon pool applied in year t = t*+19 (20th year after deforestation, as per Table 20.b) (tCO2- e.ha-1).

Total emissions in the Project Area baseline scenario for the years 2021 and 2022 were 215,867 tCO2e and 115,768 tCO2e, respectively, as shown in Table 12. Total emissions in the Leakage Belt baseline scenario for the years 2021 and 2022 were 79,841 tCO2e and 205,718 tCO2e, respectively, as shown in Table 13.

Table 12. Total changes in the carbon stock of the Project Area baseline scenario (table 21.b. VM0015).

Carbon stock changes per initial forest class *icl*		Total carbon stock change of initial forest class in the project area		Carbon stock changes per post-deforestation zone z		Total carbon stock change of post-deforestation zones in the project area		Total net carbon stock change of the project area	
ID_{icl}>	1	$\Delta CBSLPA_{icl,t}$	$\Delta CBSLPA_{icl}$	ID_{iz}>	1	$\Delta CBSLPA_{z,t}$	$\Delta CBSLPA_{z}$	$\Delta CBSLPA_{t}$	$\Delta CBSLPA$
Name>	Forest	annual	cumulative	Name>	Zone 1	annual	cumulative	annual	cumulative

Project Year *t*	tCO_2-e	tCO_2-e	tCO_2-e
2021	279,760	279,760	4,684,200
2022	181,401	181,401	4,865,601

Project Year *t*	tCO_2-e	tCO_2-e	tCO_2-e
2021	63,893	63,893	327,263
2022	65,633	65,633	392,896

tCO_2-e	tCO_2-e
215,867	4,356,937
115,768	4,472,705

Table 13. Total changes in the carbon stock of the Leakage Belt baseline scenario (Table 21.c. VM0015).

Carbon stock changes per initial forest class *icl*		Total carbon stock change of initial forest class in the leakage belt area	
ID_{icl}>	1	$\Delta CBSLLK_{icl,t}$	$\Delta CBSLLK_{icl}$
Name>	Forest	annual	cumulative
Project Year *t*	tCO_2-e	tCO_2-e	tCO_2-e
2021	98,987	98,987	1,401,637
2022	227,886	227,886	1,629,523

Carbon stock changes per post-deforestation zone z		Total carbon stock change of post-deforestation zones in leakage belt area	
ID_{iz}>	1	$\Delta CBSLLK_{z,t}$	$\Delta CBSLLK_{z}$
Name>	Zone 1	annual	cumulative
Project Year *t*	tCO_2-e	tCO_2-e	tCO_2-e
2021	19,146	19,146	95,944
2022	22,168	22,168	118,112

Total net carbon stock change of the leakage belt area	
$\Delta CBSLLK_{t}$	$\Delta CBSLLK$
annual	cumulative
tCO_2-e	tCO_2-e
79,841	1,305,693
205,718	1,511,412

3.2.2 Project Emissions (VCS, 3.15)

3.2.2.1 Emissions due to planned deforestation

The sustainable forest management carried out by the MADREX company since 2016 is not directly part of the scope of the project, however, there is an impact on the reduction of the carbon stock related mainly to deforestation in Annual Production Units (UPA) for the implementation of infrastructure such as dragging trails and patios.

The data used to calculate these areas was obtained from the information contained in the UPAs' post-exploratory reports. To arrive at the area deforested annually for these structures, we used the information on the areas actually exploited in the UPAs, identified in the post-exploratory reports, multiplied by the rate of 8%, which is a reasonable percentage of openness accepted in conventional forest management in extractive reserves in the Amazon, according to experts previously consulted, as described in the PD.

Table 14 shows the decrease in carbon stock due to planned deforestation in the Project Area, the total emissions related to planned deforestation is 52,945 tCO2e. These figures were obtained by multiplying the annually opened infrastructure areas, identified as described above, by the average variation in carbon stock, as shown in the equation below:

$\Delta CPDdPAt = (APDPAicl,t \times Ctoticl,t)$ (8)

Where:

$\Delta CPDdPAt$: Total decrease in carbon stock due to planned deforestation in year t in the Project Area;

APDPAicl,t: Area of planned deforestation in forest class icl in year t in the Project Area;

Ctoticl,t: Average carbon stock in all carbon pools accounted for in forest class icl in year t.

Table 14. Decrease in carbon stock due to planned deforestation in the Project Area (Table 25.a. VM0015).

Project Year *t*	Areas of planned deforestation x Carbon stock change (decrease) in the project area		Total carbon stock decrease due to planned deforestation	
	ID_{cl} =	1	annual	cummulative
	$APDPA_{icl,t}$	$Ctot_{icl,t}$	$\Delta CPDdPA_t$	$\Delta CPDdPA$
	ha	$tCO_2e\ ha^{-1}$	tCO_2e	tCO_2e
2021	48	477	22.959	22.959
2022	63	477	29.987	52.945

3.2.2.2 Emissions due to planned logging activities.

As already expected in the PD, low-impact forest management in the Project Area did not perceive emissions associated with logging activities in 2021 and 2022. In addition, logging was mainly directed towards obtaining long-lived timber products and, based on the fact that VM0015 considers it conservative to disregard these products from the calculations, all logging activities were excluded.

Table 15. Decrease in carbon stock due to planned logging activities in the Project Area (Table 25.b. VM0015).

Project Year *t*	Areas of planned logging activities x Carbon stock change (decrease) in the project area		Total carbon stock decrease due to planned logging activities	
	ID_{cl} =	1	annual	cummulative
	$APLPA_{icl,t}$	$Ctot_{icl,t}$	$\Delta CPLdPA_t$	$\Delta CPLdPA$
	ha	$tCO_2e\ ha^{-1}$	tCO_2e	tCO_2e
2021	0	0,0	0,0	0,0
2022	0	0,0	0,0	0,0

3.2.2.3 Emissions from planned firewood cutting and wood charcoal production activities

There were no emissions associated with planned firewood collection and wood charcoal production activities in the Project Area.

Table 16. Decrease in carbon stock due to planned firewood collection and wood charcoal production in the project area (Table 25.c. VM0015).

Project Year *t*	Areas of planned fuel-wood & charcoal activities x Carbon stock change (decrease) in the project area		Total carbon stock decrease due to planned fuel-wood and charcoal activities	
	ID_{cl} =	1	annual	cummulative
	$APFPA_{icl,t}$	$Ctot_{icl,t}$	$\Delta CPFdPA_t$	$\Delta CPFdPA$
	ha	$tCO_2e\ ha^{-1}$	tCO_2e	tCO_2e
2021	0	0,0	0,0	0,0
2022	0	0,0	0,0	0,0

3.2.2.4 Removals due to carbon increase by planned activities.

The increase in carbon stock due to planned activities in the areas that would be deforested in the baseline has been omitted.

Table 17. Total decrease in carbon stock (ex-post) due to planned activities in the Project Area (Table 25.d. VM0015).

Project Year t	Total carbon stock decrease due to planned deforestation		Total carbon stock decrease due to planned logging activities		Total carbon stock decrease due to planned fuel-wood and charcoal activities		Total carbon stock decrease due to planned activities	
	annual	cumulative	annual	cumulative	annual	cumulative	annual	cumulative
	$\Delta CPDdPA_t$	$\Delta CPDdPA$	$\Delta CPLdPA_t$	$\Delta CPLdPA$	$\Delta CPFdPA_t$	$\Delta CPFdPA$	$\Delta CPAdPA_t$	$\Delta CPAdPA$
	tCO_2e	tCO_2e	tCO_2e	tCO_2e	tCO_2e	tCO_2e	tCO_2e	tCO_2e
2021	22.958,6	22.959	0,0	0,0	0,0	0,0	22.958,6	22.959
2022	29.986,5	52.945	0,0	0,0	0,0	0,0	29.986,5	52.945

3.2.2.5 Total decrease in carbon stock (ex-post) in the Project Area

There was no reduction in the carbon stock associated with project activities in the Project Area during the monitored period.

Table 18. Total decrease in carbon stock (ex-post) in the Project Area (Table 27 VM0015).

Project Year t	Total carbon stock decrease due to planned activities		Total carbon stock increase due to planned activities		Total carbon stock decrease due to unavoided unplanned deforestation		Total carbon stock change in the project case	
	annual	cumulative	annual	cumulative	annual	cumulative	annual	cumulative
	$\Delta CPAdPA_t$	$\Delta CPAdPA$	$\Delta CPAiPA_t$	$\Delta CPAiPA$	$\Delta CUDdPA_t$	$\Delta CUDdPA$	$\Delta CPSPA_t$	$\Delta CPSPA$
	tCO_2e	tCO_2e	tCO_2e	tCO_2e	tCO_2e	tCO_2e	tCO_2e	tCO_2e
2021	22.958,6	22.959	0,0	0,0	38.602	38.602	61.561	61.561

2022	29.986,5	52.945	0,0	0,0	9.875	48.477	39.862	101.423

3.2.2.6 Emissions due to unplanned and un-avoided deforestation

The total unplanned deforestation in the Project Area during this monitoring period is 105.45 hectares, according to data from PRODES (2022) supplemented by MapBiomas Alert for the months of August and September 2022. The accuracy of the PRODES and MapBiomas Alert data for land use and land cover classes in the monitored area was 97.98%, higher than the 88% established by VM0015. The methodology and results of this analysis are described in section **Erro! Fonte de referência não encontrada.**. The data f or the years 2021 and 2022 are shown in Table 19.

Table 19. Deforested areas observed annually in each zone within the Project Area (Table 13.b. VM0015).

Area establiseh after deforestation per zone within the project area		Total monitored deforestation in the project area	
IDz>	1		
Name>	Zone 1	Annual	Cumulative
Project year$_t$	ha	ha	ha
2021	95	95	95
2022	10	10	105

3.2.2.7 Emissions due to forest fires and catastrophic events

During the monitoring period, there were no significant emissions from forest fires in the project area.

Table 20. Ex post actual carbon stock decrease due to forest fires in the project area (Table 25.e. VM0015).

Project Year *t*	Areas affected by forest fires x Carbon stock change (decrease)		Total carbon stock decrease due to forest fires	
	ID_{cl} =	1	annual	cummulative
	$AUFPA_{icl,t}$	$Ctot_{icl,t}$	$\Delta CUFdPA_t$	$\Delta CUFdPA$
	ha	$tCO_2e\ ha^{-1}$	tCO_2e	tCO_2e
2021	0	0,0	0,0	0,0
2022	0	0,0	0,0	0,0

During the monitoring period, there were no significant emissions from catastrophic events in the Project Area during the monitored period (Table 21).

Table 21. Decrease in carbon stock due to catastrophic events (Table 25.f. VM0015).

Project Year *t*	Areas affected by catastrophic events x Carbon stock change (decrease)		Total carbon stock decrease due to catastrophic events	
	ID_{cl} =	1	annual	cummulative
	$ACPA_{icl,t}$	$Ctot_{icl,t}$	$\Delta CUCdPA_t$	$\Delta CUCdPA$
	ha	$tCO_2e\ ha^{-1}$	tCO_2e	tCO_2e
2021	0	0,0	0,0	0,0
2022	0	0,0	0,0	0,0

3.2.2.8 Total variation in carbon stock (ex-post) in the Project Area

The calculation of the total variation in carbon stock (ex-post) in the Project Area used the same methods described in items 6.1.2 and 6.1.3 of the approved VCS methodology VM0015, taking into account the changes observed during the monitoring period. The total variation in carbon stock due to unplanned and un-avoided deforestation in the Project Area was calculated using Equation 9.

$$\Delta CUDdPA_t = \sum_{y=1}^{t}\left(\sum_{icl=1}^{icl} AUDPA_{icl,y} * \Delta Ctot_{icl,t-y} - \sum_{fcl=1}^{fcl} AUDPA_{fcl,y} * \Delta Ctot_{fcl,t-y}\right) \quad (9)$$

Where:

ΔCUDdPAt: Total carbon stock changes due to unplanned and un-avoided deforestation in the Project Area in year t;

AUDPAicl,y: Unplanned deforested area in the initial forest class icl in year t in the Project Area within the project scenario;

ΔCtoticl,Ac: Loss of carbon stock in the initial forest class icl at the age of change Ac (number of years after the change in soil use and cover);

AUDPAfcl,y: Area of the final non-forest class fcl in year t in the Project Area after unplanned deforestation within the project scenario;

ΔCtotfcl,Ac: Gain in carbon stock in the final non-forest class fcl after deforestation at the age of change Ac (number of years after the change in soil use and cover).

The total change in the ex-post carbon stock of the Project Area in the project scenario during this monitoring period is shown in Table 22.

Table 22. Change in ex-post carbon stock in the Project Area (Table 21.b.2. VM0015)

Carbon stock changes per initial forest class *icl*		Total carbon stock change of initial forest class in the project area		Carbon stock changes per post-deforestation zone z		Total carbon stock change of post-deforestation zones in the project area		Total net carbon stock change of the project area	
ID_{icl}>	1	$\Delta CBSLPA_{icl,t}$	$\Delta CBSLPA_{icl}$	ID_{iz}>	1	$\Delta CBSLPA_{z,t}$	$\Delta CBSLPA_{z}$	$\Delta CBSLPA_{t}$	$\Delta CBSLPA$
Name>	Forest	annual	cumulative	Name>	Zone 1	annual	cumulative	annual	cumulative
Project Year *t*	tCO_2-e	tCO_2-e	tCO_2-e	Project Year *t*	tCO_2-e	tCO_2-e	tCO_2-e	tCO_2-e	tCO_2-e
2021	72.443	72.443	72.443	2021	33.840	33.840	33.840	38.602	38.602
2022	44.296	44.296	116.739	2022	34.421	34.421	68.262	9.875	48.477

3.2.2.9 Non-CO2 emissions from forest fires

Following the guidelines of item 6.2 of VM0015 (page 81), non-CO2 emissions from fires used to clear forests in the baseline have been omitted. According to item 1.1.4 of VM0015 v 1.1 (page 112), these events are subject to monitoring and should be accounted for in the project scenario when significant.

During the monitoring period, the forest fires that occurred were monitored and the result of the calculation of non-CO2 emissions indicated that the emissions were not significant for the period (Section 3.1.3.3). Therefore, non-CO2 emissions from forest fires were not reported.

3.2.3 Leakage Emissions (VCS, 2.5, 3.2, 3.6, 3.15, 4.3)

As defined in the VCS VM0015 methodology, deforestation detected above the baseline in the Leakage Belt area was considered to be leakage due to displacement. Therefore, leakage due to displacement activity was monitored by mapping the change in forest cover in the Leakage Belt. The activity data for the Leakage Belt area was determined using the same methods applied to mapping deforestation in the Project Area.

3.2.3.1 Total decrease in carbon stock (ex-post) in the Leakage Belt

Total deforestation in the Leakage Belt was 563.11 hectares in the monitored period, according to PRODES and MapBiomas Alert data.

As mentioned for the Project Area, the PRODES and MapBiomas data used to monitor the Leakage Belt also had their accuracy analyzed; the methodology and results of this analysis are described in section **Erro! Fonte de referência não encontrada.**. The data for the years 2021 and 2022 are shown in Table 23.

Table 23. Areas cleared annually in each zone within the monitored Leakage Belt (Table 13.c. VM0015).

Area establiseh after deforestation per zone within the leakage belt		Total monitored deforestation in the leakage belt	
IDz>	1		
Name>	Zone 1	Annual	Cumulative

Project year$_t$	ha	ha	ha
2021	62	62	62
2022	501	501	563

The total variation in carbon stock due to unplanned and un-avoided deforestation in the Leakage Belt was calculated using the following formula:

$$\Delta CBSLLK_t = \sum_{y=1}^{t}\left(\sum_{icl=1}^{icl} AUDLK_{icl,y} * \Delta Ctot_{icl,t-y} - \sum_{fcl=1}^{fcl} AUDLK_{fcl,y} * \Delta Ctot_{fcl,t-y}\right) \quad (10)$$

Where:

ΔCBSLLKt: Total carbon stock changes due to unplanned and un-avoided deforestation in the Leakage Belt in year t;

AUDLKicl,y: Unplanned deforested area in the initial forest class icl in year t in the Leakage Belt within the project scenario;

ΔCtoticl,Ac: Loss of carbon stock in the initial forest class icl at the age of change Ac (number of years after the change in soil use and cover);

AUDLKfcl,y: Area of the final non-forest class fcl in year t in the Leakage Belt after unplanned deforestation within the project scenario;

ΔCtotfcl,Ac: Gain in carbon stock in the final non-forest class fcl after deforestation at the age of change Ac (number of years after the change in soil use and cover).

Table 24. Change in ex-post carbon stock in the Leakage Belt area (table 21.c.2. VCS VM0015).

Carbon stock changes per initial forest class *icl*		Total carbon stock change of initial forest class in the leakage belt area		Carbon stock changes per post-deforestation zone z		Total carbon stock change of post-deforestation zones in leakage belt area		Total net carbon stock change of the leakage belt area	
ID_{icl}>	1	$\Delta CBSLLK_{icl,t}$	$\Delta CBSLLK_{icl}$	ID_{iz}>	1	$\Delta CBSLLK_{z,t}$	$\Delta CBSLLK_z$	$\Delta CBSLLK_t$	ΔCBSLLK
Name>	Forest	annual	cumulative	Name>	Zone 1	annual	cumulative	annual	cumulative
Project Year *t*	tCO_2-e	tCO_2-e	tCO_2-e	Project Year *t*	tCO_2-e	tCO_2-e	tCO_2-e	tCO_2-e	tCO_2-e
2021	36.381	36.381	36.381	2021	10.540	10.540	10.540	25.841	25.841
2022	223.040	223.040	259.421	2022	10.920	10.920	21.460	212.120	237.961

3.2.3.2 Total estimated ex-post leakage

The total ex-post changes in the carbon stock in the Leakage Belt due to displacement activities in this monitored period are presented in Table 25. Leakage was calculated as the difference between the ex-post and ex-ante analyses.

In this case, the result is that the value of the carbon stock change in the monitoring period for 2021 was less than zero (<0). Therefore, the ex-post leakage was set to zero for this year, as recommended in item 1.2 - Leakage Monitoring, of VCS VM0015.

For 2022, the deforestation that occurred in the leakage belt was higher than predicted by the baseline calculation and resulted in total ex-post carbon stock changes above what was recommended by VM0015. Thus, the total ex-post carbon stock changes in 2022 resulted in 6,401 tCO2-e.

Table 25. Total ex-ante and ex-post changes in the baseline carbon stock in the Leakage Belt.

Total net carbon stock change of the leakage belt area			Total net carbon stock change of the leakage belt area		Total ex-post Leakage	
ID_{iz}>	ΔCBSLLKt	ΔCBSLLK	ΔCBSLLKt	ΔCBSLLK	ΔCBSLLKt	ΔCBSLLK
Name>	annual	cumulative	annual	cumulative	annual	cumulative
Project Year *t*	tCO2-e	tCO2-e	tCO2-e	tCO2-e	tCO_2-e	tCO_2-e
2021	79.841	79.841	25.841	25.841	0	0
2022	205.718	285.559	212.120	237.961	6.401	6.401

3.2.4 GHG Emission Reductions and Carbon Dioxide Removals (VCS, 3.15, 4.1)

The reduction in anthropogenic GHG emissions was calculated according to equations 19, 20 and 21 of the VCS VM0015 methodology version 1.1 (equations 5, 6 and 7). The risk factor was reviewed in this monitored period and estimated using the Non-Permanence Risk Report, resulting in a VCS credit buffer (VBC) of 14%.

REDDt = (CBSLPAt + EBBBSLPAt) – (CPSPAt + EBBPSPAt) – (CLKt + ELKt) (11)

Where:

ΔREDDt: Reduction in ex-post anthropogenic GHG emissions attributed to the project's AUD activity in year t (tCO2e);

ΔCBSLPAt: Sum of changes in the baseline carbon stock in the project area in year t (tCO2e);

EBBBSLPAt: Sum of baseline emissions caused by biomass burning in the project area in year t (tCO2e);

ΔCPSPAt: Sum of ex-post carbon stock changes in the project area in year t (tCO2e);

EBBPSPAt: Sum of ex-post emissions caused by biomass burning in the project area in year t (tCO2e);

ΔCLKt: Sum of ex-post carbon stock changes due to leakage in year t (tCO2e);

ELKt: Sum of ex-post emissions due to leakage in year t (tCO2e);

t: 1, 2, 3 ... T, one year of the proposed crediting period (dimensionless).

VCUt = REDDt - VBCt (12)

VBCt = (CBSLPAt - CPSPAt) * RFt (13)

Where:

VCUt: Number of Verified Carbon Units that can be traded in year t (tCO2e);

ΔREDDt: Reduction in ex-post anthropogenic GHG emissions attributed to the project's AUD activity in year t (tCO2e);

VBCt: Number of buffer credits deposited in the VCS buffer in year t (t CO2-e);

ΔCBSLPAt: Sum of baseline carbon stock changes in the project area in year t (tCO2e);

ΔCPSPAt: Sum of ex-post carbon stock changes in the project area in year t (tCO2e);

RFt: Risk factor used to calculate the VCS buffer of credits (%);

t: 1, 2, 3 ... T, one year of the proposed crediting period (dimensionless).

