

REDUCTION OF DEFORESTATION AND DEGRADATION IN TAMBOPATA NATIONAL RESERVE AND BAHUAJA-SONENE NATIONAL PARK WITHIN THE AREA OF MADRE DE DIOS REGION –PERU: MONITORING REPORT

Project title	Reduction of deforestation and degradation in Tambopata National Reserve and Bahuaja-Sonene National Park within the area of Madre de Dion region –Perú
Project ID	1067
Crediting period	01 July, 2010 – 30 June, 2030; 20 years
Monitoring period	01 – January – 2021 to 31 – December - 2023
(CCB) GHG accounting period	01 July, 2010 – 30 June, 2030; 20 years
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Most recent date of issue	17 – September – 2024
Version	1
VCS Standard version	4.7
CCB Standards version	3.1
Project location	Perú, Madre de Dios
Project proponent(s)	Main proponent of the project: Asociación para la Investigación y Desarrollo Integral - AIDER Contact: Jaime Nalvarte Armas Calle Las Camelias 174, 6th Floor - San Isidro. Iime Phone: (511) 5956644

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Validation/verification body	Organization: AENOR CONFÍA SAU Contact: Jose Luis Fuentes Perez Email: jfuentes@aenor.com Phone (+34) 914 326 000
History of CCB Status	The project was validated in June 2012 Under revalidation of CCB standard
Gold Level criteria	Climate and Biodiversity The project Reduction of deforestation and degradation in the Tambopata National Reserve and the Bahuaja Sonene National Park of the Madre de Dios region - Peru has exceptional benefits to biodiversity by including, in the project area, sites with high priority for its conservation, as is the case of the Pampas of the Heath, which present globally significant source populations of the Crinose Wolf (<i>Chrysocyon brachyurus</i>) and the deer of the marshes (<i>Blastocerus dichotomus</i>). In addition, the project generates benefits at the level of climate adaptation through the implementation of agroforestry systems using species that provide organic matter, prevent erosion, favor the labeling of the soil, etc., so that they are less susceptible to being affected by phenomena related to climate change and are viable alternatives for sustainability for the population.
Prepared by	Asociación para la Investigación y Desarrollo Integral - AIDER

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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) Protection of unique ecosystems in the region and in the country, called Pampas del Heath	Pampas del Heath	5	Pampas del Heath
2) Support to native communities of the Ese'Eja ethnic group located in the area of influence of the project in matters of governance, gender, productive activities, food security, as well as the care of their cultural identity	3 native communities supported: Infierno, Palma Real, and Sonene	2.2.6 4.4.1 4.3.2	3 native communities supported: Infierno, Palma Real, and Sonene
3) Recovery of areas degraded by agriculture and livestock through the installation of agroforestry systems with fine aroma cocoa, in the buffer zone of the RNTAMB y PNBS	25 ha	4	25 ha
4) Support to cooperatives or associations of producers	4: COOPASER; ADAPAB, ASCART, AGROBOSQUE	4.4.1	4: COOPASER; ADAPAB, ASCART, AGROBOSQUE

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	Does not apply	-	Does not apply
	Net estimated emission reductions in the project area, measured against the without-project scenario	1,413,915 tCO ₂ e	3.2.4	6,764,034 tCO ₂ e
Forest ¹ cover	For REDD ² projects: Number of hectares of reduced forest loss in the project area measured against the without-project scenario	2,292.23 ha	3.2.4	13,230.13 ha
	For ARR ³ projects: Number of hectares of forest cover increased in the project area measured against the without-project scenario	Does not apply	-	Does not apply
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	Does not apply	-	Does not apply
	Number of hectares of non-forest land in which improved land management has occurred as a result of the project's activities,	Does not apply	-	Does not apply

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*)

	measured against the without-project scenario			
Training	Total number of community members who have improved skills and/or knowledge resulting from training provided as part of project activities	515	4.4.6	382 families benefited from the project with sustainable economic activities such as agroforestry, Brazilian nut extraction, handicrafts, palm fruit extraction, artisanal fishing, tourism, regenerative livestock farming, and aquaculture as part of the project's REDD+ strategy.
	Number of female community members who have improved skills and/or knowledge resulting from training provided as part of project activities of project activities	194	4.4.6	194 women trained in issues of agroforestry , Brazilian nut extraction, handicrafts, palm fruit extraction, artisanal fishing, tourism, regenerative livestock farming, and aquaculture.

Employment	Total number of people employed in of project activities, ⁵ expressed as number of full-time employees ⁶	Does not apply	-	Does not apply
	Number of women employed in project activities, expressed as number of full-time employees	Does not apply	-	Does not apply
Livelihoods	Total number of people with improved livelihoods ⁷ or income generated as a result of project activities	515	4.4.6	515 families, family's members of COOPASER, AGROBOSQUE, ASCART, PALSAMAD, SHI'OI, MASHEKE, BOKAO, ADAPAB.
	Number of women with improved livelihoods or income generated as a result of project activities	194	4.4.6	194 women members of COOPASER, AGROBOSQUE, ASCART, PALSAMAD, SHI'OI, MASHEKE, BOKAO, ADAPAB.
Health	Total number of people for whom health services were improved as a result of project activities, measured against the without-project scenario	Does not apply	-	Does not apply
	Number of women for whom health services were improved as a result of	Does not apply	-	Does not apply

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.

	project activities, measured against the without-project scenario			
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	Does not apply	-	Does not apply
	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	Does not apply	-	Does not apply
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	Does not apply	-	Does not apply
	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	Does not apply	-	Does not apply
Well-being	Total number of community members whose well-being ⁸ was improved as a result of project activities	382		339 families, partners of the COOPASER, AGROBOSQUE, ASCART, PALSAMAD, SHI'OI, MASHEKE, BOKAO, ADAPAB.

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.

	Number of women whose well-being was improved as a result of project activities	Does not apply	-	Does not apply
Biodiversity conservation	Change in the number of hectares significantly better managed by the project for biodiversity conservation, ⁹ measured against the without-project scenario	Does not apply	-	Does not apply
	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	Does not apply	-	Does not apply

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.

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

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 REDD project is implemented in the area comprised by Tambopata National Reserve and Bahuaja-Sonene National Park sector within Madre de Dios region, corresponding to the Administration Contract of TAMBPNR and BSNP – Madre de Dios, signed between the Peruvian government and the Association for Research and Integrated Development – AIDER. The area of project has an extension of 541,808.17 hectares and aim is conserve forests in both Protected Natural Area - NPA from the imminent advance of deforestation.

In order to implement effective measures to avoid deforestation and forest degradation for the period January 1 2021 - December 31, 2023; activities have been developed in accordance with the type of actors and threats. These activities come from the established components in the REDD + Strategy, which have been improving and aligning with the reality of the area.

The components are: (1) Integral Biological Monitoring System that feeds the REDD + monitoring, (2) Promotion of research as a strategic activity for channeling resources in favor of conservation, (3) Systematization of Plans and Experiences of the Administration Contract, (4) Promotion of Sustainable Economic Activities and Sustainable Land Management, (5) Surveillance and Control, (6) Organizational Strengthening for Committees, Indigenous Communities, and Local Bases, (7) Strengthening Organizations to Achieve Trade Integration, (8) Communication and environmental education, (9) Management of the REDD+ Project and the administration contract.

The project has contemplated working with new beneficiaries who engage in sustainable economic activities, recognizing the forests in the area as ecosystems that must be conserved for future generations. These actions are an integral part of the REDD+ strategy implemented in the project, which has been adjusted to address the changing realities on the ground and maximize positive impacts in reducing emissions from deforestation and forest degradation.