State the non-permanence risk rating (%)	14%
Has the non-permanence risk report been attached as either an appendix or a separate document?	☒ Yes ☐ No The information from the Non-Permanence Risk Report was inserted into the VCS Platform Hub
For ARR and IFM projects with harvesting, state, in tCO2e, the Long-term Average (LTA).	Not applicable.
Has the LTA been updated based on monitored data, if applicable?	☐ Yes ☐ No Not applicable.
State, in tCO2e, the expected total GHG benefit to date.	223,811 tCO2e
If a loss occurred (including a loss event or reversal), state the amount of tCO2e lost:	Not applicable.

Vintage period	Baseline emissions (tCO_2e)	Project emissions (tCO_2e)	Leakage emissions (tCO_2e)	Buffer pool allocation (tCO_2e)	Reductions VCUs (tCO_2e)
08-Aug-2020 to 31-Dec-2020	88,035	0	0	8,810	54,119
01-Jan-2021 to 31-Dec-2021	169,410	0	0	16,288	100,052
01-Jan-2022 to 30-Sep-2022	74,189	0	0	6,236	38,306
Total	331,635	0	0	31,334	192,477

Vintage period	Ex-ante estimated reductions/ removals	Achieved reductions/ removals	Percent difference	Explanation for the difference
08-Aug-2020 to 31-Dec-2020	88.035	62.929	71%	During the monitored period, a deforested area was identified that it was not expected in the baseline. This fact reflected in the percent difference achieved by the project, which in the monitored period less emissions were avoided than the expected.
01-Jan-2021 to 31-Dec-2021	169.410	116.340	69%	
01-Jan-2022 to 30-Sep-2022	74.189	44.542	60%	
Total	331.635	223.811	67%	

3.3 Optional Criterion: Climate Change Adaptation Benefits

3.3.1 Activities and/or processes implemented for Adaptation (CCB, GL1.3)

Based on the project's validated causal model, describe activities and/or processes implemented to assist communities and/or biodiversity to adapt to the probable impacts of climate change.

The scenarios and impacts of climate change on traditional communities and biodiversity in the Amazon region and in the project region are described in section I). The objective of the Rio Preto-Jacundá REDD+ RESEX Project is to obtain Gold Label certification for Climate Change Adaptation Benefits, based on the actions implemented to provide significant support to communities and biodiversity, in order to facilitate adaptation to the possible impacts of climate changes, which are detailed in the following table.

Risks of climate changes	Potential effects	Activities carried out by the project
Increasing deforestation in tropical forests	- Decrease in forest cover; - Loss of natural habitats for biodiversity; - Loss of means of subsistence for local communities.	- Monitoring deforestation using satellite images and generating bulletins for Asmorex and SEDAM; - Monitoring the effectiveness of REDD+ activities using satellite images and field checks;
Decrease in biodiversity of fauna and flora in forests	- Increase in species at risk of extinction; - Reduction in species of fauna and flora;	- RESEX zoning: demarcation of areas suitable for fishing, hunting, forest management and full protection;
Longer dry periods and shorter, more intense rainy periods.	- Low land productivity; - Destruction of agricultural crops;	- Provision of technical and sanitary assistance in the production of manioc flour and fruit pulp;
Low capacity of local populations to adapt to the consequences of climate changes	- Damage to community communications for leisure or emergency purposes; - Damage to transportation infrastructure, such as roads, bridges and rivers; - Limited resources for adapting to climate changes.	- Implementation of an educational center for young people and adults; - Acquisition of computer equipment; - Facilitation of access to courses and distance learning; - Offering courses and training (GPS handling, botanical identification, REDD+ and climate changes lecture, computer course); - Acquisition of 2 antennas with internet and telephone; - Construction of houses to meet the housing needs of the communities and improve sanitary conditions in existing houses;

		- Construction of a community space in the riverside part of the Resex and improving the structure of the existing space on the mainland; - Maintenance of roads and branches within the Resex.
Risk to the health of local populations	- Increased spread of vector-borne diseases such as malaria and dengue fever; - Impacts on health infrastructure;	- Pediatric care for RESEX children; - Construction of 2 ambulatories (riverside and mainland); - Structure and materials for medical care provided by professionals from the Machadinho D'Oeste city hall.

3.3.2 Adaptation monitoring (GL 1.4)

The following table shows the activities carried out by the project and how they are contributing to adaptation to climate changes by communities and biodiversity.

Activity	Project achievements	Activities for adaptation by communities and biodiversity
Monitoring deforestation and surveillance of the project area.	- Monitoring deforestation using satellite images and generating bulletins for SEDAM and Asmorex - Monitoring the effectiveness of REDD+ activities through satellite images and field checks;	Monitoring deforestation is essential for mitigating adverse environmental impacts and promoting sustainable practices. Continuous assessment of forest cover will make it possible to track areas susceptible to deforestation within the RESEX, enabling the implementation of preventative measures and the adoption of responsible management strategies. In addition, regular monitoring will contribute to transparency and accountability, providing crucial data for environmental impact assessments.

Biodiversity monitoring	- RESEX zoning: demarcation of areas suitable for fishing, hunting, forest management and full protection;	Monitoring of fauna and flora biodiversity plays a fundamental role in understanding and preserving ecosystems. Continuous monitoring contributes to identifying endangered species and evaluating the success of project programs. Ultimately, preserving biodiversity not only maintains the health of ecosystems, but also ensures long-term sustainability by promoting a vital balance between humans and the environment.
Strengthening Family Farming and Sustainable Extractivism	- Provision of technical and sanitary assistance in the production of manioc flour and fruit pulp;	Training and technical assistance to improve skills in the extractivist way of life will be essential for the community to better adapt to the challenges of longer periods of drought and flooding.
Maintenance and installation of infrastructure for communities	- Implementation of an educational center for young people and adults; - Acquisition of computer equipment; - Facilitating access to courses and distance learning; - Offering courses and training (GPS handling, botanical identification, REDD+ and climate changes lecture, computer course); - Acquisition of 2 antennas with internet and telephone; - Construction of houses to meet the housing needs of the communities and improve sanitary conditions in existing houses; - Construction of a community space in the riverside part of the Resex and improving the structure of the existing space on the mainland; - Maintenance of roads and branches within the Resex.	In order to improve the communication and infrastructure conditions of the communities, the construction and maintenance of spaces and housing for families to have minimum housing conditions is essential, as well as the maintenance of roads and branches that give access to the more isolated areas of the Reserve. Equipment to facilitate day-to-day communication, such as the internet, is also a planned activity, as well as training and classroom and distance learning courses at the educational center.

Access to healthcare	- Pediatric care for communities in the project area; - Construction of 2 ambulatories (riverside and mainland);	To improve the health conditions of the communities, local health professionals will provide care to strengthen the provision of preventive health care. The construction of two ambulatories, one in the riverside sector and the other on mainland, complements this initiative by providing local infrastructure for medical services.

4 COMMUNITY

4.1 Net Positive Community Impacts

4.1.1 Community Impacts (CCB, CM2.1)

The implementation of the Rio Preto-Jacundá REDD+ RESEX Project was able to contribute with a number of benefits to the communities living in the Project Area. The positive impacts were achieved thanks to the Project's activities, which were basically divided into 11 main axes, as described in section **Erro! Fonte de referência não encontrada.**. Considering the monitored period, 33 families were positively impacted, 30 of which were divided into five communities, one riverside - Jatobá - and four located on the mainland - Cabeça de Boi, Jatuarana, Campo Novo, and Chibé. Of the 33 families living in the RESEX, three are further away and therefore don't consider themselves to belong to any of the existing communities, these being the riverside settlement of Bom Futuro and the mainland settlements of Manaus and Seringal Redonda.

For a better understanding of the impacts generated individually in the communities, a table was prepared showing the benefits obtained by all the members of the community, taking into account all the results studied, as well as a table of the positive impacts specific to each community, which in the case of this monitoring period included only the community of Jatobá, affecting 9 families. The understanding of the impacts considering a broader approach and a more specific approach according to the main theme were described in sections 4.1.3 and 4.3.1**Erro! Fonte de referência não encontrada.**, respectively.

Community group	All RESEX community members
Impact	1. community empowerment 2. Increased possibilities for improving income and strengthening extractivist culture 3. Training of community members 4. Improving community spaces within the RESEX 5. Improvement in quality of life

Type of benefit/cost/risk	Direct benefits
Change in well-being	1. Community members were empowered as they became increasingly active in deciding on the activities to be carried out within the RESEX by the REDD+ Project. Empowerment has occurred both through the role of ASMOREX managers, who are positions held by community members, and through the individual role of each community member in exercising their right to vote at General Assemblies. 2. One initiative that contributed to improving the community's income was the diagnosis of production chains. This study proposed recommendations for strengthening existing community enterprises and the production, marketing and decision-making processes for managing businesses and the territory. As soon as the diagnostic guidelines are put into practice in conjunction with the two agro-industries (built through investment by SEDAM), they will further strengthen the community's income generation. The two initiatives were able to be implemented due to the Multiple Use Management Plan, which provided guidelines on soil use and occupation within the RESEX, investments to improve the infrastructure, which provided a suitable space, making it a reference within the territory for setting up the agro-industry, and the project's investment in actions to encourage extractive culture in the communities. Furthermore, these actions increase the possibility of strengthening the extractivist culture as they are involved with the practice of collecting non-timber forest products. 3. The tele center and auditorium built in the Community Complex have made it possible for various courses to be held at the RESEX to boost the training of interested community members. The courses given were open to all residents and covered different topics, such as: a computer course, a botanical identification course, GPS handling training and a lecture on climate changes and REDD+. In addition, specific training in administrative and financial management was carried out with the Asmorex board by Rioterra. 4. Community members have benefited from infrastructure built within the RESEX, including the construction of the ASMOREX headquarters in the riverside sector, in the Jatobá community, with accommodation, a kitchen, toilets and a laboratory. 5. Community members have benefited from the purchase of a bouncer for children to use while their parents attend Asmorex events, such as General Assemblies, and from the purchase of a

	brush cutter to be attached to the tractor for collective use by all residents who need it to facilitate the preparation and maintenance of the soil in the fields, thus improving the quality of life for RESEX residents.

Community group	Jatobá Community - 9 families
Impact	1. Improvement of housing conditions
Type of benefit/cost/risk	Direct benefits
Change in well-being	(1) Three families from the Jatobá community benefited from the construction of a new home, guaranteeing an improvement in the quality of their housing and, consequently, their quality of life. In addition, one family from the Jatobá community benefited from the purchase of a solar pump to improve access to water.

4.1.2 Negative Community Impact Mitigation (VCS, 3.19; CCB, CM2.2)

Although the project's actions aim to promote positive impacts for the social actors in the project area, some negative impacts may occur. This way, as a mitigation measure, some points were worked on in the period under review based on the potential negative impacts raised during the process of designing and structuring the Rio Preto-Jacundá REDD+ Project - section 6.2 of the PD.

One potential negative impact for the community is linked to the influx of people from outside the Extractive Reserve due to the benefits generated by the project. The improvement in the living conditions of the community members present in the RESEX could be an attraction for people from outside the project area. The population increase in the RESEX, although foreseen and desired due to the strategic occupation of some points in the territory, when uncontrolled and unplanned can trigger negative impacts. As a mitigation measure, two main mechanisms have been put in place: choosing new families by assessing whether their production profile is compatible with the one in force at the RESEX and the implementation of an approval process for these families by the communities already present. These mechanisms are addressed in AMOREX's Social Statute, specifically in Article 7 of Chapter 3, which states that when people from outside the RESEX want to live there, they must be approved by all the members at the General Assembly, where all the community members have the right of evaluation on decisions involving the management of the RESEX. After the approval of the community members, the entry of new families is analyzed by SEDAM, which after its approval, the new residents are incorporated into the RESEX communities. This last stage was confirmed by the person responsible for coordinating the Conservation Units in Rondônia during an audit meeting.

Due to population growth and the occupation of new regions within the project area, there could be over-hunting and over-fishing of natural resources by community members. In addition, through greater access to information, community members become aware of more invasive hunting and fishing techniques, which could corroborate the negative impact. Mitigation of this potential impact was covered by the Multiple Use Management Plan (PMUM), which proposed species monitoring activities and measures, as presented, and

described in section **Erro! Fonte de referência não encontrada.**. In this section, it was also described the a pproach adopted to mitigate another possible negative impact in the project area, which consists of increased pressure on low-abundance species, especially flora.

In addition, all the activities that were carried out were monitored to track other negative impacts that could arise for the communities and for the HCVAs. The monitoring process was linked to the conflict resolution procedure - described in section **Erro! Fonte de referência não encontrada.** - allowing the implementing a gency to be aware of the impacts and act when necessary.

4.1.3 Net Positive Community Well-Being (VCS 3.19; CCB, CM2.3, GL1.4)

The socio-economic conditions of the communities impacted by the implementation of the Rio Preto-Jacundá REDD+ RESEX Project are positive compared to a scenario without the project. The positive impacts, which occurred during the monitored period, are related to the various activities developed and structured around 11 main axes: Governance and adaptive management, Health, Income improvement, Education, Youth and women, Environment, Social organization, Communication, Infrastructure, Financial Mechanism and Zoning. All the activities carried out were previously designed in the Life Plan, which took into account the perspectives and demands of each member of the community. Considering the project's resources, the highest priority activities were chosen according to the community's vision. These choices were made through informal meetings and formal meetings at General Assembly level.

In this way, the execution of different activities aimed at meeting the needs and demands of community members has had a number of positive impacts, highlighting the following:

- Empowerment of community members promoted by the various possibilities provided, such as: participation of community members in RESEX decision-making linked to the General Assemblies, increased social participation offered by the use of new community infrastructures, training of residents in various courses increasing their knowledge and skills, among others;

- Improved quality of life achieved through improved income and investments in health, sanitation, housing, infrastructure, training, communication, among others;

- Improved health of residents and increased life expectancy related to investments in the construction of an ambulatory that enabled medical care for all community members, as well as improvements in housing conditions with the construction of new homes for families.;

- Increased food security thanks to the purchase of agricultural inputs, such as the brush cutter attached to a tractor for collective use, which has made it possible to improve agricultural production;

- Maintenance of the benefits offered by ecosystem services through responsible use, obtained through the knowledge and skills acquired in the training courses, as well as by improving agro-extractive practices;

- Increasing the skills and knowledge of community members through the various training courses on topics such as IT, administrative and financial management, botanical identification, GPS handling, the environment, among others. In addition, the possibilities for expanding knowledge through internet access;

- Fostering the retention of young people in the RESEX, reducing the exodus to the city due to improvements in infrastructure and internet access;

- Promotion of gender equality in management positions due to the occupation of leadership positions by women in ASMOREX management;

- Improvement in the management of ASMOREX resources due to training in administrative and financial management, and the implementation of the practices described in the Jacundá REDD+ Financial Mechanism, focusing on better planning and organization of resources and investments linked to the RESEX;

Positive impacts were generated for community members due to the implementation of the Rio Preto-Jacundá REDD+ RESEX Project. As a result of the implementation of the activities financed by the project, positive results have been achieved that would not have occurred in the absence of the project. In this case, the marginalization of the residents would be linked to the maintenance of the status quo, as shown in the social diagnosis carried out in 2013, that is, the infrastructure would remain precarious, a large part of the families would remain deficient in terms of access to electricity and the internet, small-scale farming practices would remain unsupported due to the lack of agricultural implements and the community members would not have the skills and knowledge acquired through the courses offered during the monitored period. These and other contexts, as shown in the 2013 diagnosis, would continue to affect the lives of RESEX residents if the project were not implemented.

Among the strategies to help local communities in climate adaptation can be considered:

- Strengthening of community organization through the centralization of management by ASMOREX, the improvements provided, such as the training of managers in administrative and financial management, the empowerment of community members over RESEX decisions linked to the General Assemblies and the social participation offered by the new infrastructures;

- Training of community members through courses and access to new information through internet access, allowing them to diversify their livelihood strategies;

- Training for community members in botanical identification and the use of GPS, enabling them to become increasingly adept at knowing their territory and protecting the forest;

- Access to electricity through investments in photovoltaic kits, reducing the need to look for other GHG-emitting energy sources that are common in isolated Amazonian communities, such as diesel generators.

4.1.4 Protection of High Conservation Values (CCB, CM2.4)

The Zoning Workshop II conducted in February 2014 by the Project (section 2.6.2 of the PD) served as a guideline for identifying the potential High Conservation Value Attributes (HCVAs) related to the community present in the Project Zone, and in the end two main HCVAs were pointed out.

One of the main aspects raised by the community members were the areas of importance for the residents' subsistence, especially hunting, fishing, and the extraction of natural resources (non-timber forest products), which was represented as HCVA 5 - forest areas that are fundamental for guaranteeing the basic needs of local communities (e.g. subsistence, health, etc.). The other aspect raised by the community consisted of two sacred zones considered to be ancient rubber tapper cemeteries, which were represented as HCVA 6 - forest areas critical to the cultural identity of traditional communities (e.g. areas of cultural, ecological, economic, or religious significance).

Measures to protect HCVAs are linked to containing deforestation itself, since both attributes depend on the presence of forest cover for their maintenance and improvement. In this way, the protection of HCVAs is directly linked to the Project's activities, considering the three main scopes - climate, community and biodiversity - and especially to the climate actions that act directly to combat deforestation, such as the monitoring activity using satellite images. As can be seen in section **Erro! Fonte de referência não encontrada.**, the project has achieved results in terms of containing the deforestation expected to occur within the RESEX.

Another very important measure for the protection of the HCVAs was the development of the Multiple Use Management Plan (PMUM), especially section IV. Of particular note in this section is the implementation of the Zoning of the Rio Preto-Jacundá RESEX, aimed at the delimitation of zones within the Reserve with management objectives and specific rules, in order to provide the means and conditions so that all the objectives for the RESEX can be achieved in a harmonious and effective manner.

One of the zones established is the Sacred Zone, which delimits the area covered by the HCVA 6. The document sets out the objectives and rules, such as allowing only scientific activities, monitoring, and protection.

With regard to HCVA 5, there are three Zones that cover these areas: the Traditional Use and Multiple Use Zones, which have specific rules for hunting and fishing, oil extraction and seed and fruit collection as long as they are carried out with low impact and medium intensity and executed following a specific management plan, and the Forest Management Zone which is intended for forest exploitation with the aim of generating income and improving the community's quality of life, based on the sustainable use of biodiversity and, although the focus is on forest management, this zone allows hunting, fishing and seed and fruit collection.

In addition to the Traditional Use, Multiple Use and Forest Management Zones, the PMUM also established the Restricted Use Zone, which has the main objective the preservation in order to guarantee the reproduction of the RESEX's fauna and flora. This is the place where nature remains as unspoiled as possible, not tolerating any human alterations that cause medium or great impact, and it acts as a matrix for repopulating the other zones. It is an area that contains numerous springs, natural clay pits and different Phyto physiognomies. Its uses are limited to scientific research, monitoring, protection, and the extraction of non-timber forest products.

Another achievement presented in the PMUM refers to the updating of the Utilization Plan, which contains rules of use and the rights and duties of RESEX residents, with the aim of serving as a guide for residents to take care of nature's resources in order to guarantee the protection of the RESEX for future generations. The plan was designed and structured with the participation of the RESEX residents, based on their own knowledge and discussions. It deals with extractive and agricultural interventions and new interventions in the forest, the fauna, and the common use area. The plan also contains guidelines on inspections and penalties for non-compliance.

In this way, the project's activities were essential in promoting the maintenance of HCVAs, while also contributing, in a complementary way, to the development of mechanisms to mitigate possible impacts on HCVAs.

4.2 Other Stakeholder Impacts

4.2.1 Mitigation of Negative Impacts on Other Stakeholders (VCS, 3.18, 3.19; CCB, CM3.2)

Considering the actions implemented in the Rio Preto-Jacundá REDD+ RESEX Project, no negative impacts on other actors were expected. However, although the project's actions were aimed at promoting positive impacts, a guide was implemented to monitor any negative impacts that might arise. The measure adopted consisted of the conflict resolution procedure. Considering the focus on external actors, they can contact the channel that accesses the project's Implementing Body, made up of ASMOREX, CES Rioterra and Biofílica, either by e-mail, telephone or in person. Furthermore, in addition to this channel, meetings involving external actors, for example with CDREX, are spaces for raising any criticisms that may arise, given that the presence of the ASMOREX manager at these meetings makes it possible to build this bridge with other actors.

4.2.2 Net Impacts on Other Stakeholders (VCS, 3.18, 3.19; CCB, CM3.3)

The main focus of the REDD+ Rio Preto-Jacundá RESEX Project was the residents of the Project Zone. However, it was noted that the development of the project's activities has had a positive impact on other stakeholders. The main benefits achieved are as follows:

- Income generated by hiring local people and companies to build the infrastructure located within the RESEX, such as the community houses, the Asmorex headquarters in the riverside sector, among others;

- Encouraging improvements in management for other Extractive Reserves in the surrounding area, while the Rio Preto-Jacundá RESEX has become a model to be followed in terms of its administrative and financial management - a perception gained through ASMOREX's participation in CDREX meetings together with the managers of other Extractive Reserves;

- An increase in interest from other RESEX in the surrounding area in developing a REDD+ project, given that there is recognition of the positive results of the project and, above all, CUC/SEDAM's encouragement of these actions. This is directly linked to the openness of the participation of other actors in the events that take place within the RESEX, such as courses and training given, public consultations, actions to demonstrate the results of the project, inaugurations of infrastructures, among others (detailed description in section **Erro! Fonte de referência não encontrada.**), consequently spreading the appreciation of the s tanding forest;

- Maintenance of the benefits of ecosystem services, such as microclimate, water purification, pollination, among others, which have been promoted by forest and biodiversity conservation.

4.3 Community Impact Monitoring

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

The community's monitoring makes it possible to assess whether the project's activities are being effective in terms of the positive impacts expected for the communities. Furthermore, by monitoring the established indicators, it is possible to make the necessary adjustments to achieve the desired objectives and impacts. However, during the monitored period, some activities were not carried out, directly impacting on the

monitoring of some indicators. The reasons for these deviations are mentioned in section **Erro! Fonte de referência não encontrada.** of this document.

Regardless of these deviations, during the monitored period, the focus of the monitoring was on the communities located within the Project Zone. These are riverside and mainland (non-flooded areas) communities that were originally extractivists, but which in recent years have undergone an oscillating migration away from traditional extractivism and towards timber forest management. In addition, the families belonging to these communities have exclusively family agricultural production systems for their own subsistence. Especially in the riverside areas, due to the difficulty in accessing adequate infrastructure for production, they resort to burning to prepare the areas.

RESEX is currently made up of 5 communities and 3 placements (isolated families), totaling 33 families within the Extractive Reserve.

The description of the monitoring presented below was structured based on the activities that had been planned for development with the communities and which were implemented during this monitored period. The actions implemented can be divided into 11 main pillars: Governance and adaptive management, Health, Income improvement, Education, Youth and women, Environment, Social organization, Communication, Infrastructure, Jacundá REDD+ Financial Mechanism and Zoning.

During the monitoring period, no risks to community participation (GL2.3) in the project were identified, since there are no restrictions on soil use by the communities, nor on carrying out timber forest management activities, and furthermore, the process of choosing and carrying out activities for the communities is related to the actions planned under the Life Plan. As described in section 2.2 of the PD, the Life Plan was built in a participatory way among the community members during a workshop structured in different dynamics to identify actions that would benefit them and that could be carried out in connection with the Rio Preto-Jacundá REDD+ RESEX Project. Two dynamics were key to defining the activities to be carried out: the SWOT dynamic (strengths, weaknesses, opportunities and threats), which made it possible to identify the focal problems of the communities, and the Action Plan dynamic, in which the community members were encouraged to build a set of proposals for activities, with objectives, people responsible, partnerships, results and estimated budget, taking into account the local reality, community beliefs, values and principles.

Every year, prior to the current year, a decision-making process is carried out to choose the activities considered to be priorities according to the community's vision, based on the Life Plan and other suggestions or demands that arise from the communities. The process is structured around several meetings that take place among ASMOREX, CES Rioterra and Biofílica to understand the current situation, considering the needs and social context of the communities and the financial context of the project, in order to list the priority activities to be carried out in a given year. As a result of this process, the Work Plan is created, which consists of the prior planning of the project's activities for the year.

In order to monitor both the actions and the indicators, follow-up was carried out using activity reports produced by CES Rioterra, activity reports produced by resident and former ASMOREX president José Pinheiro (from 2008 to 2011, 2014 to 2018 and 2018 to 2021), approved annual Work Plans, as well as minutes of meetings and community assemblies, specifically the accountability meeting in which ASMOREX presents a report on the activities carried out with the project's resources. Depending on the activities, other resources were used to monitor the actions carried out. Where necessary, these have been described under each activity below. All documents were made available to the VVB team.

4.3.1.1 Governance and Administrative Management

The activities related to governance and adaptive management were intended to promote the continuous improvement of the project and its management. Among the planned activities are: **holding quarterly meetings of the management collegiate**, which was not held and was reported as a deviation from the project in section **Erro! Fonte de referência não encontrada.** of this document, holding meetings with r esidents to gather feedback on the effectiveness of activities and holding meetings to prioritize community investments. The indicator related to the actions that took place consists of "Strengthening governance".

With regard to the commitments to **hold meetings with RESEX residents to gather feedback on the effectiveness of activities** and to **hold meetings to prioritize community investments**, it is reliable to say that both activities are covered in practice through the Ordinary and Extraordinary General Assemblies and through meetings of the Executive Secretariat of the Jacundá REDD+ Financial Mechanism (better described under "Financial Mechanism").

The assemblies are the main space for exchange between all the RESEX community members, since their presence is essential for decision-making on any and all activities or actions that will be carried out by the REDD+ project. It's a space not only for strengthening this management, but also for exchanging and discussing the actions carried out, gathering feedback from the community members. The meetings of the Executive Secretariat of the Financial Mechanism are mainly focused on drawing up the annual Work Plan, defining the priorities, actions, composition of investments and activities, which is then discussed and approved by the community members. The definitions and guidelines governing these spaces can be consulted and viewed in section **Erro! Fonte de referência não encontrada.** of this document, in the A SMOREX Social Statute and in the Jacundá REDD+ Financial Mechanism, made available to the VVB.

Specifically with regard to **meetings to gather feedback from residents**, this activity was designed to increase the empowerment of community residents in the Rio Preto-Jacundá RESEX, as well as being powerful spaces for gathering residents' opinions, suggestions and needs. It was hoped that these meetings would start to be held from the first verification of the project and that they would be ongoing every six months. However, over the course of the project cycle, the assemblies became the ideal setting for such an activity and the periodicity was not strictly followed, since the agendas for the assemblies need to be defined in advance and published in the local newspaper, leading to bureaucracy in holding them every six months. Despite this, any community member can raise the need and call for this space.

With reference to the activities of **holding meetings to prioritize community investments**, it was conjectured that this activity would bring empowerment to the community, being linked to commitments that met the community's life plan. These were planned to take place at the beginning of each verification, but these meetings took place throughout the life of the project, mostly through assemblies for discussions linked to the project's work plan, since this is an issue that arises and is necessary at other times, not just when the project is being verified, as well as through meetings held by the Executive Secretariat of the Jacundá REDD+ Financial Mechanism, made up of ASMOREX (representing community members), Biofílica Ambipar and CES Rioterra.

To calculate the indicator, the minutes of the General Assemblies and meetings held in person or remotely covering discussions on investments were taken into account. It is important to note that the General Assemblies are ideal spaces for discussing the Project's resources with all the community members, as they serve to evaluate and approve the Work Plans. During the monitored period, there were 8 meetings involving the discussion of investments in the monitored period.

<table>
<tr><td>Data / Parameter</td><td>Strengthening of governance</td></tr>
<tr><td>Data unit</td><td>Number of implemented governance initiatives</td></tr>
<tr><td>Description</td><td>Records of the activities that occurred in the minutes of assemblies and meetings</td></tr>
<tr><td>Data source</td><td>Minutes of the ordinary and extraordinary assemblies and meetings of the Executive Secretariat of the Jacundá REDD+ Financial Mechanism</td></tr>
<tr><td>Description of the methods and procedures of measurement to be applied</td><td>The survey was carried out by recording the minutes of the meetings and assemblies in which the investments to be made within RESEX were discussed, separated by the type of meeting held and the months in which it took place.</td></tr>
<tr><td>Monitoring/recording frequency</td><td>Monthly and Annual</td></tr>
<tr><td>Monitored value</td><td>
<table>
<tr><th>Year</th><th>Month</th><th>Ordinary Assembly</th><th>Extraordinary Assembly</th><th>Meetings Executive Secretariat Financial Mechanism</th></tr>
<tr><td rowspan="2">2021</td><td>01</td><td>1</td><td>1</td><td></td></tr>
<tr><td>09</td><td></td><td>1</td><td></td></tr>
<tr><td rowspan="5">2022</td><td>01</td><td></td><td></td><td>1</td></tr>
<tr><td>02</td><td></td><td>1</td><td></td></tr>
<tr><td>05</td><td></td><td></td><td>1</td></tr>
<tr><td>06</td><td></td><td></td><td>1</td></tr>
<tr><td>08</td><td></td><td></td><td>1</td></tr>
</table>
</td></tr>
<tr><td>Monitoring equipment</td><td>Reading the minutes of assemblies and meetings</td></tr>
<tr><td>GQ/CQ procedures to be applied</td><td>Validation of systematized information with ASMOREX and CES Rioterra.</td></tr>
<tr><td>Purpose of the data</td><td>Understand the dynamics of specific meetings aimed at community investment and collecting feedback from residents</td></tr>
<tr><td>Calculation method</td><td>Counting in the minutes of assemblies and meetings</td></tr>
<tr><td>Comments</td><td>Throughout the project's life cycle, various meetings took place both internally and externally to the project's activities. At these meetings, it was possible to identify discussions and deliberations regarding investments, finances, cash flow, etc. The first stage for discussing investments takes place at meetings of the Executive Secretariat of the Jacundá REDD+ Financial Mechanism, where considerations are made about which investments are most pertinent to be prioritized given the needs of the community, and so the Work Plans are established. Subsequently, the plans are</td></tr>
</table>

	evaluated and voted on by the community members at ordinary and extraordinary general assemblies.

4.3.1.2 Health

Linked to six main activities, the actions relating to health were aimed at improving the community's health and increasing the quality of life and life expectancy of community members. Among the activities planned were: reviving popular medicine through training and booklets, training and maintaining at least one health agent per community, monitoring the quality of the water consumed in the RESEX, offering courses on disease prevention and family planning, acquiring and maintaining an ambulance and ambulancha (jet boat ambulance), and training and maintenance of a microscopist. The actions are covered by the indicators "Families benefiting from the REDD+ project", "Participants in courses", and "Number of courses and training courses".

With regard to "**rescuing popular medicine through training and booklets**", it was hoped to achieve natural solutions for less complex diseases and increase the availability of medicinal plants by rescuing popular forest medicine. Within the scope of the activity, Master's research was carried out at the Federal University of Rondônia (UNIR) by Master Leandro Ribas Amaral in 2018, where he characterized and described the ecological knowledge of RESEX community members about the non-timber forest products used or of potential use, permeating the hypothesis that traditional communities, because they have a historical context in forest areas, have extensive knowledge about plant resources, combined with their conservation and sustainable use (RIBAS, 2018).

In this study, interviews were conducted with 20 residents of the RESEX to understand their knowledge of non-timber forest products with various potentials, including medicinal use, characterizing species used to treat diseases or illnesses listed in the Intentional Classification of Diseases (ICD10). The research showed that ethnobotanical knowledge in the Rio Preto-Jacundá RESEX is concentrated among people between the ages of 41 and 60 and is evidently greater in relation to medicinal plants than in relation to other categories of species use. All the informants reported that their knowledge of non-timber forest products had been passed down from generation to generation, mainly through their parents and grandparents.

A total of 376 citations were made, identifying the use of 107 species, among which 72 different species were mentioned for medicinal uses, with Copaíba (Copaifera sp.), Jatobá (Hymenaea courbaril L.), Castanha-do-Brasil (Bertholletia excelsa Bonpl.) and Cipó-cravo (Tynnanthus fasciculatus Miers) standing out the most. From this research, the expected result of rescuing the popular medicine of the forest and natural solutions for minor illnesses was achieved. Among the indications for use of these species are: infections, anti-inflammatory, cicatrizant, the flu, combating anemia and calmative.

Data / Parameter	**Families benefiting from the REDD+ Project**
Data unit	Number of families
Description	Number of families benefiting from the survey carried out by the study on the ecological knowledge of RESEX community members about non-timber forest products used or products of potential use

Data source	Once the study was carried out within the RESEX, with the direct participation of community members, and the results are available for them to access, it was considered that all RESEX families could benefit from this survey, starting from the year in which the survey was conducted.
Description of the methods and procedures of measurement to be applied	A counting was made of the families living in the RESEX who have access to the results of the research carried out.
Monitoring/recording frequency	Annual
Monitored value	Year: Number of families 2021: 33 2022: 33
Monitoring equipment	Master's dissertation Leandro Ribas (2018)
GQ/CQ procedures to be applied	Validation of systematized information with ASMOREX and CES Rioterra.
Purpose of the data	To provide information on the families benefiting from carrying out a study that brings as its main reference the rescue of popular medicine within RESEX.
Calculation method	Spreadsheet count of the list of families and residents of the RESEX
Comments	-

With regard to the activity of "**maintaining a health agent per community**", the maintenance of a health agent in the RESEX was not established, however, as a way of providing medical care to community members, visits by external medical teams were carried out, using the infrastructures built with the investment of the REDD+ Project as a place of care, with the main objectives of improving the health of residents and increasing the life expectancy of community members.

The initial step in these actions was in May 2019, when a municipal health team was received and provided outpatient medical care to all RESEX residents. In these situations, ASMOREX provides logistical assistance to bring the community members, with the cost of fuel coming from REDD+ Project resources. In order to improve the conditions for medical care for RESEX community members, a medical clinic was built in the Community Complex, which has a space for care and a bathroom and was opened on May 23, 2020, becoming an appropriate space for the care of all the families of the Rio Preto-Jacundá RESEX.

In 2021 and 2022, the residents of RESEX were attended monthly by a doctor from the municipality of Machadinho D'Oeste. In addition, the REDD+ Project paid for the services of a pediatrician to attend the children of the RESEX, providing care in May and September 2021 (20 and 27 children, respectively) and in August 2022 (19 children). These services are extremely important, mainly because of the difficulty in accessing public health services due to the distance to be traveled by families.

To ensure that riverine families can be served, in 2022 a laboratory was built at the Asmorex headquarters in the riverine sector, in the Jatobá Community, with the project's resources. The laboratory is used by external teams and also has accommodation and a kitchen, mainly focused on detecting malaria in RESEX residents.

Thus, under the indicator "Families benefiting from the REDD+ Project", 33 families benefited from the activities listed above.

Data / Parameter	**Families benefiting from the REDD+ Project**
Data unit	Number of families
Description	Number of families benefiting from investments in infrastructure to support actions aimed at the health and well-being of the Project's community members.
Data source	Project activity reports and list of families and project's residents
Description of the methods and measurement procedures to be applied	Accounting for community members benefiting from health care provided within the RESEX in the infrastructures invested in by the project.
Monitoring/recording frequency	Annual
Monitored value	Year: Number of families 2021: 33 2022: 33
Monitoring equipment	Spreadsheet listing RESEX families and residents.
GQ/CQ procedures to be applied	Validation of systematized information with ASMOREX and CES Rioterra.
Purpose of the data	Provide information on the benefits generated for the community through the REDD+ Project.
Calculation method	Spreadsheet count of the list of families and residents of the RESEX
Comments	-

In relation to the activities of monitoring water quality, offering courses on disease prevention, acquiring and maintaining an ambulance and ambulancha (jet boat ambulance), and training and maintaining a microscopist, these were not carried out during the monitored period analyzed because they were not considered a priority by the community members compared to the other activities listed for receiving investments. Within the priorities for the use of resources, other activities were carried out, as can be seen in this section, because they were considered more urgent and strategic within the socio-economic context of the communities and their needs.

4.3.1.3 Income improvement

Within the scope of improving income, the main activities planned were: implementing and operating a fruit pulp agribusiness (including infrastructure, training and access to the market), adapting sustainable forest management in accordance with FSC standards, setting up and operating a carpentry shop to sell furniture, training and adapting to occupational health and safety, providing technical and sanitary assistance in the production of manioc flour and fruit pulp, and acquiring a tractor to mechanize the swidden. The general aim of the planned activities was to increase the income of the families within the RESEX in order to guarantee an improvement in their quality of life.

The **implementation and operation of a fruit pulp agribusiness (including infrastructure, training and market access)** was intended to improve the income of the families present in the RESEX by perpetuating the extractivist culture and the responsible use of biodiversity resources, while also contributing to their food security. As the activities related to this indicator have not yet actually begun, due to the prioritization of other investments, no direct results indicators have been listed, only the actions already carried out have been described below.

In 2019, due to the good results that the Rio Preto-Jacundá RESEX had been showing in terms of economic activities, such as forest management, improved management and investments in infrastructure, through an investment action by the State Government, through CUC, an environmental compensation process, the RESEX was chosen to receive the infrastructure of two agro-industries, for the processing of açaí and manioc flour. These infrastructures were built near the Community Complex, located in the Jatuarana community.

Based on these improvements achieved by the state government and with a view to expanding the possibilities for collective investments and, consequently, improving people's lives, a call for tenders was launched on May 27, 2019, to hire a specialized company to carry out diagnoses of the Brazil nut, açaí and manioc production chains, with the aim of learning about the potential that exists in the RESEX to implement actions under the project. In this sense, among the proposals received, the NGO Pacto das Águas became the legitimate holder of the contractual concession to carry out the diagnoses, with funding from the REDD+ Project.

In September 2019, the first product of the study was the work plan drawn up by the contracted company, based on the Socioeconomic and Environmental Diagnosis of the Rio Preto-Jacundá REDD+ RESEX Project, carried out by Rioterra and Biofílica in partnership with UNIR (Federal University of Rondônia) between 2012 and 2013. The initial aim was to coordinate the forms of social and political representation of the extractivists and the institutions involved (SEDAM and Rioterra) in order to build alternative ways of generating income based on structuring chains of non-timber forest products, as well as strengthening social structures and maintaining the standing forest. As a second product, Pacto das Águas produced a diagnostic report on production chains in December 2019. The document proposes ways of strengthening these chains as an environmental and territorial management strategy and as an alternative way of generating income for RESEX community members. Due to the COVID-19 pandemic, the activities to present the results to community members were postponed and held in August 2022, when the RESEX families were given feedback for later use of these analyzes.

With regard to the **purchase of a tractor to mechanize the swidden**, it was hoped that the equipment would help with the responsible use of biodiversity resources by reducing the use of fire in agricultural practices and making more efficient use of areas that were already open and covered with brush. It was also hoped

that this investment would help increase family income and empower residents through the mechanization of agricultural production. A tractor was purchased in 2016 through a parliamentary amendment from a state deputy. As the management of the project's resources was being developed, at the time this acquisition was not directed through the REDD+ Project, so the financing of the tractor did not use the REDD+ Project's resources. After the consolidation of knowledge about management among the ASMOREX entities, improvements were made using resources from the Rio Preto-Jacundá REDD+ RESEX Project, such as agricultural implements. In 2018, a lime spreader, a tractor coupled harrow for mechanization and a tractor trailer were purchased, and in 2021, a brush cutter was purchased for the tractor for collective use by the community members, with a view to improving the soil for planting manioc and other crops.

The activity of **providing technical and sanitary assistance in the production of manioc flour and fruit pulp** aimed to increase the income of families within the RESEX and access to more demanding markets, by adapting production to sanitary rules and obtaining quality and inspection certificates. Technical assistance actions were counted and included support for mechanization and the marketing of the community members' products. The indicators related to activities are represented by the indicator "Families benefiting from the REDD+ project".".

This important implemented initiative consisted of assistance with both field procedures and logistics for transporting the production. Several families benefited from harrowing the soil for planting manioc and received logistical support. In October 2020, the Cabeça-de-Boi community and Seringal Redonda were supported with soil mechanization, totaling six families. In February 2021, a family from the Jatuarana community was supported with harrowing activities and in May 2022 three families, of the Jatuarana, Campo Novo and Cabeça de Boi communities, were benefited with soil mechanization for the planting of cassava and other cultures.

<table>
<tr><td>Data / Parameter</td><td>Families benefiting from the REDD+ Project</td></tr>
<tr><td>Data unit</td><td>Number of families</td></tr>
<tr><td>Description</td><td>Number of families benefiting from the Project's social investments in the acquisition of tractor implements for mechanizing the swidden</td></tr>
<tr><td>Data source</td><td>Project activity reports and a list of Project's families and residents</td></tr>
<tr><td>Description of the measurement methods and procedures to be applied</td><td>Analysis of the actions carried out by the project and the community beneficiaries</td></tr>
<tr><td>Monitoring/recording frequency</td><td>Annual</td></tr>
<tr><td>Monitored value</td><td><table><tr><td>Year</td><td>Number of families</td></tr><tr><td>2020</td><td>6</td></tr><tr><td>2021</td><td>1</td></tr><tr><td>2022</td><td>3</td></tr></table></td></tr>
<tr><td>Monitoring equipment</td><td>Spreadsheet listing RESEX families and residents.</td></tr>
</table>

GQ/CQ procedures to be applied	Validation of systematized information with ASMOREX and CES Rioterra.
Purpose of the data	Provide information on the benefits generated for the community through the REDD+ Project in terms of the families benefiting from the mechanization of the swidden.
Calculation method	Counting RESEX families and residents based on the evidence
Comments	-

In relation to the activities of **adapting sustainable forest management in accordance with FSC standards**, **setting up and operating a carpentry shop to sell furniture** and **training and adjustments in relation to health and safety at work**, these were not carried out during the monitored period analyzed because they were not considered priorities by the community members compared to the other activities listed for receiving investments. Within the priorities for the use of resources, other activities were carried out, as can be seen in this section, because they were considered more urgent and strategic within the socio-economic context of the communities and their needs.

4.3.1.4 Education

The main objectives of the activities relating to education are to reduce the illiteracy rate, improve the self-esteem of the residents, increase their contact with current issues that can favor the project, diversify their skills and encourage young people to stay in the RESEX, reducing the exodus to urban centers. Three activities were planned: setting up an educational center for young people and adults, acquiring computer equipment and facilitating access to courses and distance learning. All the activities applied to the Education scope were financed via the Rio Preto-Jacundá REDD+ RESEX Project.