The verification period runs from January 1. 2021 to December 31, 2023, and it has managed to avoid 868,452 tCO₂-e

2.1.2 Audit History (VCS, 4.1)

Audit Type	Period	Program	VVB Name	Number of years
Validation	01/07/2010— 30/06/2020	VCS / CCB	Rainforest Alliance	Ten years
Verification period	01/07/2010— 30/06/2011	VCS	Rainforest Alliance	One year
Verification period	01/07/2011 – 30/06/2013	VCS / CCB	AENOR	Two years
Verification period	01/07/2013 – 30/06/2014	VCS / CCB	AENOR	One year
Verification period	01/07/2014 – 30/06/2015	VCS / CCB	AENOR	One year
Verification period	01/07/2015 - 30/06/2017	VCS / CCB	AENOR	Two years
Verification period	01/07/2017 – 31/12/2018	VCS / CCB	ICONTEC	Two years
Verification period	01/01/2019 – 31/12/2019	VCS / CCB	SCS	One year
Verification period	01/01/2020 – 30/06/2020 & 01/07/2020 – 31/12/2020	VCS / CCB	ICONTEC	One year
Re-validation of baseline	-	VCS / CCB	AENOR	10 years
Verification period	01/01/2021 – 31/12/2023	VCS / CCB	AENOR	Three years

2.1.3 Sectoral Scope and Project Type (VCS, 3.2)

Sectoral Scope	14: Agriculture, Forestry and Other Land Use
AFOLU Project Category	Reduced Emissions from Deforestation and Degradation (REDD)
Project Activity Type	Avoiding Unplanned Deforestation and Degradation (AUDD)

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

Organization name	Asociación para la Investigación y Desarrollo Integral – AIDER
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2.1.5 Other Entities Involved in the Project

Organization name	National Service of Protected Natural Areas – SERNANP
Role in the project	The National Service of Protected Natural Areas (SERNANP) is in charge of leading the management of the National System of Natural Protected Areas (NPA). Consequently, they are responsible of headship of the Tambopata National Reserve and Bahuaja-Sonene National Park. Their purpose is provide political support, monitoring and supervision of the taken commitments for the implementation of the project, in their capacity as the State entity responsible for the management of the NPA.
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2.1.6 Project Start Date (VCS, 3.8)

Project start date	July 1, 2010
Justification	The project started in July 2010, its first baseline was completed and is currently updating the second baseline period.

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

Crediting Period	01.01.10 – 31.12.20
Start Date of First or Fixed Crediting Period	01.07.10 - 31.12.20
Total Number of Years of Crediting Period	20 años
CCB Benefits Assessment Period	20 años

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

The project area politically belongs to Tambopata and Inambari districts, Tambopata province, Madre de Dios region, Peru. It occupies the southeast end of the region, reaching the international border with the Republic of Bolivia. Figure 1 shows the location map of project area.