As a way of improving the living conditions of RESEX residents, the construction of various infrastructures was planned. Among them, the "tele center" (computer room) was built in 2019 as part of the "**implementation of an educational center for young people and adults**" activity, giving community members the opportunity to access technology. The tele center is located in the Jatuarana Community along with the other infrastructures of the Community Complex and is open for use by all RESEX community members. Regarding the "**acquisition of computer equipment**" activity, in 2019 four computers were installed in the tele center, thus facilitating internet access for the entire RESEX, especially for residents in the school phase to develop studies, school research, among other activities, in addition to serving as support for researchers from partner universities and other bodies. A server, Win10PRO programs, Office 2016 package and antivirus were installed on each of the 4 computers, as well as configuring them in the terminal in an interconnected way. These actions meet the indicator "Families benefiting from the REDD+ Project", but during the current monitoring period the community did not identify the need for further investment in these activities.

With regard to the activity of "**facilitating access to courses and distance learning**", meeting the indicators "Number of courses and training" and "Participants in courses", courses and training were held on a variety of topics in order to expand skills and knowledge, as well as promoting the training of RESEX residents on subjects that are of interest to the community and that can favor the project.

In 2019, a computer course was purchased for community members by the company Smart Machine, with a contract running until November 2022. The course was held at the tele center, offered free of charge to the entire community, and was designed to cater for students of all age groups, from 8 years old upwards,

who can read. The course came about as a way of offering residents opportunities to occupy administrative positions in the town or in the association that require computer skills. Classes lasted four hours a week, with students having access to interactive videos, teaching simulators and lessons covering two modules: basic (learning to type, interacting with the computer, learning about Windows, the Basic Office Package and interacting with social networks) and advanced (learning more complex web development and creation software). At the beginning of the course in 2019, 23 students participated in classes and in 2020, 17 students. During this monitoring period, in 2021 the course had 19 people, until, in 2022, 10 people completed one and/or two modules of the course, in which completion certificates were issued.

Also in 2019, and in force until the period of this monitoring, a computer technician was hired, who, among the activities described in the service contract made available to the VVB team, coordinates the actions of the ASMOREX tele center, supervises the use of computers, supports community demands regarding the need to use equipment for studies and research and provides assistance, including training and guiding the correct use of equipment, allowing residents to have greater access to communication and learning tools.

As part of biodiversity monitoring, two botanical identification trainings were held: a more basic one on July 2, 2020, run by the company Ecoporé, and a more in-depth one that lasted from November 29 to December 6, 2021. The latter, which is covered by the monitoring period for this document, was held by the partner CES Rioterra and was attended by an average of 11 people a day. The activity was important for avoiding errors in the identification of species and genera within the scope of the forest inventory carried out by Asmorex for the forest management of RESEX.

Also with the main focus on people who work with forest inventory and timber forest management, Rioterra held a workshop on the use and handling of GPS from July 6 to 8, 2022, attended by 10 people.

A lecture on climate changes and REDD+ was held by Rioterra for the residents of the RESEX, with the aim of refreshing them on the subject and especially for the young people, who at the beginning of the project were children and today have grown up and need to understand the REDD+ Project. The lecture took place on August 6, 2022 in the auditorium of the community complex and was attended by 27 people.

Thus, considering two years of the computer course, the second training in botanical identification, the GPS training and the educational lecture, the activities covered 93 people in total during this verification period.

Data / Parameter	Number of courses and training
Data unit	Number
Description	Number of courses and training within the project's thematic axes
Data source	Project activity reports and attendance lists
Description of the measurement methods and procedures to be applied	The courses and training held for the residents of the Rio Preto-Jacundá RESEX were recorded in an activity report (all of which were made available to the VVB team), as well as having an attendance list and photographic records
Monitoring/recording frequency	Annual
Monitored value	Year | Number of courses

	2021: 2 2022: 3
Monitoring equipment	Attendance list and photographic record
GQ/CQ procedures to be applied	In all courses, workshops and training sessions held, an attendance list was issued (containing space to fill in name, CPF, telephone number, Institution/Entity belonging and signature).
Purpose of the data	Provide information on the benefits generated for the community through the investments made by the REDD+ Project
Calculation method	Count of courses held
Comments	-

Data / Parameter	**Course participants**
Data unit	Number
Description	Number of people who took part in the courses offered within the thematic axes
Data source	Project activity reports and attendance lists
Description of the measurement methods and procedures to be applied	The courses and training given to the residents of the Rio Preto-Jacundá RESEX were recorded in activity reports (all of which were made available to the VVB team), as well as having attendance lists and photographic records. From the attendance lists, it was possible to count the number of participants in each course.
Monitoring/recording frequency	Annual
Monitored value	Year: Number of participants 2021: 42 2022: 47
Monitoring equipment	Attendance list and photographic record
GQ/CQ procedures to be applied	In all courses, workshops and training sessions held, an attendance list was issued (containing space to fill in name, CPF, telephone number, Institution/Entity belonging and signature).
Purpose of the data	Provide information on the benefits generated for the community through the investments made by the REDD+ Project
Calculation method	Counting in attendance lists
Comments	-

4.3.1.5 Environment

The activity focused on the environment, represented by the **workshops and the preparation of environmental education booklets**, was aimed at incorporating different skills and capacities among the residents on the subjects of solid waste, composting, recycling, agroecological techniques and organic production.

Other actions were contemplated considering the scope of this activity, such as the return of the results of the diagnosis of the açaí, Brazil nut and flour production chains, which was previously covered in the " Income improvement" theme (section 4.3.1.3), as well as the training in botanical identification and the lecture on climate changes and REDD+, already mentioned in the " Education" theme (section 4.3.1.4). As these activities have already been accounted for, they were not included in the indicator for this theme.

4.3.1.6 Social Organization

The activities aimed at social organization have the following principles: to guarantee an improvement in the resources managed, to expand the skills and capacities of residents to benefit the community as a whole, to progressively reduce dependence on external agents, to reduce social conflicts and to provide better management of these conflicts. Two main activities were planned: the promotion of workshops to train ASMOREX and COOPEREX board members in management and finance, and the structuring of internal committees to empower all residents and decentralize the Association.

In the last monitoring period, various activities were carried out, including courses, training and workshops, including the **promotion of workshops to train board members in management and finance**, the first of which was held in January 2017 and the last in November as follows:: Social Strengthening workshop with an emphasis on participation in associations and drawing up ASMOREX's financial application plan, 6-module course on administrative and financial management, Management and Social Organization course to meet ASMOREX's demands, Social Organization course on strategies for using the community complex's space, cash flow update training and financial training for ASMOREX members.

Due to the COVID-19 pandemic that began in March 2020 in Brazil, less urgent activities were avoided so as not to expose community members, so training in management and finance was not carried out in an organized manner for the Asmorex board and other interested residents. The ASMOREX board was given support in administrative and financial management, such as drawing up cash flows and work plans, with the support of Rioterra, which was not accounted for as it took place during meetings between the partners.

In relation to the activity of **structuring internal committees to empower all residents and decentralize the Association**, it was not carried out within the monitored period because there was no decentralization of RESEX management considering the main actors responsible for its management.

The current centralized configuration of ASMOREX benefits the community members, since centralization in a single actor allows the community members' demands and interests to be better addressed. Furthermore, the very constitution of ASMOREX aims to strengthen the community as a whole, given that its functions correspond to the good management of the RESEX and the interests of all the community members, as stated in Article 2 of ASMOREX's Social Statute. All those over the age of eighteen who carry out sustainable extractive activities and/or are residents of the RESEX, in accordance with Article 7 of this Statute, are considered members and therefore have the right to vote and be voted into elected positions, take part in General Assemblies and vote on agendas proposed by the board of directors. Therefore, the

current organizational mechanism allows every community member to participate in ASMOREX's decisions, both as an elected member of ASMOREX's board of directors and by voting on decisions.

4.3.1.7 Young people and Women

The main objective of the activities related to young people and women was to promote gender equality in management and production positions, enabling women to take on leadership and management roles within the family and community. Within this scope, two activities were planned: promoting workshops to train leaders, with a focus on young people and women, and structuring an internal committee made up of women to access public policies and guarantee rights.

Regarding the **promotion of leadership training workshops focused on young people and women**, no training was carried out due to the COVID-19 pandemic that began in March 2020 in Brazil. Because of this, less urgent activities were avoided in order not to expose community members, so leadership training was not carried out in the current monitoring period.

During the previous monitoring period, various training sessions were held on the topic of management and finance, as described in the above topic "Social organization" (section 4.3.1.6). The trainings were aimed at both the ASMOREX board and other RESEX community members who were interested in participating and acquiring management and financial skills. In addition, for the courses given via Rioterra, 50% of the places were reserved for women and young people in order to maintain equity. Other descriptions related to the impact of the projects on women can be found in section **Erro! Fonte de r eferência não encontrada.**.

In relation to the activity of **structuring an internal commission made up of women to access public policies and guarantee rights**, this was not carried out during the monitored period because the management of the RESEX was not decentralized, considering the main actors responsible for its management. Even so, the participation of women in ASMOREX's administrative structure has always been widely encouraged, since the current ASMOREX board has a significant number of women in various positions, including the presidency.

4.3.1.8 Communication

The actions carried out in the area of communication were aimed at improving the quality of life of the residents, increasing access to different subjects that could benefit the project and, consequently, the community members, by speeding up communication and access to the internet. Two main activities were planned: the purchase of 4 ham radios (1 for each community and 1 at the Association's urban headquarters) and the purchase of 2 antennas with internet and telephone.

With regard to the **acquisition of 4 ham radios**, there were already 4 ham radios in the following locations that serve the entire RESEX: ASMOREX headquarters in Machadinho D'Oeste (1), Jatobá Community (1), Cabeça de Boi Community (1) and Jatuarana Community (1). Because of this, only maintenance was carried out in 2018, with the purchase of batteries, photovoltaic modules, and other necessary equipment, which was financed by the REDD+ Project. Since the internet and telephone are used on a larger scale, no new ham radios were purchased or maintained during the monitored period, prioritizing, and allocating financial resources for investment in these two other means of communication.

Due to the communication difficulties faced by some communities in the Rio Preto-Jacundá RESEX, the **"acquisition of 2 antennas with internet and telephone"** activity was designed to meet the needs of some

families in terms of improving their means of communication. In 2019, a satellite internet kit was installed in the Jatobá community. In 2020, a radio internet tower was installed in the Campo Novo community. During this installation, there was a problem with the transportation of materials for fixing the tower, which was solved by transferring them from the Jatuarana community to the Campo Novo community, where the tower was installed. The purchases were made using funds from the REDD+ Project. In 2020, internet equipment was installed in response to the Federal Government's digital inclusion program, Governo Eletrônico em Serviço de Atendimento ao Cidadão (GESAC). The equipment was installed in the Jatuarana and Cabeça de Boi communities. Thus, up until the last monitoring period, 8 families from the Jatobá community, 5 families from the Campo Novo community, 6 families from the Jatuarana community and 7 families from the Cabeça de Boi community had benefited from the activities listed above.

During the current monitoring period, the communities did not identify the need to purchase any internet antennas, as the other communities that had not yet been provided with antennas opted to contract the service individually.

4.3.1.9 Infrastructure

The infrastructure activities were structured into four main activities: building houses to meet the housing needs of the communities and improving sanitary conditions in existing houses, building a community space on the riverine side of the RESEX and improving the structure of the existing space on the mainland, setting up three communities in strategic locations, settling a total of 12 families, and maintaining the roads and branches within the RESEX. These activities are in line with the indicator "Families benefiting from the REDD+ project".

The first proposed activity, which involved **building houses to meet the housing needs of the communities and improving sanitary conditions in existing houses**, had the objective of improving the quality of life and health of the residents, while also enabling them to remain in the RESEX. All the houses built were financed via the REDD+ Project.

Regarding the construction of houses, in October 2018 the first contract was signed with J.J. Construções e Montagens Industriais Ltda and in May 2019 the construction of 5 houses was completed, serving one family from the Jatuarana community, two families from the Campo Novo community and two families from the Cabeça de Boi community. In March 2020, two more houses were completed, serving the Campo Novo community. In September 2019 and October 2019, two more contracts were signed for the construction of 1 and 4 houses, respectively. Thus, in December 2019, 5 riverside families from the Jatobá community were benefited. Thus, in the last verified period, 12 families benefited from the construction of houses.

In relation to the current monitoring period, in May 2021 a contract was signed with HS Félix Serralheria for the construction of 5 houses. Three houses were built in the Jatobá community in the riverside sector and delivered in 2021. Also in 2021, a family from the Jatobá community benefited from the installation of a solar pump. In this way, 4 families were benefited, guaranteeing an improvement in the housing and quality of life of the RESEX residents who were contemplated with these actions.

Data / Parameter	Families benefiting from the REDD+ Project
Data unit	Number of families
Description	Number of families benefiting from the project's investment in the construction of houses for housing improvement

Data source	Project activity reports and a list of Project's families and residents
Description of the measurement methods and procedures to be applied	Analysis of the actions carried out by the project and the community beneficiaries, such as the construction of houses and other improvements in sanitary conditions.
Monitoring/recording frequency	Annual
Monitored Value	Year: Number of families 2021: 4 2022: -
Monitoring Equipment	Spreadsheet listing RESEX families and residents.
GQ/CQ procedures to be applied	Validation of systematized information with ASMOREX and CES Rioterra.
Purpose of the data	Provide information on the benefits generated for the community through the REDD+ Project in the construction of houses, for housing improvement
Calculation Method	Spreadsheet count of RESEX families and residents
Comments	-

The second activity, which consists of **building a community space in the riverside part of the RESEX and improving the structure of the existing space on the mainland**, is related to the indicator "Families benefiting from the REDD+ project". The construction of these infrastructures aims to increase community participation by improving decision-making processes, as well as promoting organized occupation of the territory by improving the space for moments of community interaction.

Contemplating the improvement in the structure of the existing space on the mainland, in relation to the last verified period, the community members of the entire RESEX benefited from the construction of the Community Complex on the premises of the Jatuarana Community, which included the following works: in 2018, a warehouse was built to house the association's vehicles and agricultural implements, and in 2019 the construction included an auditorium, a computer room, a canteen, a block of toilets, an office for the board of directors, and was subsequently contemplated in the same year with the drilling of an artesian well and the installation of a water tank, allowing water to be distributed in the community complex. In order to improve the functionality and use of the space, some appliances and electronics were purchased, such as notebooks, printers, air conditioning and others. Other improvements were built within RESEX, addressing the themes of "Health", "Improving income" and "Education", and are described in the respective themes of this section. In 2019, the computer room, also known as a tele center, and an auditorium were built. In 2020, other complementary works were carried out, including accommodation and an ambulatory. In this way, 8 infrastructure projects were completed within the RESEX in the last period checked.

In relation to the current monitoring period and taking into account the activity of building community space in the riverside part of the RESEX, in September 2022 the Asmorex headquarters in the riverside sector was handed over, located in the Jatobá community. The space was built in order to have a fixed base for Asmorex in the riverside area, thus improving governance over the RESEX area and facilitating the

participation of the riverside communities in collective activities, improving decision-making processes. The structure has lodgings, a kitchen, toilets, and a malaria detection laboratory for the communities of the riverine sector.

Considering the work carried out, all the residents of the RESEX have benefited since they can all enjoy the facilities available at the headquarters of the riverside part, thus totaling 33 families benefited since the construction was completed.

<table>
<tr><td>Data / Parameter</td><td>Families benefiting from the REDD+ Project</td></tr>
<tr><td>Data unit</td><td>Number of families</td></tr>
<tr><td>Description</td><td>Number of families benefiting from the project's investment in building community space in the riverside sector</td></tr>
<tr><td>Data Source</td><td>Project activity reports and a list of Project's families and residents</td></tr>
<tr><td>Description of the measurement methods and procedures to be applied</td><td>Analysis of the actions carried out by the project and the community members who benefited from the construction of infrastructure in the riverside sector</td></tr>
<tr><td>Monitoring/recording frequency</td><td>Annual</td></tr>
<tr><td>Monitored value</td><td><table><tr><td>Year</td><td>Number of families</td></tr><tr><td>2021</td><td>-</td></tr><tr><td>2022</td><td>33</td></tr></table></td></tr>
<tr><td>Monitoring equipment</td><td>Spreadsheet listing RESEX families and residents.</td></tr>
<tr><td>GQ/CQ procedures to be applied</td><td>Validation of systematized information with ASMOREX and CES Rioterra.</td></tr>
<tr><td>Purpose of the data</td><td>Provide information on the benefits generated for the community through the REDD+ Project in the construction of community space in the riverside sector</td></tr>
<tr><td>Calculation method</td><td>Spreadsheet count of RESEX families and residents</td></tr>
<tr><td>Comments</td><td>-</td></tr>
</table>

At first, it was planned **to set up three communities in strategic locations, settling a total of 12 families**, with the aim of reducing deforestation through a greater physical presence on the unprotected boundaries of the RESEX, while also contributing to better use of forest products in uninhabited places. Given the instability of the areas bordering the project area, reflected in violence and deforestation in the region, as pointed out in section **Erro! Fonte de referência não encontrada.**, it was understood that this action could p ose risks to community members who would be somewhat isolated within the context of the location of the existing communities.

As with prioritizing the safety of community members, there has been no planned and intentional relocation. The possibility of occupying these areas, which are considered strategic, would occur as soon as new

families entered the RESEX, in order to maintain the strategic occupation and avoid further densification of the existing communities.

With regard to the **maintenance of the roads and branches within the RESEX**, this maintenance was carried out by Madrex in order to improve the roads for the movement of tractors and trucks for timber forest management, which ended up benefiting the residents who use the roads and branches, and was therefore not accounted for as a result of the REDD+ Project.

4.3.1.10 Jacundá REDD+ Financial Mechanism

Among the activities carried out in the Jacundá REDD+ Project, between February and May 2014, workshops were held called "Construction of the Life Plan and "Construction of the Benefit Sharing and Conflict Resolution Mechanism", which culminated in the decision on the mission, characteristics, form of conflict resolution, governance, among others, of a financial mechanism that should guide the sharing of the benefits of the REDD+ Project for the communities existing within the Rio-Preto Jacundá RESEX. As mentioned in section **Erro! Fonte de referência não encontrada.**, this mechanism came to be called the " Jacundá REDD+ Financial Mechanism".

The **structuring, implementation and monitoring of the Mechanism** began on November 8, 2016, with a meeting attended by ASMOREX, Biofílica, CES Rioterra and SEDAM. Since then, several other meetings have been held in 2017 with the aim of carrying out collective construction and validating the terms of the agreement between the parties.

These meetings resulted in a mechanism guided by collegiate management, representative and committed to community concerns, transparency, and publicity of all its actions, the application of benefits and resources exclusively for the RESEX community, the representative participation of community members, credibility and legality, and environmental conservation. With the aim of financially supporting the RESEX, it is the right instrument for sharing the benefits coming mainly from the REDD+ Project's resources.

The implementation of the Resources of the Jacundá REDD+ Financial Mechanism for the first Cycle were made available by Biofílica in the Jacundá REDD+ Financial Mechanism Account (managed by ASMOREX) after the approval of the Annual Work Plan in 2018, carried out through the ASMOREX Extraordinary General Assembly, according to the minutes dated 27.03. 2018, of the First Ordinary CDREX Meeting of 2018, dated 13.04.2018, as well as the CDREX Resolution, approving ASMOREX's planning for the application of REDD+ Jacundá resources, in the total amount of R$ 1,637,479.54, duly approved by SEDAM's technical area, for the year 2018, and published in the Official State Gazette, referring to the first Cycle of the REDD+ Jacundá Financial Mechanism.

The Executive Secretariat of the REDD+ Financial Mechanism (made up of Biofílica, ASMOREX and CES Rioterra) is responsible for drawing up the Annual Work Plan, which defines the priorities, actions, composition of investments and activities related to the subsequent 12-month period ("Cycle") of the Jacundá REDD+ Financial Mechanism, always based on the Investment Policy. This plan undergoes approval by the community through a General Assembly and, six (6) months after its approval, the Annual Work Plan can be evaluated and revised, with the possibility of making adjustments, if necessary, and the revision is subject to deliberation by the Community, via a General Assembly to be held extraordinarily.

All the benefits described in the previous items in this section were achieved using this methodology. Thus, within the monitoring period of this report, 2 Work Plans for investments in RESEX were approved and

implemented for the 2021 and 2022 cycles. These activities are in line with the "Strengthening governance" indicator.

Currently, the document that celebrates the agreement to set up the Jacundá REDD+ Financial Mechanism has been finalized and is just awaiting signature by CDREX, which should be done at a meeting with the members of the Council. However, the activities described in the tool have been in practice in the project since the start of the carbon credit sales, in fact the documentation will only serve to legally formalize the good practices described above that are already applied by the project proponents.

As the project's investments began in 2018, it was expected that the **accounting audit** would occur in 2020, but due to the COVID-19 pandemic, this activity was halted and resumed in 2021. Thus, financial/accounting auditing services were contracted for the 2021 and 2022 cycles, helping to strengthen RESEX's governance, as described in the mechanism:

"The Jacundá REDD+ Financial Mechanism will have its accounting and financial transactions audited every two (2) Annual Work Plan Cycles by an independent third party, duly registered with the Brazilian Securities and Exchange Commission (CVM), which will be chosen by the REDD+ Financial Mechanism Executive Secretariat at a specific meeting on this subject, upon the submission of three (3) proposals, and this period may be reduced if the REDD+ Financial Mechanism Executive Secretariat deems it necessary."

<table>
<tr><td>Data / Parameter</td><td>Strengthening of governance</td></tr>
<tr><td>Data unit</td><td>Number of governance initiatives implemented</td></tr>
<tr><td>Description</td><td>Records of the activities that occurred in the minutes of assemblies and meetings with regard to the construction of the Financial Mechanism, planning meetings, approval and revision of the Work Plan, the number of Work Plan plans approved and the number of accounting audit service contracts.</td></tr>
<tr><td>Data source</td><td>Minutes of ordinary and extraordinary meetings, minutes of meetings of the Executive Secretariat of the REDD+ Jacundá Financial Mechanism and accounting audit service contracts</td></tr>
<tr><td>Description of the measurement methods and procedures to be applied</td><td>Accounting for applied meetings dealing with the construction of the Financial Mechanism, planning, approval and revision of the Work Plan, approval of the Work Plans and approval of the accounting audit proposals.</td></tr>
<tr><td>Monitoring/recording frequency</td><td>Monthly and Annual</td></tr>
<tr><td>Monitored value</td><td>
<table>
<tr><td>Year</td><td>Month</td><td>Meetings on the construction Of the Financial Mechanism</td><td>Planning meetings, approval and revision of the Work Plan</td><td>Approved Work Plans</td><td>Year of the accounting audit contracts</td></tr>
</table>
</td></tr>
</table>

	2021	01		1	1	
		-				1
	2022	02		1	1	
		-				1
Monitoring equipment	Reading the minutes of the meetings					
GQ/CQ procedures to be applied	Validation of systematized information with ASMOREX and CES Rioterra					
Purpose of the data	Understand the dynamics of specific meetings aimed at community investment and collecting feedback from residents					
Calculation method	Counting in assembly minutes					
Comments	-					

4.3.1.11 Zoning

The main objective of the actions developed for zoning was to increase food security and species conservation. These actions were based on one activity: the implementation of hunting and fishing zones (multiple use). These activities are in line with the "Strengthening of governance" indicator. To complement the monitoring of both the actions and the indicators, the Multiple Use Management Plan (PMUM) of the Rio Preto-Jacundá RESEX was used.

As part of the **"implementation of hunting and fishing zones (multiple use)"** activity, the Multiple Use Management Plan (PMUM) was implemented in 2016, with work and data collection beginning in July 2015, as a way of strengthening the activities of extractivists in a sustainable way. The PMUM was drawn up by CES Rioterra, a partner in the REDD+ Project, and approved in May 2017 by SEDAM, via publication in the Official Gazette (made available to VVB).

The PMUM established the zoning of the Rio Preto-Jacundá RESEX (insert-IV), whose main function was to guarantee the preservation of natural environments, biodiversity, potential for environmental education, attractions for visitors and, above all, the maintenance of the local extractivists' way of life.

In order to achieve the objective of the activity in question, the traditional use, multiple use and forest management zones have specific rules for hunting and fishing. Therefore, in the Traditional Use Zone, hunting and fishing are allowed, as well as oil extraction, seed and fruit collection, provided that they are carried out with low impact and medium intensity and executed following a specific management plan.

The Multiple Use Zone is mostly made up of areas intended for use by the RESEX's extractivist communities, so hunting and fishing activities are allowed, as well as oil extraction, seed, and fruit collection, provided they are carried out in accordance with a specific management plan.

The Forest Management Zone is intended for forest exploitation to generate income and improve the community's quality of life through the sustainable use of biodiversity. Although the focus is on forest management, this zone allows hunting, fishing and the collection of seeds and fruit.

In addition to the Traditional Use, Multiple Use and Forest Management Zones, other zones were determined in the PMUM, such as: Restricted Use Zone (33%); Forest Management Zone (31%); Traditional Use Zone (21%); Multiple Use Zone (13%); Sacred Zone (0.05%). The Buffer Zone was also determined, with the aim of minimizing the negative impacts of human activities in the area of the municipalities adjacent to the RESEX. Further details on the RESEX zoning are described in section **Erro! Fonte de r eferência não encontrada.** of this document. As the zoning of the Rio Preto-Jacundá RESEX was initiated in 2016 and approved in May 2017, it was already included in the last monitoring period.

Complementary to this, the scope of the climate project included the multiple and sustainable use of forest products, given its relationship with the reduction of emissions from deforestation and forest degradation, linked to valuing the standing forest and, consequently, maintaining it in the Project Area and the physical presence of community members in it. The activity was linked to the resumption of the community's extractive culture and the generation of income for them. It was geared towards structuring value chains, including training ranging from harvesting techniques to marketing, with an emphasis on improving product processing practices.

The activity is related to the indicator "Number of families managing non-timber forest products". The families that managed non-timber forest products were monitored through interviews with each family in the RESEX, and their results were compiled in a table for annual monitoring.

<table>
<tr><td>Data / Parameter</td><td>Number of families managing non-timber forest products</td></tr>
<tr><td>Data Unit</td><td>Number</td></tr>
<tr><td>Description</td><td>Number of families involved in extractive activities</td></tr>
<tr><td>Data Source</td><td>Residents' spreadsheet - non-timber forest products</td></tr>
<tr><td>Description of the measurement methods and procedures to be applied</td><td>Through interviews with each RESEX family, a compilation was made of the results of the number of families that managed non-timber forest products in each year of the monitored period</td></tr>
<tr><td>Monitoring/recording frequency</td><td>Annual</td></tr>
<tr><td>Monitored value</td><td><table><tr><td>Year</td><td>Number of families</td></tr><tr><td>2021</td><td>20</td></tr><tr><td>2022</td><td>26</td></tr></table></td></tr>
<tr><td>Monitoring equipment</td><td>Digital records</td></tr>
<tr><td>GQ/CQ procedures to be applied</td><td>The spreadsheet and the interviews were carried out by ASMOREX and Biofílica has a digital copy of the data compilation</td></tr>
<tr><td>Purpose of the data</td><td>To provide information on the benefits generated for the community through the REDD+ Project</td></tr>
<tr><td>Calculation method</td><td>Counting families</td></tr>
<tr><td>Comments</td><td>-</td></tr>
</table>

4.3.2 Monitoring Plan Dissemination (CCB, CM4.3)

As already described in Section **Erro! Fonte de referência não encontrada.**, the Rio Preto-Jacundá REDD+ R ESEX Project has three methods of communication - oral, written and virtual - in order to guarantee access to the documents and all other Project's information for the communities and other stakeholders.

The results were disseminated in a printed version, where each document related to the project's conception and monitoring was made available for consultation at ASMOREX's headquarters and at CUC/SEDAM (in the city of Porto Velho), in a virtual version where the documents related to monitoring were made available through Verra's site and website, Biofílica's newsletter and social media, and orally, through the internal alignment meetings held by ASMOREX and at the Ordinary and Extraordinary General Assemblies held with the RESEX residents.

4.4 Optional Criterion: Exceptional Community Benefits

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

The project's activities have managed to bring benefits to the communities, as can be seen in sections **Erro! F onte de referência não encontrada.**, **Erro! Fonte de referência não encontrada.** and **Erro! Fonte de referência não encontrada.**, in the short, medium, and long term. In terms of short-term actions, the community members underwent various training courses on topics such as IT, botanical identification, GPS use, administrative and financial management, among others. Initially, in addition to the benefits of the new skills and knowledge they incorporated, the trainings allowed ASMOREX's management to be improved, consequently reducing its dependence on external agents. In the medium and long term, these training courses will provide opportunities to improve quality of life, both by training a more qualified workforce, providing job and business opportunities and, consequently, improving income, and by increasing the resilience of these people due to the knowledge they have acquired.

The construction of homes for some community members, access to health services and investments in improving RESEX's infrastructure have also brought various benefits. In the short term, there has been an improvement in quality of life, better use of community space, helping to motivate community members to stay and, consequently, reducing their exodus to the cities, and also making it possible for health teams to visit, using the infrastructure built with investment from the REDD+ Project as a place of care. These actions in the medium and long term have a direct impact on improving the health of residents and increasing the life expectancy of community members.

Another benefit achieved in the short term was the empowerment of community members promoted by the various possibilities provided, such as: community participation in RESEX decisions linked to the General Assemblies, increased social participation offered by the new infrastructures, training of community members in various courses, increasing their knowledge and skills, among others. In the short term, this empowerment has also occurred for women, with the occupation of management positions at ASMOREX. In the medium and long term, these initiatives are crucial for the continued encouragement of community members to participate in these spaces, especially women and young people, thus enabling the perpetuation of the communities currently residing in the RESEX, preserving their sustainable lifestyle, with the forest as their most precious resource.

Increased food security was another benefit achieved in the short term through the acquisition of agricultural inputs, such as the tractor-mounted brush cutter, which improved family agricultural production. Considering the scope of production, both agricultural and extractive, it is expected that in the

medium and long term the community members will be able to improve and diversify their income, especially once the agro-industries that were built with environmental compensation funds from SEDAM start operating, and with the implementation of the diagnosis of production chains carried out by the REDD+ Project. Furthermore, with the promotion of extractivist practices by these two initiatives, it is hoped that the benefits will be the strengthening of extractivist culture and associative spirit.

The benefits achieved by each activity were monitored through a number of indicators, which relate to each main pillar of the community scope: Governance and Adaptive Management, Health, Income Improvement, Education, Young People and Women, Environment, Social Organization, Communication, Infrastructure, Jacundá REDD+ Financial Mechanism, and Zoning. The indicators have already been presented in section **Erro! Fonte de referência não encontrada.**.

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

According to the socio-economic diagnosis carried out in 2013 by CES Rioterra and the description in section 6.4.4. of the PD, the residents of the riverside sector are considered a vulnerable group due to the difficulties they face, such as precarious housing conditions and their remote location from other communities. As presented in section **Erro! Fonte de referência não encontrada.**, the project's activities h ave also achieved benefits for this group, as shown in the following table.

Community Group	Riverside communities - represented by the Jatobá community and the Bom Futuro
Net positive impacts	1. Community members have been empowered as they have taken an active role in deciding on the activities to be carried out within the RESEX. This has been achieved by increasing the representation of these vulnerable communities in spaces such as the ASMOREX board of directors, since participation in these positions is open to all community members present in the RESEX territory, and by encouraging the individual participation of each community member in decision-making spaces such as the General Assemblies. 2. An important initiative that contributed to improving the community's income was the diagnosis of production chains. This study proposed recommendations for strengthening existing community enterprises and the production, marketing, and decision-making processes for managing businesses and the territory. As soon as the diagnostic guidelines are put into practice in conjunction with the use of the two agro-industries (built through investment by SEDAM), they will further strengthen the community's income generation. The two initiatives were able to be implemented due to the Multiple Use Management Plan, which provided guidelines on soil use and occupation within RESEX, investments in improving RESEX's infrastructure, which provided a suitable space, making it a reference within the territory for setting up the agro-industry, and the project's investment in actions that encourage extractivist culture. In addition, these actions increase

	the possibility of strengthening the extractivist culture, as they are involved with the practice of collecting non-timber forest products, which, mainly due to infrastructure difficulties in the riverside region in implementing other productive processes, are increasingly encouraged for these community members. 3. The construction of a tele center and an auditorium within the RESEX, together with the acquisition of equipment such as computers, has made it possible for community members to take various courses. The courses given were open to all RESEX community members and covered different topics, such as IT, botanical identification, GPS use and handling, administrative and financial management, among others. 4. The riverside communities have also benefited from other infrastructure built within the RESEX, specifically the community complex in the riverside sector, which has accommodation, a kitchen, toilets, and a laboratory for detecting endemic diseases, especially malaria. All these spaces are in common use by all RESEX community members, and their use is constantly encouraged. 5. Three families from the Jatobá community benefited from the construction of a new home, guaranteeing an improvement in the quality of their housing and, consequently, their quality of life. 6. A family from the Jatobá community received a solar pump to draw water, thus providing access to water and improving their quality of life.
Benefit access	The mitigation of risks and barriers in addressing benefits to vulnerable groups (represented by riverine populations) occurred through the implementation of the actions of the "REDD+ Financial Mechanism", which is guided mainly by the representative participation of community members. As described in section **Erro! Fonte de referência não encontrada.**, a ll community members, including riverine communities, are given priority in decision-making, so that they can contribute to decisions on the activities to be carried out by the project. With a view to getting this group more involved, ASMOREX managers help transport these residents to the common areas (Community Complex) where the meetings are held. In addition, residents of the riverside sector also have the option of spending the night in the headquarters' accommodation and are provided with food, with the aim of encouraging participation in community decision-making moments.
Negative impacts	No negative impact was expected on the marginalized groups identified within the project area. All the activities carried out had their chain of impacts analyzed (section **Erro! Fonte de r eferência não encontrada.**) and none of them generated

	negative impacts on the well-being of any community (both at an individual and collective level). However, some measures to mitigate negative impacts have been implemented, as can be seen in section **Erro! Fonte de referência não encontrada.**.

4.4.3 Net Impacts on Women (CCB, GL2.5).

Considering the benefits promoted by the project's activities, as described in sections **Erro! Fonte de referência não encontrada.**, **Erro! Fonte de referência não encontrada.** and **Erro! Fonte de referência não encontrada.**, women were also positively impacted, since the activities carried out were mainly aimed at RESEX families as a whole. Therefore, the improvement in quality of life, the empowerment of community members, the increase in food security and all the other existing benefits also reached women. The following indicators monitored the benefits achieved:

Health

Data / Parameter	**Families benefiting from the REDD+ Project**
Data unit	Number of families
Description	Number of families benefiting from the survey carried out by the study on the ecological knowledge of RESEX community members on non-timber forest products used or of potential use
Data source	Since the study was carried out within the RESEX, with the direct participation of community members, and the results are available for them to access, it was considered that all RESEX families could benefit from this survey, starting from the year the research was carried out.
Description of the measurement methods and procedures to be applied	A counting was made of the families living in the RESEX who have access to the results obtained in the research carried out.
Monitoring/recording frequency	Annual
Monitored value	Year: Number 2021: 65 women 2022: 65 women
Monitoring equipment	Master's dissertation Leandro Ribas (2018)
GQ/CQ procedures to be applied	Validation of systematized information with ASMOREX and CES Rioterra.
Purpose of the data	To provide information on the families benefiting from a study that brings as its main reference the recovery of popular medicine within RESEX.
Calculation method	Spreadsheet count of RESEX families and residents
Comments	-

Data / Parameter	**Families benefiting from the REDD+ Project**
Data unit	Number of families
Description	Number of families benefiting from investments in infrastructure to support actions aimed at the health and well-being of the Project's community members.
Data source	Project activity reports and a list of project families and residents
Description of the measurement methods and procedures to be applied	Accounting for the number of community members who benefited from the healthcare services provided within the RESEX in the infrastructures invested in by the project.
Monitoring/recording frequency	Annual
Monitored value	Year: Number 2021: 65 women 2022: 65 women
Monitoring equipment	Spreadsheet listing RESEX families and residents.
GQ/CQ procedures to be applied	Validation of systematized information with ASMOREX and CES Rioterra.
Purpose of the data	Provide information on the benefits generated for the community through the REDD+ Project.
Calculation method	Spreadsheet count of RESEX families and residents
Comments	-

Education

Data / Parameter	**Course participants**
Data unit	Number
Description	Number of people who took part in the courses offered within the thematic axes
Data source	Project activity reports and attendance lists
Description of the measurement methods and procedures to be applied	The courses and training given to the residents of the Rio Preto-Jacundá RESEX were recorded in activity reports (all of which were made available to the VVB team), as well as having attendance lists and photographic records. From the attendance lists, it was possible to count the number of participants in each course.
Monitoring/recording frequency	Annual

Monitored value	Year: 2021 — Number: 12 women Year: 2022 — Number: 20 women
Monitoring equipment	Attendance list and photographic record
GQ/CQ procedures to be applied	All courses, workshops and training sessions held had an attendance list (with space to fill in name, CPF, telephone number, institution/entity belonging to and signature).
Purpose of the data	Provide information on the benefits generated for the community through the investments made by the REDD+ Project
Calculation method	Counting in attendance lists
Comments	-

Infrastructure

Data / Parameter	**Families benefiting from the REDD+ Project**
Data unit	Number of families
Description	Number of families benefiting from the project's investment in building community space in the riverside sector
Data source	Project activity reports and a list of Project families and residents
Description of the measurement methods and procedures to be applied	Analysis of the actions carried out by the project and the community members who benefited from the construction of infrastructure in the riverside sector
Monitoring/recording frequency	Annual
Monitored value	Year: 2021 — Number: - Year: 2022 — Number: 65 women
Monitoring equipment	Spreadsheet listing RESEX families and residents.
GQ/CQ procedures to be applied	Validation of systematized information with ASMOREX and CES Rioterra.
Purpose of the data	Provide information on the benefits generated for the community through the REDD+ Project in the construction of community space in the riverside sector
Calculation method	Spreadsheet count of RESEX families and residents
Comments	-

From the point of view of women's participation in decision-making about the project's activities, they have been able to contribute through their participation in General Assemblies, as well as by holding leadership positions in ASMOREX, enabling them to take an even more direct role in decision-making regarding the lives of community members and the progress of the project. This leadership position was achieved thanks to the training courses in administrative and financial management carried out during the monitoring period prior to this one, presented in section 4.3.1, specifically on the subject of Social Organization. Furthermore, it is important to note that in these specific courses given by Rioterra, part of the places were reserved for women, in order to contribute to gender equality. The parameters "Training for women" and "Number of women in leadership positions in ASMOREX and COOPEREX" were designed to monitor these achievements among women.

The survey of the parameter "Training for women" considered the indicator "Participants in courses", completed in section **Erro! Fonte de referência não encontrada.**, for the educational activities on botanical i dentification, the use and handling of GPS and lectures on the environment, climate changes and REDD+. The training in management and finance for the members of ASMOREX's board of directors was not carried out in the form of workshops, so it was not counted, but the lessons learned were implemented through the support provided by Rioterra during meetings between the partners.

<table>
<tr><td>Data / Parameter</td><td>Training for women</td></tr>
<tr><td>Data unit</td><td>Number</td></tr>
<tr><td>Description</td><td>Number of trained women who took part in the courses offered within the thematic axes</td></tr>
<tr><td>Data source</td><td>Project activity reports and attendance lists</td></tr>
<tr><td>Description of the measurement methods and procedures to be applied</td><td>The courses and training given to the women of the Rio Preto-Jacundá RESEX were recorded in activity reports (all of which were made available to the VVB team), as well as having attendance lists and photographic records. From the attendance lists, it was possible to count the number of women taking part in each course</td></tr>
<tr><td>Monitoring/recording frequency</td><td>Annual</td></tr>
<tr><td>Monitored value</td><td><table><tr><td>Year</td><td>Number of trained women</td></tr><tr><td>2021</td><td>12</td></tr><tr><td>2022</td><td>20</td></tr></table></td></tr>
<tr><td>Monitoring equipment</td><td>Attendance lists and photographic records</td></tr>
<tr><td>GQ/CQ procedures to be applied</td><td>All courses, workshops and training sessions held had an attendance list (with space to fill in name, CPF, telephone number, institution/entity belonging to and signature).</td></tr>
<tr><td>Purpose of the data</td><td>Provide information on the benefits generated for the female community through the investments made by the REDD+ Project</td></tr>
<tr><td>Calculation method</td><td>Counting in spreadsheets and/or directly on attendance lists</td></tr>
<tr><td>Comments</td><td>-</td></tr>
</table>

The parameter "Number of women in leadership positions in ASMOREX and COOPEREX" was filled in using the results found in the minutes of the Assembly of January 15, 2021, in which the new ASMOREX board was voted in, electing 3 women to positions on the Board of Directors: Denise Viana Borges as president, Roseni Matos Dias as vice-president and Maria Rosalina de Oliveira as treasurer.

COOPEREX was not considered in this parameter because, as described in section **Erro! Fonte de referência não encontrada.**, due to some legal and management problems, the cooperative's activities were temporarily paralyzed, and no activities relating to the work of community members in this institution were accounted for during the monitoring period. During the monitored period, the tasks previously assigned to COOPEREX were assigned to and carried out by ASMOREX.

Data / Parameter	**Number of women in leadership positions at Asmorex and Cooperex**
Data unit	Number
Description	Number of women on the board of director of Resex organizations
Data source	Minutes of general assemblies
Description of the measurement methods and procedures to be applied	The elections of the ASMOREX and COOPEREX Board of Directors are held at community assemblies. All assemblies are recorded in the minutes which were used to measure this indicator. These elections are also mentioned in Activity Reports, and it is common to have photographic records
Monitoring/recording frequency	Annual
Monitored value	Year: Number of women 2021: 3 2022: 3
Monitoring equipment	Assemblies minutes
GQ/CQ procedures to be applied	Minutes are drawn up for every Assembly held, which are then registered with a notary.
Purpose of the data	Providing information on women's empowerment within RESEX
Calculation method	Counting directly in the investiture minutes
Comments	During the monitored period, an ASMOREX board election actually took place, however, as the board's term of office lasts three years, the participation of women was counted annually for the current year of each board, including the board that began in 2018.

4.4.4 Benefit Sharing Mechanisms (CCB, GL2.6)

The description of the implementation of the benefit sharing mechanism is described in the section 2.5.6.

4.4.5 Governance and Implementation Structures (CCB, GL2.8)

During the structuring of the Rio Preto-Jacundá REDD+ RESEX Project, the community members opted to create a management/deliberation body called the "Colegiado Gestor". However, as presented in section **Erro! Fonte de referência não encontrada.**, some difficulties created barriers in the formation of this c ollegiate body and its attributions were basically directed to the Implementing Body, made up of ASMOREX, Biofílica and CES Rioterra, which were therefore responsible for including the residents in the decision-making and implementation of the project.

The procedures related to decision-making and the implementation of the project's activities are open to the participation of community members, as they have been since the beginning of the project's design. As described in section 2.6.2 of the PD, in March 2014 the Life Plan was drawn up with the aim of identifying the actions that would benefit the community and that could be carried out in connection with the Rio Preto Jacundá REDD+ Project, taking into account the local reality, beliefs, values and principles of the community. The construction of this plan took place in a participatory manner among community members during a workshop structured in different dynamics. Two dynamics were key to defining the activities to be carried out: the SWOT dynamic (strengths, weaknesses, opportunities and threats), which made it possible to identify the focal problems of the communities, and the Action Plan dynamic, in which the community members were encouraged to build a set of proposals for activities, with objectives, people responsible, partnerships, results and estimated budget, taking into account the local reality, community beliefs, values and principles.

Community participation in the implementation of project activities continued via assemblies, as described in section **Erro! Fonte de referência não encontrada.**, mainly because one of the principles of the Financial M echanism is the "Representative participation of community members". Through the Extraordinary and Ordinary General Assemblies, internal meetings and/or meetings with other stakeholders (SEDAM and CDREX), all community members who have an interest in participating in decision-making, giving their opinion, answering questions, or demanding clarification are given the opportunity to participate in these democratic spaces, which are open to the public of interest.

Furthermore, it is important to note that all decisions come in some way from the community, since ASMOREX, one of the project's proponents, which is at the forefront of the project's decisions, is made up of RESEX residents. More information on the implementation of ASMOREX as co-manager of the RESEX can be found in the ASMOREX Social Statute.

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

Among the thematic axes of investment, the training activities took place on various fronts, as outlined in sections **Erro! Fonte de referência não encontrada.**, **Erro! Fonte de referência não encontrada.** and **Erro! Fon te de referência não encontrada.**. These were divided up in the PD considering human, social, financial and natural capital, and for this MR, human and social capital were taken into account together, unlike the way reported in the PD. The capacities of RESEX residents were improved in the following aspects:

• Human and social capital: investments in a course aimed at learning computer skills, serving both ASMOREX board members and other interested RESEX community members, enabling this knowledge to be applied in the administration of the common good. The benefits achieved by the activities were monitored using the following indicators:

Data / Parameter	Number of courses and training

Data unit	Number
Description	Number of courses and training within the project's thematic axes for IT training
Data source	Course contracts
Description of the measurement methods and procedures to be applied	The contracted computer course could be used by all residents who were interested and was available free of charge and at any time.
Monitoring/recording frequency	Annual
Monitored value	Year | Number of courses 2021 | 1 2022 | 1
Monitoring equipment	Computer course contract
QA/QC procedures to be applied	All the courses, workshops and training sessions held had an attendance list (with space to fill in name, CPF, telephone number, institution/entity belonging to and signature).
Purpose of the data	Provide information on the benefits generated for the community through the investments made by the REDD+ Project
Calculation method	Count of contracted courses
Comments	-

Data / Parameter	**Course participants**
Data unit	Number
Description	Number of people who took part in the courses offered within the thematic axes
Data source	Project activity reports and attendance lists
Description of the measurement methods and procedures to be applied	The courses and training given to the residents of the Rio Preto-Jacundá RESEX were recorded in activity reports (all of which were made available to the VVB team), as well as having attendance lists and photographic records. From the attendance lists, it was possible to count the number of participants in each course.
Monitoring/recording frequency	Annual
Monitored value	Ano | Número de participantes 2021 | 19 2022 | 10
Monitoring equipment	Attendance list and photographic record

QA/QC procedures to be applied	During the course, the hired IT technician prepared the activity report and the student attendance list.
Purpose of the data	Provide information on the benefits generated for the community through the investments made by the REDD+ Project
Calculation method	Counting in attendance lists
Comments	-

• Financial capital: investments in activities to support the mechanization of the residents' agricultural crops, which included both support in mechanized field procedures, such as preparing the soil for planting and harrowing, and in logistics for transporting the produce for sale. The benefits achieved by the activity were monitored using the following indicator:

Data / Parameter	**Families benefiting from the REDD+ Project**
Data unit	Number of families
Description	Number of families benefiting from the Project's social investments in the acquisition of tractor implements for mechanizing the swidden
Data source	Project activity reports and a list of the Project's families and residents
Description of the measurement methods and procedures to be applied	Analysis of the actions carried out by the project and the community beneficiaries
Monitoring/recording frequency	Annual
Monitored value	Year: Number of families 2020: 6 2021: 1 2022: 3
Monitoring equipment	Spreadsheet listing RESEX families and residents.
QA/QC procedures to be applied	Validation of systematized information with ASMOREX and CES Rioterra.
Purpose of the data	Provide information on the benefits generated for the community through the REDD+ Project in terms of the families benefiting from the mechanization of the swidden.
Calculation method	Counting RESEX families and residents based on the evidences
Comments	-

• Natural capital: training in botanical identification and the use and handling of GPS, mainly helping community members who work on forest inventory and timber management within RESEX, as well as lectures on the environment, climate changes and REDD+. The benefits achieved by each activity were monitored using the following indicators:

Data / Parameter	Number of courses and training
Data unit	Number
Description	Number of courses and trainings on the project's thematic axes
Data source	Project activity reports and attendance lists
Description of the measurement methods and procedures to be applied	The courses and training held for the residents of the Rio Preto-Jacundá RESEX were recorded in an activity report (all of which were made available to the VVB team), as well as having an attendance list and photographic records
Monitoring/recording frequency	Annual
Monitored value	Year: 2021 — Number of courses: 1 Year: 2022 — Number of courses: 2
Monitoring equipment	Attendance list and photographic record
QA/QC procedures to be applied	All the courses, workshops and training sessions held had an attendance list (with space to fill in name, CPF, telephone number, institution/entity belonging to and signature).
Purpose of the data	Provide information on the benefits generated for the community through the investments made by the REDD+ Project
Calculation method	Count of courses held
Comments	-

Data / Parameter	Course participants
Data unit	Number
Description	Number of people who took part in the courses offered within the thematic axes
Data source	Project activity reports and attendance lists
Description of the measurement methods and procedures to be applied	The courses and training given to the residents of the Rio Preto-Jacundá RESEX were recorded in activity reports (all of which were made available to the VVB team), as well as having attendance lists and photographic records. From the attendance lists, it was possible to count the number of participants in each course.

Monitoring/recording frequency	Annual
Monitored value	Year: 2021 — Number of participants: 11 Year: 2022 — Number of participants: 37
Monitoring equipment	Attendance list and photographic record
QA/QC procedures to be applied	All the courses, workshops and training sessions held had an attendance list (with space to fill in name, CPF, telephone number, institution/entity belonging to and signature).
Purpose of the data	Provide information on the benefits generated for the community through the investments made by the REDD+ Project
Calculation method	Counting in attendance lists
Comments	-

5 BIODIVERSITY

5.1 Net Positive Biodiversity Impacts

5.1.1 Biodiversity Changes (VCS, 3.19; CCB, B2.1)

Change in Biodiversity	Reduction of unplanned deforestation.
Monitored Change	During the monitoring period, it was identified that the deforestation predicted in the baseline was greater than what occurred. In other words, there was a reduction in unplanned deforestation both in the project area and in the leakage belt for the total of the monitored period.

Year	Project Area		Leakage belt	
	Projected deforested area	Deforested area	Projected deforested area	Deforested area
2021	523,28	94,97	191,42	62,13
2022	284,43	10,48	493,98	500,98

	A total change of 807,7 ha in the Project Area and 685,4 ha in the Leakage Belt, due to deforestation, was predicted in the baseline (Section **Erro! Fonte de referência não encontrada.** and t ables above). However, according to the data from the monitoring of deforestation carried out over these years and already pointed out in this report (Sections **Erro! Fonte de referência não encontrada.**. and **Erro! Fonte de referência não encontrada.**. and in the tables above), the total change that occurred during this monitoring period was 105,45 ha in the Project Area and 563,11 ha in the Leakage Belt, representing 13.0% and 82,1% of what was expected, respectively. The deforestation that has occurred below the baseline forecast has consequently implied qualitative changes such as the conservation and maintenance of the integrity of the forest and existing ecological processes, which reduces soil erosion, contributes to the conservation of water quality and maintains the genetic variability of plant and animal species, which is important for resilience to pests and diseases, pollination and climate regulation, thus reducing the risks of extinction and conserving forest cover, which acts as a protective shield against winds and storms. In addition, mitigating actions are proposed in section **Erro! Fonte de referência não encontrada.** so that biodiversity remains stable over time.
Justification of Change	The collection of deforestation data and the verification of accuracy, via satellite images and in the field, are described in section **Erro! Fonte de referência não encontrada.**. In addition to m onitoring forest cover using satellite images, other activities influenced the obtained results during the monitored period: patrols carried out by SEDAM; the development of sustainable forest management activities; and socio-environmental actions carried out with communities (which permeate "the big theme" of the importance of sustainable use and maintenance of natural resources), such as technical assistance activities carried out by ASMOREX and the diagnosis of production chains for Brazil nuts, manioc flour and açaí. Details of these actions can be found in sections **Erro! Fonte de referência não encontrada.**, **Erro! Fonte de referência não encontrada.**, **Erro! Fonte de referência não encontrada.**, **Erro! Fonte de referência não encontrada.**, **Erro! Fonte de referência não encontrada.**, **Erro! Fonte de referência não encontrada.**, **Erro! Fonte de referência não encontrada.** and **Erro! Fonte de referência não encontrada.**.

	It is even worth mentioning here that the project as a whole, through the opportunities for work and income generation associated with the project's activities, the investments in infrastructure, the courses offered (even those that haven't directly addressed the issue of environmental conservation, but which do act to empower community members and their perception of "being a community in a RESEX") and the other moments of exchange between community members (during the Assemblies, for example), have been raising awareness among RESEX residents and showing them that it is possible to improve their quality of life and conserve the forests at the same time, which culminates directly in less internal pressure on the forest and on biodiversity.

Change in Biodiversity	Biodiversity conservation
Monitored Change	The project did not monitor biodiversity during the verification period, so in order to estimate the impacts on biodiversity, data from the National Biodiversity Monitoring Program (Monitora Program), carried out by CUC-SEDAM with the support of RESEX community members, was used. The results of the 2020, 2021 and 2022 campaigns identified 33, 23 and 33 species of birds and mammals respectively, making a total of 48 species identified by the Monitora Program in the 3 years of the campaign at the Rio Preto-Jacundá RESEX. Of these, 7 species are threatened with extinction according to the IUCN Red List. The results suggest high species richness for both birds and mammals in the RESEX. With regard to flora, through sustainable forest management data, the diversity indices presented very satisfactory and surprising values and were within the expected values for the region. It was observed that the permanent plots of the UPAs explored during this period of verification have an average plant community diversity of 30 species/hectare. Therefore, the changes monitored for biodiversity conservation were considered real, positive, and direct, since the flora values found in the analysis of the permanent plots give the Project Area a conserved forest status. Detailed results can be found in the respective reports (made available to the VVB team) and in Section **Erro! Fonte de referência não encontrada.** of this d ocument.

Justification of Change	The positive impact on biodiversity conservation is the result of both the actions to contain deforestation and the good practices carried out in Sustainable Forest Management (mainly reflected in the fauna). It can be mentioned that all the activities carried out in the project seek to mitigate the impacts generated on biodiversity, the sustainable use of natural resources and the maintenance of the forest. In addition, other activities have influenced the conservation of biodiversity, such as the good coordination and improvement of communication with the responsible environmental inspection body, which strengthens the governance of the Reserve, and the good engagement and alignment with the community in the activities and training carried out. Details of these actions can be found in sections **Erro! Fonte de r eferência não encontrada.**, **Erro! Fonte de referência não encontrada.**, **Erro! Fonte de referência não encontrada.**, **Erro! Fonte de referência não encontrada.**, **Erro! Fonte de referência não encontrada.**, **Erro! Fonte de referência não encontrada.** and **Erro! Fonte de referência não encontrada.**.

5.1.2 Mitigation Actions (VCS, 3.19; CCB, B2.3)

The REDD+ RESEX Jacundá project works mainly on the maintenance of the habitat of the species present in the project area, seeking to reduce and control the threats suffered by the biotic community present in the area. As a way of guaranteeing the preservation of the natural ecosystem and biodiversity and, at the same time, guaranteeing the maintenance of the extractivists lifestyle and the sustainable use of natural resources, the RESEX's participatory zoning was drawn up as part of the Conservation Unit's Multiple Use Management Plan with the aim of mitigating possible impacts on biodiversity. The zoning was therefore defined as follows:

Restricted Use Zone: where no human alterations causing medium or great impact are tolerated, being limited to scientific research, monitoring and protection activities and the collection and extraction of non-timber products, which must be carried out in a restricted manner and with low impact. Its main objective is preservation, in order to guarantee the reproduction of the RESEX's fauna and flora;

Forest Management Zone: specially designed to carry out Sustainable Forest Management activities with the aim of generating income and improving the community's quality of life and the sustainable use of biodiversity. For this reason, its objectives include promoting the recovery of degraded areas, the possibility of managing species of economic and cultural interest, as well as other low-impact activities;

Traditional Use Zone: made up, for the most part, of areas destined for the traditional activities of extractivists, with the premise of generating income and improving the quality of life of the local population. There may be some anthropogenic alterations, which are subject to controlled intervention;

Multiple Use Zone: made up, for the most part, of areas intended for use by the RESEX extractivist communities. Its premise is that all the activities provided for in the PMUM and zoning can be carried out. It also allows activities related to the traditional lifestyle of the extractivists, which should take place with a low impact on the natural environment;

Sacred Zone: Areas of historical or sacred interest. The permitted activities must take place with little or no impact on the sacred sites.

In addition, in the PMUM, the Buffer Zone (BZ) was planned, defined by Law No. 9.985/2000 as: "the surroundings of a Conservation Unit where human activities are subject to specific rules and restrictions, with the aim of minimizing negative impacts on the Conservation Unit". As such, the RESEX BZ has some objectives, such as: avoiding possible conflicts of socio-economic activities, protecting watercourses that are fundamental to the maintenance of ecological processes and environmental services, restricting and/or dampening the pressure of human occupation, especially those that could threaten the conservation of the RESEX's socio-biodiversity, enabling the conservation of natural resources, developing actions for the conservation and restoration of Permanent Preservation Areas and Legal Reserves and mobilizing actors that could make up the RESEX Deliberative Council.

With the potential impacts on biodiversity within the project area in mind, the zoning was an important tool for reducing pressure on hunting and fishing species, since there are specific zones for this activity, helping to keep the levels of these species stable. In a complementary way, by establishing zones that interact with the extractivist lifestyle, the zoning serves as the basis for guaranteeing the continuity of the species that serve as a source of food and income for the community. In addition, the Rio Preto-Jacundá RESEX has a Utilization Plan set out in section IV of the PMUM, which contains rules of use and the rights and duties of residents, serving as a guide on how to care for natural resources. The rules cover activities already carried out by the residents, as well as rules that comply with Brazilian environmental legislation.

Monitoring biodiversity is key to understanding and moderating the extent of climate changes and mitigating their negative impacts. Due to the prioritization of investments in infrastructure works to improve the quality of life of community members, the planned biodiversity monitoring campaigns were not carried out by the REDD+ Project during the monitored period. However, in order to monitor biodiversity during the period, the results of the biodiversity monitoring carried out by the Amazon Protected Areas Program (ARPA) were used within the RESEX, which also involved community participation, empowering the community with regard to biodiversity and functioning as an important strategy for raising awareness about fauna and flora through the eyes of the extractivists who live there.

Another possible scenario of negative impacts on biodiversity is the increased pressure on low-abundance species (as described in the PD, section 7.2). On the other hand, during the monitoring period, we can mention the "Diagnosis of the Production Chains of Brazil Nuts, Açaí and Manioc Flour in the Rio Preto-Jacundá RESEX", carried out by the NGO Pacto das Águas (described in section **Erro! Fonte de referência não encontrada.**). This d ocument proposes ways of strengthening these production chains as an environmental and territorial management strategy and as an alternative way of generating income for the population living in the RESEX. Thus, this diagnosis served to stimulate and boost the sustainable exploitation of these species, which are considered to be abundant in the region, reducing the pressure on the less abundant and frequent ones and, as an effect, served as a mitigating measure for local biodiversity.

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

Species and habitat	*Ateles chamek* (black-faced spider monkey) Endemism Center of Rondônia
Evidence	The activities proposed in the Rio Preto-Jacundá REDD+ RESEX Project aim to generate various benefits for the climate, communities and biodiversity. The main benefits related to biodiversity are associated with reducing deforestation and forest degradation and conserving habitats. Despite all the problems faced with invasions and deforestation in recent years, the Rio Preto-Jacundá RESEX is still a site of great importance for maintaining regional biodiversity. The deforestation not only directly reduces the number of plant specimens, including species threatened with extinction, but also threatens the diversity of fauna through habitat loss and degradation. Most animal species have a close and specific relationship with the environment in which they live, and habitat loss can lead to the extinction not only of species directly dependent on that environment, but also of related species, causing a cascade effect. If not extinct, the genetic erosion of the species still represents a risk. In extreme cases, habitat loss can lead to the extinction of key ecosystem processes (GROOM & VYNNE, 2006). Habitat loss, degradation and fragmentation can also lead to edge effects, the dominance of invasive species and greater susceptibility to the effects of climate changes. All of these effects combined would potentiate the process of extinction of more sensitive and endemic species. Given this context, it is important to remember that biodiversity monitoring studies since the start of the project have identified that several species are endemic to the region, as well as many on the IUCN Red List of Threatened Species, such as the black-faced spider monkey (Ateles chameck) in the "Endangered" (EN) category, and also the Project Area is located in the Endemism Center of Rondônia, which is considered one of the main areas of endemism within the southern Amazon basin (CRACRAFT, 1985[44]). and that the permanence of the forest in this location is extremely important for maintaining these species in the short and long term. It is in this sense that reducing deforestation is so important, and so it is assumed that all negative impacts not generated on the ecosystem are considered to be net positive impacts on biodiversity.

[44] CRACRAFT J. 1985. **Historical biogeography and patterns of diferentiation within the South American Avifauna: areas of endemism**. In: BUCKLEY, P. A. *et. al*. eds. *Neotropical Ornithology*. Washington, American Ornithologists' Union. p. 49-84 (Ornithological Monographs n. 36).

It's also worth saying that the implementation of the project's activities has a direct and positive impact on biodiversity, helping to maintain forest cover and species that are already in suitable environmental conditions and abundance, with good levels of conservation. These positive impacts are mainly the result of avoided deforestation, deforestation monitoring, technical assistance, environmental education workshops and training courses. As an example of this, we can mention the basic training in botanical identification given to community members from November 29 to December 6, 2021 (mentioned in section 4.3.1.4), an important action in terms of biodiversity with the aim of preparing and empowering residents to monitor biodiversity (section **Erro! Fonte de referência não encontrada.**). In this sense, a community that is empowered and aware of the exuberant richness of the place where it lives represents a real net benefit for biodiversity. This social nature of the use of biodiversity by the communities living in the RESEX is covered by the Multiple Use Management Plan and the activities linked to it. These activities generate positive impacts, guaranteeing the maintenance of natural resources.

It can therefore be said that there are several positive impacts generated and/or maintained in relation to biodiversity, which go beyond reducing deforestation and forest degradation within the Project Area, encompassing all the indirect positive impacts related to strengthening the socio-environmental component, with the traditional way of life of the extractivists playing a role in maintaining the quality of biodiversity in the Rio Preto-Jacundá RESEX.

5.1.4 High Conservation Values Protected (CCB, B2.4)

Because it is a Conservation Unit and has recorded endemic species, as well as meeting the vulnerability criterion due to the regular occurrence of globally threatened species (according to the IUCN Red List), the Rio Preto-Jacundá RESEX can be classified as an area that concentrates attributes of high conservation value for biodiversity.

The extractivist and riverside population has a close relationship with biodiversity, whether for food, medicinal purposes or as a source of income. Hunting and fishing for subsistence and the collection of non-timber forest products are carried out by the residents in accordance with the Multiple Use Management Plan, following the rules established to guarantee the maintenance of species of fauna and flora.

Of the plant formations present in the Extractive Reserve, the campinarana can be considered ecologically differentiated due to its ability to adapt to poor, acidic soils. The species richness and abundance of this environment compared to other ecosystems is relatively low. However, there are a high number of plants, invertebrates, and vertebrates such as birds that only occur in this type of vegetation. Another important consideration for conservation is the existence of natural clay pits, beaches, and lakes inside the RESEX, which can also be considered attributes for conservation, since these are highly important areas for maintaining species. In the case, for example, of natural clay pits, which are areas of depressions, with little

vegetation cover and moist soils and visited by many animals, the consumption of soil (geophagy) in these places is recognized for several species of vertebrates in various regions of the world, suggesting that natural clay pits are important components of the habitat of these organisms.

Reducing deforestation and forest degradation generates direct benefits for biodiversity, such as habitat conservation. The protection of forest cover in the RESEX as a whole helps to protect attributes of high conservation value. Thus, it can be said that the HCVAs related to biodiversity in the Project Zone were positively affected by the Project through the unplanned deforestation that was avoided during the monitored period.

5.1.5 Species Used (VCS, 3.19; CCB, B2.5, 2.6)

Not applicable. No species were introduced in the RESEX Rio-Preto Jacunda REDD+ Project.

5.1.6 Invasive Species (VCS, 3.19; CCB, B2.5)

As foreseen in the project planning (Section 7.2 of the PDD), there was no introduction or increase in invasive species in any of the areas involved in the project. The actions carried out during the verified period (which basically consisted of: low-impact forest management activities; monitoring deforestation; patrolling the project area; training and capacity building for the RESEX population; and conservation practices and impact reduction on biodiversity) did not involve the manipulation or introduction of invasive species as a result of the project.

5.1.7 GMO Exclusion (CCB, B2.7)

Through the Rio Preto-Jacundá REDD+ RESEX Project, it has been guaranteed that no Genetically Modified Organisms (GMOs) have been used. It is guaranteed that the seeds and seedlings of forest and agricultural species supplied to the communities are not GMOs, nor is it part of the scope of the Project to encourage, produce or donate GMO seedlings and/or seeds. The reduction or removal of greenhouse gas emissions was achieved by reducing deforestation and forest degradation. Furthermore, in line with section **Erro! F onte de referência não encontrada.**, the actions carried out during the verified period did not involve the manipulation or introduction of genetically modified organisms.

5.1.8 Inputs Justification (VCS, 3.19; CCB, B2.8)

Through the Rio Preto-Jacundá REDD+ RESEX Project, no fertilizers, chemical pesticides, biological control agents or any other inputs related to these practices were used, as provided for in the PD (Section 7.2). In addition, ASMOREX only provides technical assistance to community members, but does not supply seedlings and has so far not supported the use of inputs, pesticides or seedlings with a productive bias.

5.2 Offsite Biodiversity Impacts

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

Negative Offsite Impact	Mitigation Measure(s)

Pressure from hunting and fishing activities.	A likely negative impact outside the project zone is associated with leakage and pressure from hunting and fishing activities in areas adjacent to the RESEX limits. However, when analyzing the biodiversity monitoring carried out in the project area by the Monitora Program, it is possible to observe that the fauna indices are adequate, including for animals that are usually hunting targets. Land mammals and birds likely to be hunted were observed on the access roads to the communities, demonstrating a low hunting pressure for these animals beyond the project limits. A densification of fauna was also not identified within the project area, which could occur due to pressure external to the project limits (migration into the RESEX, due to excessive hunting and fishing outside the project area). Therefore, there is no evidence of visible negative impacts on biodiversity outside the project zone. This lack of negative impacts derives mainly from the fact that the project has an important regional role in maintaining biodiversity, which favors the conservation and connectivity scenario with the surrounding forest fragments. Another point is that the forest has excellent quality for the survival of biodiversity, information attested by sightings of top-tier carnivores, such as the jaguar, and animals that require large living areas to maintain their populations, such as wild pigs and peccaries. Furthermore, just seeing animals of this size confirms that the project area, as well as its surroundings, presents an ecological balance in the food chain. Another factor that served as great support to minimize negative impacts on biodiversity outside the project area were the patrolling rounds by the SEDAM team at RESEX and other surrounding Conservation Units in an unsystematic and sporadic manner. Such activity is further described in section **Erro! Fonte de referência não encontrada.** of this document. Finally, it is important to say that, regarding the outside of the project zone, all interested parties, when identifying any negative impact or dissatisfaction, can contact the channel that accesses the Project Implementing Body, formed by ASMOREX, CES Rioterra and Biofílica, whether by email, telephone or in person. Within the monitored period, no dissatisfaction of this nature was reported.

5.2.2 Net Offsite Biodiversity Benefits (VCS, 3.19; CCB, B3.3)

As mentioned in section **Erro! Fonte de referência não encontrada.**, no negative impacts on the biodiversity of the Project Zone caused by the activities carried out have been detected, nor have any leaks. The

mitigating actions (such as monitoring the forest cover using satellite images; frequent patrols by the SEDAM team; good practices in Sustainable Forest Management, which strengthen the governance of the area and seek to minimize the impact on biodiversity; the application of the RESEX Multiple Use Management Plan; the engagement of local families in project activities; the workshops and training; and the sustainable use of natural resources to maintain the forest), promoted the conservation of biodiversity in the region and avoided possible negative impacts.

The activities that took place within the Project Area promoted the conservation of local biodiversity, which also plays an important role in maintaining the biodiversity of the surrounding area, through connectivity with other Conservation Units and protected forests in the region. This connectivity between fragments constitutes a large and resilient conservation system, making significant improvements to the quality of life of local populations.

5.3 Biodiversity Impact Monitoring

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

5.3.1.1 The choice of methodology

The methodology for in situ biodiversity monitoring was built collectively and with technical-scientific excellence over the years, covering protocols for planning and implementing the In Situ Biodiversity Monitoring Program in Conservation Units, procedures for sampling the four groups of biological indicators selected in the Monitora Program, as well as identification guides, field sheets and training manuals for carrying out the monitoring (NOBRE, 2014[45]). The first paragraph of the document "Monitoring Biodiversity: Methodological Roadmap for Monitoring" summarizes the purpose and premises of the Monitoring Program:

> "*Monitoring the condition of biodiversity in the interior of protected areas, observing especially those groups of indicators that are relevant to guiding decisions on preventive and mitigating actions against the effects of climate changes, is one of the emerging global demands. And for the initiatives aimed at this end to achieve financial sustainability and temporal continuity, it is necessary to think of integrated programs within a broad monitoring system, which provides accurate and comparable data, but also obtained at affordable costs and from a perspective that produces useful information for the management of these spaces (NOBRE, 2014, p.10*)."

It is important to highlight that this roadmap is a Brazilian government project, coordinated by the Ministry of the Environment (MMA) and the Chico Mendes Institute for Biodiversity Conservation (ICMBio), in the context of Brazil-Germany Cooperation, within the framework of the International Climate Protection Initiative (IKI), of the German Federal Ministry for the Environment, Nature Conservation, Construction and Nuclear Safety (BMUB), and which had full technical support through the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH.

[45] NOBRE, R. A.; KINOUCHI, M. R.; CONSTANTINO, P. de A. L.; PEREIRA, R. C.; UEHARA-PRADO, M. Monitoramento da biodiversidade: roteiro metodológico de aplicação. Brasília: ICMBio, 2014. 40 p.

This methodology brings a series of consolidated procedures and protocols and, after years of collective construction, offers a guide for in situ biodiversity monitoring in protected areas. It therefore offers a step-by-step approach based on guidelines on how to carry out the procedure in practice, providing a set of data capable of reflecting the conservation landscape found in the area where it is applied.

The methodology proposes a minimum of three sampling stations, ensuring that the data is consistent and of a scientific standard. The sampling protocols were designed taking into account two fundamental elements: replication, to guarantee the reproduction of a sample so that the results are confirmed at each event, and randomization, which ensures that each sampling unit is selected at random. The incorporation of these two elements into sampling protocols guarantees the quality and scientific reliability of the data collected.

Considering the choice of sites where the sampling stations, also referred to as transects, will be implemented, some relevant considerations are made within the sampling delineation:

i) evaluations are restricted to the most representative forest Phyto physiognomies within the UC;

ii) the areas eligible for incorporating environmental features of interest are analyzed;

iii) aspects such as topography, slope, hydrography are evaluated, avoiding drastic variations in relief and preferably with easy access;

iv) application of a 5km buffer around the first point drawn, preventing the adoption of another sampling station in order to guarantee the independence of the data.

It's important to note that the protocols take into account four relevant guidelines, one of which is the implementation and execution of sampling at a reduced cost to allow the longevity of the monitoring regardless of fluctuations in financial support. In this way, the aim was to achieve quality mapping with an adequate budget in order to guarantee the continuity of the monitoring.

Additionally, the great opportunity of this biodiversity monitoring format was to enable community participation in the collection and discussion of the results, as they were the protagonists of the monitoring. This is in line with Richards' (2011[46]) guidelines for implementing a biodiversity program that was simple, low-cost, and run by a team of experts together with residents, called "community-based monitoring".

According to Richards (2011), the involvement of the community members in monitoring allows for a number of benefits such as the development of "a greater sense of ownership and responsibility for the biodiversity objectives of a project", also resulting in the empowerment of the community members, as well as improvements in methods and results through the incorporation of the community members' local knowledge of the region's biodiversity. In addition, Richards (2011) makes two recommendations, one scientific and one practical, which are in line with the selection of the transects used in the monitoring, which are, respectively:

[46] Pitman, N. 2011. Social and Biodiversity Impact Assessment Manual for REDD+ Projects: Part 3 –Biodiversity Impact Assessment Toolbox. Forest Trends, Climate, Community & Biodiversity Alliance, Rainforest Alliance and Fauna & Flora International. Washington, DC

- Monitor indicators at fixed geographical locations within the Project zone, to minimize variation caused by geographical variation within the Project zone. Thus, in accordance with the premises for defining the transects mentioned above;

- Involving the residents or employees of the Project Zone in the monitoring that is feasible in order to guarantee important benefits. Thus, the location of the transects closer to the communities, allows for greater adherence to this data, the viability of access to the site and, mainly, the provision of greater security as it is a site far from deforestation pressures, consequently far from the presence of invaders.

Furthermore, given the need to monitor biodiversity in a viable and feasible way, monitoring specific groups of animals and plants that respond in a predictable way to environmental changes, called biological indicators, has been suggested as a solution. However, as much as monitoring only certain groups of organisms with bioindication potential is more practical and feasible in logistical terms, there is still the barrier of taxonomic identification of these groups, which involves the need for specialists. In order to overcome this barrier, there is the strategy of selecting indicators that are easy and quick to identify and do not depend on the involvement of specialists (PEREIRA et al, 2013)[47].

In addition, involving people in monitoring activities can be a mechanism for strengthening the management of the Conservation Unit (CU) and promotion of biodiversity conservation. In this sense, community involvement and participation in biodiversity monitoring is facilitated "by selecting biological indicators that are easy to identify taxonomically and that are part of the daily lives of those who live in or use the Conservation Unit" (PEREIRA et al, 2013).

Many meetings were necessary for experts to reach a consensus on which groups could be included in the list of biological indicators. In addition to considering technical and scientific aspects (consultation with experts in different taxonomic groups; a survey of the most established groups in international initiatives; and a survey of the most reported groups in scientific literature), it was established that the indicators should have three characteristics: i) high rationality; ii) high performance; and iii) high possibility of implementation, as shown in Figure x (RIOTERRA & ECOPORÉ, 2019; PEREIRA et al, 2013).

In the end, four groups were selected as indicators: i) woody plants; ii) large and medium-sized mammals; iii) selected groups of birds; and iv) frugivorous butterflies. The result was a minimum set of biological indicators that are practicable to monitor, feasible and useful for managing the Conservation Unit. Details

[47] PEREIRA, R. C.; ROQUE, F. O.; CONSTANTINO, P. A. L.; SABINO, J.; UEHARA-PRADO, M.; Monitoramento in situ da biodiversidade: Proposta para um Sistema Brasileiro de Monitoramento da Biodiversidade. Brasília/DF: ICMBio, 2013, 61p.

of the process of selecting these indicators and the characteristics of these groups that make them advantageous for monitoring can be found in Pereira et al (2013).

Figure 8. Three characteristics defined for the choice of biological indicators. Source: Pereira et al, 2013.

Finally, another opportunity in applying this methodology is to make it possible to compare the data with that obtained in other conservation units in the Amazon, including other categories in the same region as RESEX. Depending on the opportunities generated, it may also be possible in the future to develop more advanced protocols, such as camera traps for birds and mammals (Terrestrial Vertebrates Monitoring Protocol - TEAM) and species-level identification of frugivorous butterflies.

As mentioned previously, due to priorities in the Project's budget defined by the community at the General Assemblies, there were no biodiversity monitoring activities using Project resources during this monitoring period. These activities were resumed in 2023 by the REDD+ Project, so they are not included in this report.

However, to estimate the impacts on biodiversity, data from the National Biodiversity Monitoring Program (Monitora Program), carried out by CUC-SEDAM with the support of RESEX community members, was used. Therefore, this is not considered a result of the REDD+ Project but is used only as a way of comparing the impacts on fauna over the years.

5.3.1.2 Fauna monitoring

The monitoring of fauna biodiversity in the Rio Preto-Jacundá RESEX was carried out following the methodology of the In situ Biodiversity Monitoring Program (published by Pereira et al., 2013), using the same sampling stations designed by ICMBio and implemented by SEDAM/CUC - State Secretariat for Environmental Development/Coordination of Conservation Units in 2019. This monitoring has been carried out annually by SEDAM since then.

Data from the 2020, 2021 and 2022 campaigns will be reported here. It is important to note that the Monitora Program is not a result of direct investments by the REDD+ Project, as the monitoring was carried out by a public entity with public financial resources as a responsibility/obligation of the State of Rondônia, consequently, the data from the Monitora Program was not accounted for as a result of the REDD+ project.

I) Methodology

The study was carried out at three sampling stations (EAs - trails) with a length of 5,000 meters (5 km). The EAs were named Trail 1, Trail 2 and Trail 3. The transects are mainly located in the multiple use and forest management zones, defined in the RESEX Multiple Use Management Plan, drawn up in 2016, and the end of transect 3 enters the unit's conservation zone, where there is a vegetation transition, signaling the areas that incorporate the environmental features of interest in RESEX and with aspects such as topography, slope, hydrography, similar, with no drastic variations in relief and easy access for community members, since they are located close to areas of community residences and common areas of RESEX.

Three groups of indicators were monitored in the Rio Preto-Jacundá RESEX area (birds and mammals and frugivorous butterflies) and, from this inspection, it is possible to follow any variations that may occur in the region's biodiversity over time. The three groups mentioned are good indicators, as they have endangered species, species used by the community for food (birds and mammals), species with high sensitivity to environmental changes, among other characteristics that have made them target groups for in situ biodiversity monitoring. They also stand out for having applied, validated methodologies that are low in implementation and execution costs.

Following the ICMBio protocol, the sampling is carried out on a 5,000 m long linear transect. During the routes, only the animals spotted by the monitors are recorded, that is, the data comes exclusively from direct observation. The monitors moved at an average distance of 1 km/h to 1.5 km/h, standard speed that reduces the possibility of recounting the same individual, and started sampling at dawn. As far as mammals are concerned, only medium-sized and large mammals were recorded, most of which have a body mass of over 1 kg, with the exception of animals such as marmosets, squirrels and others, which may have a body mass lower than that. As for birds, sampling was limited to the Cracidae and Tinamidae families. When they spotted the animals, the monitors used a species identification guide to identify the taxonomy of each record. In addition, the distance the animal was from the trail was measured with a tape measure, and the time of the sighting was recorded. Finally, the prevailing weather conditions during sampling; the start and end times of the activity; the number of animals; the sampling station covered; the location on the transect and the name of the data collectors were recorded on a field sheet.

Sampling of frugivorous butterflies also takes place on two expeditions a year and happened in parallel with the sampling of mammals and birds. For this purpose, 48 (forty-eight) Van Someren-Rydon type traps were installed, corresponding to 16 (sixteen) traps per SS. Each trap was provided with 50 ml of bait containing sugar cane and ripe bananas, which was replaced every 48 hours. The traps were also checked every 48 hours and the captured butterflies were sorted and released after having their wings marked with an appropriate pen. During sorting, the butterflies were photographed, identified, and then returned to the environment.

II) Results and Discussion

2020 campaign:

In 2020, the expeditions took place between August 7th and 13th and September 5th and 9th. During the 10 days of sampling, 150 km were covered, during the dry season. This corresponded to 146h48 of travel, corresponding to 53h46 in SS 1; 48h08 in SS 2 and 44.54 in SS 3, with **399 sightings** of Medium and Large Mammals and Game Birds. To carry out the monitoring, 6 community members were involved.

Taking into account the two orders (birds and mammals), **33 species** were recorded (Table 27), of which 14 were bird species and 19 mammal species. In more detail: SS 1 obtained 20 species (3 birds and 17 mammals), SS 2, 22 species (9 birds and 13 mammals) and in SS 3, 22 species (8 birds and 14 mammals). The results suggest high species richness for both birds and mammals in the Resex Rio Preto-Jacundá.

Comparing the records with the International Union for Conservation of Nature (IUCN) database, **6** of the 33 species **are threatened with extinction worldwide**. These are *Ateles chamek* (Blacked-face black spider monkey) with "Endangered" (EN) status; *Tayassu pecari* (White-lipped Peccary), *Psophia viridis* (Green-winged Trumpeter), *Plecturocebus brunneus* (Brown Titi Monkey), *Tinamus tao* (Grey Tinamou) and *Myrmecophaga tridactyla* (Giant Anteater) with "Vulnerable" (VU) status. In addition, **23 sightings of the *Ateles chamek*** were recorded, according to Figure 9.

Table 26. Bird and mammal species recorded in the Monitora Program's linear transect sampling in 2020 at the Rio Preto Jacundá RESEX. Source: Monitora Program (2020).

Aves		Mamíferos	
Galliformes	**Cracidae**	Artiodactyla	**Cervidae**
	Pauxi tuberosa		*Mazama americana*
	Penelope jacquacu		*Mazama nemorivaga*
	Ortalis guttata		**Tayassuidae**
	Odontophoridae		*Dicotyles tajacu*
	Odontophorus gujanensis		*Tayassu pecari*
Gruiformes	**Psophiidae**	Carnivora	**Canidae**
	Psophia viridis		*Cerdocyon thous*
Tinamiformes	**Tinamidae**		**Felidae**
	Crypturellus cinereus		*Panthera onca*
	Crypturellus sp.		*Puma concolor*
	Crypturellus soui		*Puma yagouaroundi*
	Crypturellus strigulosus		**Mustelidae**
	Crypturellus undulatus		*Eira barbara*
	Crypturellus variegatus		*Galictis vittata*
	Tinamus guttatus		**Procyonidae**
	Tinamus major		*Nasua nasua*
	Tinamus tao	Pilosa	**Myrmecophagidae**
			Myrmecophaga tridactyla
		Primates	**Atelidae**
			Ateles chamek
			Callithrichidae
			Leontocebus wedelli
			Cebidae
			Sapajus apella
			Saimiri ustus
			Pitheciidae
			Pithecia irrorata
			Plecturocebus brunneus
		Rodentia	**Dasyproctidae**
			Dasyprocta sp.

Figure 9. Histogram containing the distribution of sightings by species in the Monitora Program's linear transect sampling in 2020 at the Rio Preto Jacundá RESEX. Source: Monitora Program (2020).

A total of 48 Van Someren-Rydon traps were set out to capture butterflies, that is, 16 traps per SS. Considering that the traps were set and baited for 7 days, the total sampling effort corresponds to approximately 432 hours, or 144 hours per SS. With regard to the weather conditions on the sampling days, the climate was sunny. During the sampling, 619 individuals were captured, representing 10 tribes (Figure 10). The three most frequent tribes were: Epicaliini (40.5%), Brassolini (17.4%) and Satyrini (12.6%). The least frequent tribes were: Callicorini (0.2%), Epiphilini (1.3%) and Ageroniini (1.3%).

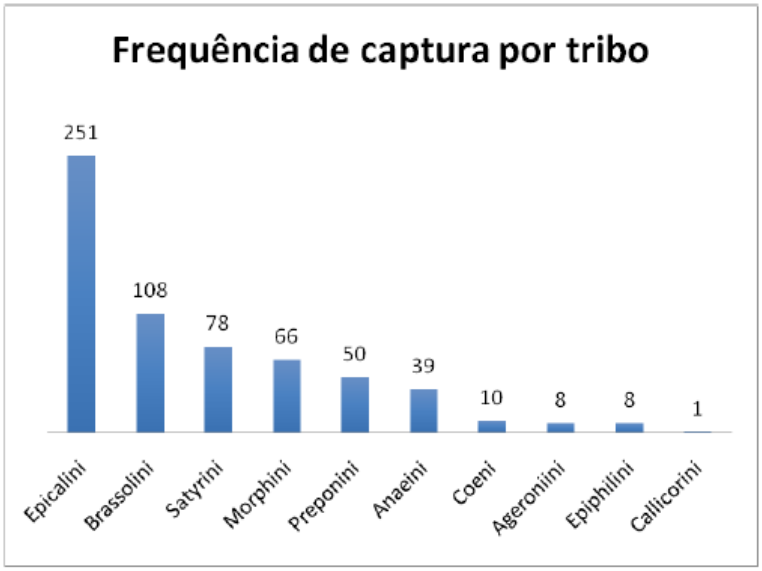


Figure 10. Histogram containing the frequency of frugivorous butterfly captures by tribe in the Monitora Program's linear transect sampling in 2020 at the Rio Preto Jacundá RESEX. Source: Monitora Program (2020).

2021 campaign:

In 2021, a single expedition took place between October 10 and 22. During the expedition, 150 km were covered, only during the rainy season. This corresponded to 94.34 hours of activity, divided into 37.16 hours in SS 1, 29.54 hours in SS 2 and 27.24 hours in SS 3. From the above, it can be said that the standard protocols of the Monitora Program with regard to the hours sampled, that is, monitored, were not met satisfactorily, falling below the minimum proposed in SS 2 and 3, which justifies the lower number of sightings and species identified in this campaign compared to the 2020 and 2022 campaigns. To carry out the monitoring, 5 extractivists living in RESEX were involved.

There were **254 sightings** of medium and large mammals and game birds. Considering both groups (birds and mammals), **23 species** were recorded (Table x), of which 8 were bird species and 15 mammal species. In more detail: in SS 1 14 species were obtained (4 birds and 10 mammals), SS 2, 14 species (6 birds and 8 mammals) and in SS 3, 15 species (5 birds and 10 mammals). The results suggest high species richness for both birds and mammals in the Resex do Rio Preto Jacundá.

Comparing the records with the International Union for Conservation of Nature (IUCN) database, **4** of the 23 species **are threatened with extinction worldwide**. These are *Ateles chamek* (Blacked-face black spider monkey) with "Endangered" (EN) status, *Tayassu pecari* (White-lipped Peccary), *Psophia viridis* (Green-winged Trumpeter) and *Tinamus tao* (Grey Tinamou), with "Vulnerable" (VU) status. This information reinforces the importance of the Resex in the regional context and the potential it has in relation to local fauna, especially with regard to scientific research and animal watching tourism. In addition, there were **44 sightings of *Ateles chamek*** (Figure 11).

Table 27. Species of birds and mammals recorded in the Monitora Program's linear transect sampling in 2021 at the Rio Preto Jacundá RESEX. Source: Monitora Program (2021).

Aves		Mamíferos	
Galliformes	Cracidae	Artiodáctilos	Cervídeos
	Pauxi tuberosa		*Mazama americana*
	Penelope jacquacu		*Mazama nemorivaga*
Gruiformes	Psophiidae		Tayassuidae
	Psophia viridis		*Dicotyles tajacu*
Tinamiformes	Tinamidae		*Tayassu pecari*
	Crypturellus cinereus	Carnivora	Procionídeos
	Crypturellus sp.		*Nasua nasua*
	Crypturellus parvirostris	Cingulata	Dasipodídeos
	Tinamus guttatus		*Dasypus novemcinctus*
	Tinamus tao	Pilosa	Myrmecophagidae
			Tamandua tetradactyla
		Primates	Atelidae
			Ateles Chamek
			Cebidae
			Micos sp.
			Safajus apella
			Saimiri ustus
			Callitrichidae
			Leontocebus weddelli
			Pitheciidae
			Pithecia irrorata
		Rodentia	Dasyproctidae
			Dasyprocta sp.
			Sciuridae
			Sciurus ignitus

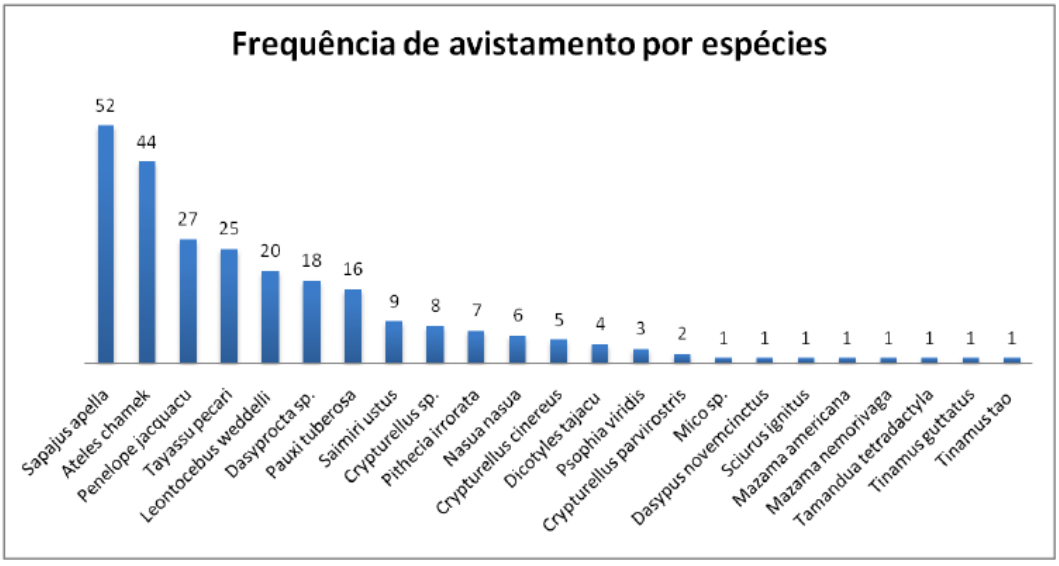


Figure 11. Histogram showing the distribution of sightings by species in the Monitora Program's linear transect sampling, in 2021, at the Rio Preto Jacundá RESEX. Source: Monitora Program (2021).

A total of 48 Van Someren-Rydon traps were set out to capture butterflies, that is, 16 traps per SS. Considering that the traps were set and baited for 7 days, the total sampling effort corresponds to approximately 432 hours, or 144 hours per SS. With regard to the weather conditions on the sampling days, 67% was sunny, 30% cloudy and 3% rainy. During sampling, 157 individuals were captured, representing 9 tribes (Figure 12). The three most frequent tribes were: Epicaliini (50.6%), Preponini (18.6%) and Satyrini (7.7%).

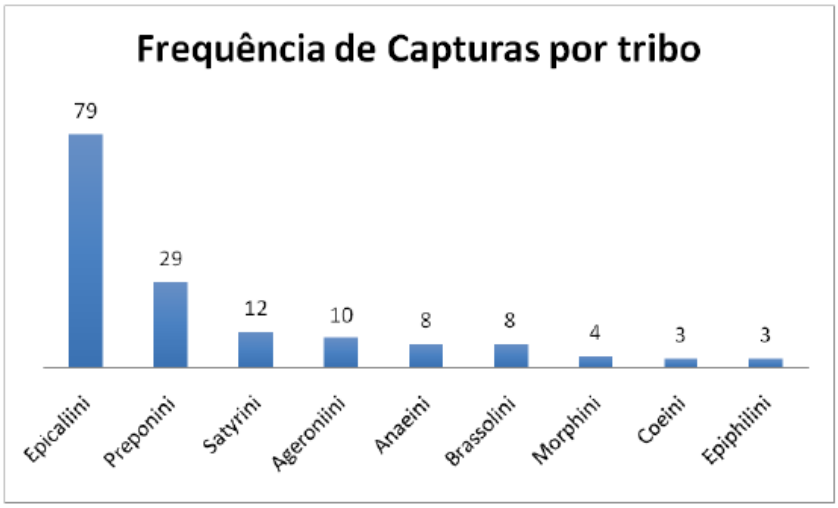


Figure 12. Histogram showing the frequency of frugivorous butterfly captures by tribe in the Monitora Program's linear transect sampling, in 2021, at the Rio Preto Jacundá RESEX. Source: Monitora Program (2021).

2022 campaign:

The 2022 expedition took place from June 25 to 29 and July 23 to 27. A total of 150 km were covered during the dry season. This corresponded to 125.21 hours of displacement, corresponding to 40.36 hours in SS 1; 43.55 hours in SS 2 and 41.30 hours in SS 3. From the above, it can be said that the standard protocols of the Monitora Program with regard to the proposed minimum sampling effort were met satisfactorily. To carry out the monitoring, 7 extractivists from RESEX were involved.

A total of **436 sightings** were recorded. Considering the two orders (birds and mammals), **33 species** were recorded (Table 29), 14 species of birds and 19 species of mammals. In more detail: SS 1 obtained 19 species (6 birds and 13 mammals), SS 2, 23 species (10 birds and 13 mammals) and in SS 3, 20 species (9 birds and 11 mammals).

Comparing the records with the International Union for Conservation of Nature's (IUCN) database, **4** of the 33 species **are threatened with extinction worldwide**. These are *Ateles chamek* (Blacked-face black spider monkey) with "Endangered" (EN) status, *Tayassu pecari* (White-lipped Peccary), *Psophia viridis* (Green-winged Trumpeter) and *Tinamus tao* (Grey Tinamou), with "Vulnerable" (VU) status. In addition, there were **25 sightings of *Ateles chameck*** (Figure 13).

Table 28. Bird and mammal species recorded in the Monitora Program's linear transect sampling in 2022 at the Rio Preto Jacundá RESEX. Source: Monitora Program (2022).

Aves		Mamíferos	
Galiformes	**Cracidae**	Artiodactyla	**Cervidae**
	Pauxi tuberosa		*Mazama americana*
	Penelope jacquacu		*Mazama nemorivaga*
	Odontophoridae		**Tayassuidae**
	Odontophorus stellatus		*Dicotyles tajacu*
Tinamiformes	**Tinamidae**		*Tayassu pecari*
	Crypturellus cinereus	Carnívora	**Procyonidae**
	Crypturellus obsoletus		*Nasua nasua*
	Crypturellus parvirostris		*Procyon cancrivorus*
	Crypturellus soui	Primates	**Atelidae**
	Crypturellus strigulosus		*Ateles chamek*
	Crypturellus tataupa		**Callitrichidae**
	Crypturellus undulatus		*Leontocebus fuscicollis*
	Crypturellus variegatus		*Leontocebus fuscus*
	Tinamus tao		*Leontocebus weddelli*
	Tinamus guttatus		**Cebidae**
Gruiformes	**Psophiidae**		*Saimiri boliviensis*
	Psophia viridis		*Saimiri ustus*
			Sapajus apella
			Pitheciidae
			Pithecia irrorata
			Plecturocebus sp.
		Rodentia	**Dasyproctidae**
			Dasyprocta punctata
			Dasyprocta azarae
			Erethizontidae
			Coendou prehensilis
			Cuniculidae
			Cuniculus paca

Figure 13. Histogram showing the distribution of sightings by species in the Monitora Program's linear transect sampling, in 2022, at the Rio Preto Jacundá RESEX. Source: Monitora Program (2022).

A total of 48 Van Someren-Rydon traps were set out to capture butterflies, that is, 16 traps per SS. Considering that the traps were set and baited for 7 days, the total sampling effort corresponds to approximately 432 hours, or 144 hours per SS. With regard to the weather conditions on the sampling days, the climate on all 10 sampling days was sunny. During sampling, 248 individuals were captured, representing 10 tribes (Figure 14). Of the individuals captured, representatives of 43 species were identified. The three most frequent tribes were: Brassolini (38%), Epicaliini (24%) and Satyrini (11%).

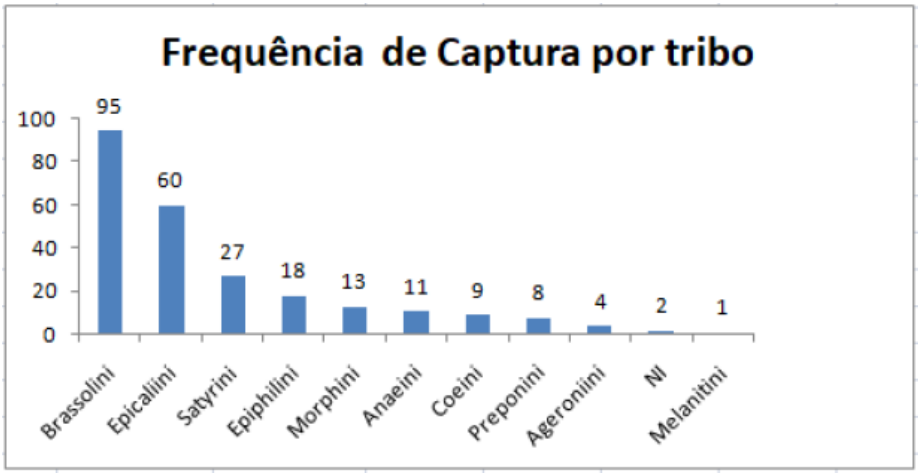


Figure 14. Histogram showing the frequency of frugivorous butterfly captures by tribe in the Monitora Program's linear transect sampling in 2022 at the Rio Preto Jacundá RESEX. Source: Monitora Program (2022).

III) Final considerations

The results of the 2020, 2021 and 2022 Monitora Program campaigns identified 33, 23 and 33 species of birds and mammals, respectively, making a total of 48 species identified by the Monitora Program in the 3 years of the campaign at the Rio Preto-Jacundá RESEX. Of these, 6 species are threatened with extinction ("EN" or "VU") according to the IUCN Red List. The execution of the Monitora Program underscores the environmental relevance of the Rio Preto-Jacundá Extractive Reserve in the regional context, as it presents high species richness for all the taxa sampled in the three years.

In the biodiversity monitoring carried out with REDD+ Project resources by Ecoporé in 2020, already presented in the last MR, 32 species of birds and mammals were identified, 6 of which are threatened with extinction by the IUCN. Therefore, the Monitora Program monitoring campaigns carried out by SEDAM together with RESEX residents, presented similar results in relation to identified species. The number of sightings of *Ateles chamek*, the Project's trigger species categorized as “endangered” (EN) by the IUCN, was high. The abundance was 1.5 sightings/10km in 2020, 2.9 sightings/10km in 2021 and 1.6 sightings per 10km traveled in 2022.

It is emphasized that, due to the level of quality of life that RESEX residents have already achieved with the help of resources from the REDD+ Project, fauna monitoring is now once again a priority in the budget and was resumed by the Project in 2023. The campaign was carried out in October 2023 and presented satisfactory results that will be recorded in the next Monitoring Report (MR).

5.3.1.3 Flora monitoring

I) Sustainable Forest Management

As described in the project description (PDD), there is sustainable forest management activity operating within the boundaries of the RESEX, with MADREX being the company currently responsible for managing such activities in the UC. In addition, as already discussed in other sections (**Erro! Fonte de referência não e ncontrada.** and **Erro! Fonte de referência não encontrada.**), during the monitored period there was sustainable exploitation of UPAs (Annual Production Unity) 20 and 21, in accordance with the procedures of the Community Forest Management Plan in a Sustainable Yield Regime (PMFS).

In the context of forest management, permanent plots are areas that are permanently demarcated and untouched in the forest and periodically measured, with the aim of acquiring information on the growth, dynamics and floristic composition of the forest. As such, permanent plots serve to measure the ecological state of the intact natural forest and, over the course of exploitation, serve as a guide for minimizing the impacts of forest management.

In the project description, medium/long-term activities include bringing sustainable forest management into line with the criteria of the Forest Stewardship Council (FSC). However, during the monitored period, reflecting the present days, forest management in the RESEX has not yet managed to comply with the FSC. Therefore, without the obligations relating to post-exploratory measures of the certification, measurements of the permanent plots have only been taking place in the pre-exploratory phase, one year before the harvesting of the UPAs. Permanent plots are only measured after harvesting if the forest engineers responsible for forest management detect that there has been an impact during harvesting activities, which did not occur during this monitoring period. In other words, the permanent plots of UPAs 20 and 21 were only inventoried one year before harvesting.

The frequency associated with the indicator foreseen in the PDD would be to count the diversity of the permanent plots one year before harvesting and at intervals of one, three and five years after harvesting the PAU. However, this frequency was considered due to the FSC requirements and, as the forest management did not obtain the certification during the monitored period, the inventory of permanent plots did not take place after exploitation. As a result, the frequency of the indicator was only collected one year before harvesting the UPAs and the deviation associated with the frequency of this indicator is reported in section **Erro! Fonte de referência não encontrada.** of this document. It is worth remembering that, due to t he existence of the indicator, only the diversity of species in these plots was extracted and no other results of this activity can be gauged, since these are permanent plots.

II) Methodology

The methodology used to collect data and information from the permanent plots is that established by MADREX in the forest inventory activities of the PMFS.

Each UPA has three randomly distributed permanent plots measuring 10,000m², or one hectare. This means that each UPA has three sampling units which together cover 3 hectares. Using a common tape measure, graduated in centimeters and at a height of 1.3 m above ground level, the circumference of the trees ('CBH') was measured. For trees with sapopemas (tabular roots), the circumference was measured at 0.3 m above them. The commercial height was established as that found at the limit of the first branches of the tree's stem and/or bifurcations of the trunk, and a 5 m long pole was used to measure it. For the rest of the stem, only height estimates were made. In addition, the quality of the tree stem is observed, according to the following quality classes:

- Class 1 - individuals showing good formation, with full use of the stem;

- Class 2 - individuals showing some irregularities, with partial use of the stem;

- Class 3 - individuals showing irregularities, with no commercial use of the stem.

III) Results

To calculate diversity, we used the spreadsheets containing the common and popular names of the species identified in the inventories of the permanent plots. It is important to note that the individuals were identified to species level, but it was not possible to access the scientific names. In view of this, considering that species names can vary due to the observer and the region in which it is located, it was not possible to identify possible double counting of these names and all the species listed in the spreadsheet were considered to be true and reliable in the diversity count of the permanent plots. Double counting was only avoided when, when analyzing the names in the spreadsheet, it was identified that there had been an error when typing in the name of the species.

Another important point to consider is the exploitation date of the UPA with the measurement date of the permanent plots of this UPA, which took place a year before the exploitation. In other words, UPA 20, exploited in 2021, had its permanent plots measured in 2020 and UPA 21, exploited in 2022, was measured in 2021. Thus, the species diversity of the permanent plots of the UPAs exploited in this monitoring period was counted in 2020 and 2021.

As a result of diversity, in 2020 the diversity of the plant community was 111 different species and in 2021 the value was 70 species, totaling an average of 30 species/hectare and 125 species monitored on the period for both the UPAs.

Data/Parameter	Diversity of the plant community in the permanent plots
Data unit	Species richness
Description	Variety of species found in the plant community within the permanent plots
Data source	Data sheet
Description of the measurement methods and procedures to be applied	Counting the species surveyed in the forest inventories of the permanent plots in each UPA
Monitoring/recording frequency	One year before harvest. At intervals of one, three and five years after the UPA harvest.
Monitored value	Year | Species richness

	2020	111
	2021	70
Monitoring equipment	Permanent plot data sheets	
QA/QC procedures to be applied	Validation of information with ASMOREX and MADREX	
Purpose of the data	Control the diversity indices in the permanent plots within the forest management area	
Calculation method	Data sheet	
Comments	The frequency of this parameter was not carried out as planned and was only counted one year before the harvest. Better details can be found in the deviations section of this document (**Erro! Fonte de referência não encontrada.**).	

Regarding threatened species, the following species were identified in the inventory of the permanent plots of UPAs 20 and 21: *Bertholletia excelsa* (Brazil-nut tree) considered "Vulnerable" (VU) and prohibited from cutting, *Mezilaurus itauba* (itaúba) considered "Vulnerable" (VU), *Virola surinamenses* (ucuúba) considered "Endangered" (EN) and *Hevea brasiliensis* (rubber tree) prohibited from cutting.

5.3.2 Biodiversity Monitoring Plan Dissemination (CCB, B4.3)

As already described in Section **Erro! Fonte de referência não encontrada.**, the Rio Preto-Jacundá REDD+ R ESEX Project has three methods of communication - oral, written, and virtual - in order to guarantee access to the documents and all other Project information for the communities and other stakeholders.

The results were disseminated in a printed version, where each document related to the project's conception and monitoring was made available for consultation at ASMOREX's headquarters and at CUC/SEDAM (in the city of Porto Velho), in a virtual version where the documents related to monitoring were made available through Verra's website and website, Biofílica's newsletter and social media, and orally, through the internal alignment meetings held by ASMOREX and at the Ordinary and Extraordinary General Assemblies held with the RESEX residents..

5.4 Optional Criterion: Exceptional Biodiversity Benefits

5.4.1 Trigger Species Population Trends (CCB, GL3.2, GL3.3)

Trigger Species	*Ateles chameck* (Blacked-face black spider monkey)

Scenario With Project	According to the IUCN Red List[48], the species is threatened, in the category "Endangered" (EN), as it is estimated to be declining due to habitat loss. The species is highlighted in fauna diagnosis studies for its great biological importance, especially for being a large, highly sensitive seed-dispersing primate, for its degree of endemism and for being threatened with extinction. During the monitored period, no fauna monitoring campaigns were carried out by the REDD+ Project, therefore, data from the Monitora Program (ARPA) monitoring carried out by CUC/SEDAM with the participation of RESEX residents was used. In the Monitora Program reports, the abundance for *Ateles chamek* was 1.5 sightings/10km traveled in 2020, 2.9 sightings/10km in 2021 and 1.6 sightings/10km in 2022. The values found by SEDAM monitoring were greater than that found in the fauna monitoring campaign carried out by Ecoporé in 2020, in which the abundance for the species was 0.5 sightings for every 10km traveled. The state of conservation of the forest directly affects the conservation of biodiversity. In this way, it can be confirmed that the project's activities have been effective in maintaining the species, since, according to the project's initial description, one of the project's positive impacts would be to maintain levels of biodiversity and rare and special species. When it was described, the project foresaw that the maintenance of this species' habitat would be linked to the empowerment of the community on biodiversity issues in the place where they live, as well as the on-site monitoring of the species' rates, generating data and estimates to verify the populational tendency of *Ateles chamek*. Therefore, it is worth highlighting that the on-site monitoring of biodiversity at RESEX by SEDAM technicians had the support of community members. Finally, it is understood that all the project's activities, which result in a common goal of reducing deforestation, forest conservation and socio-economic development, have been

[48] Alves, S.L., Ravetta, A.L., Paim, F.P., Mittermeier, R.A., Rabelo, R.M., Wallace, R.B., Messias, M.R., Calouro, A.M., Rylands, A.B., de Melo, F.R. & Boubli, J.P. 2021. *Ateles chamek* (amended version of 2020 assessment). *The IUCN Red List of Threatened Species* 2021: e.T41547A191685783. https://dx.doi.org/10.2305/IUCN.UK.2021-1.RLTS.T41547A191685783.en. Accessed on 08 March 2024.

	effective in maintaining biodiversity and populations of this trigger species.

APPENDIX 3: COMMERCIALLY SENSITIVE INFORMATION

Use the table below to describe the commercially sensitive information included in the monitoring report to be excluded in the public version.

Section	Information	Justification