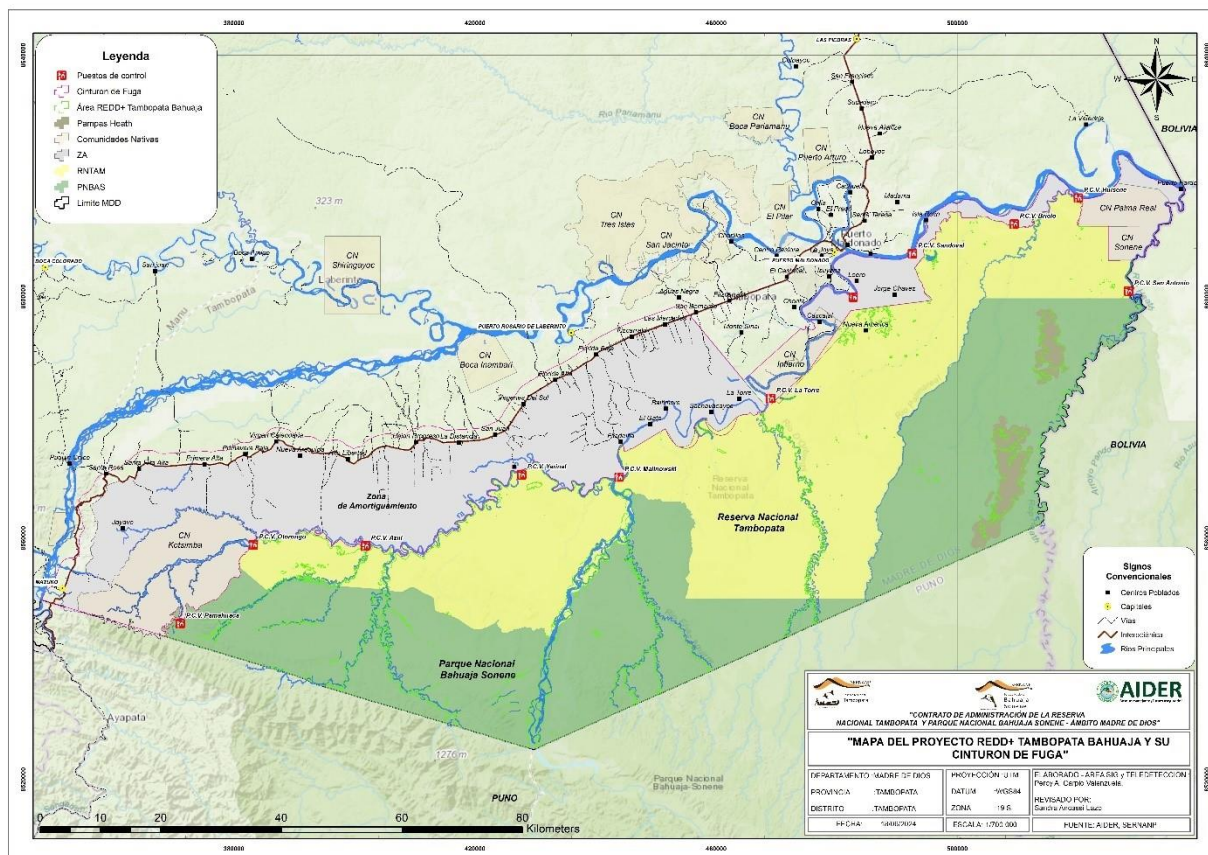


Figure 1. Location map of project area

2.1.9 Title and Reference of Methodology (VCS, 3.1)

Type (methodology, tool, module)	Reference ID (if applicable)	Title	Version
Methodology	VM0007	VM0007 REDD+ Methodology Framework (REDD+MF),	1.7
Module	VCS VMD0001	Estimation of carbon stocks in the above- and belowground biomass in live tree and non-tree pools (CP-AB)	1.2

Module	VCS VMD0007	Estimation of baseline carbon stock changes and greenhouse gas emissions from unplanned deforestation and unplanned wetland degradation (BL-UP)	3.3
Module	VCS VMD0010	Estimation of emissions from activity shifting for avoiding unplanned deforestation (LK-ASU)	1.1
Module	VCS VMD0013	Estimation of greenhouse gas emissions from biomass and peat burning (E-BPB)	1.3
Module	VCS VMD0015	Methods for monitoring of ghg emissions and removals in redd and ciw projects (M-REDD)	2.3
Module	VCS VMD0016	Methods for stratification of the project area (X-STR)	1.3
Module	VCS VMD0017	Estimation of Uncertainty for REDD+ Project Activities (X-UNC)	2.2
Tool	VT0001	Tool for the Demonstration and Assessment of Additionality in VCS Agriculture, Forestry and Other Land Use (AFOLU) Project Activities	3.0
Tool		AFOLU Non-Permanence Risk Tool	4.2
Tool	T-SIG	Tool for testing the significance of GHG emissions in A/R CDM project activities.	1.0

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

If yes, provide required evidence of no double issuance as outlined by the VCS Standard and the CCB Standard. Include all relevant information about the community, social, or biodiversity credit.

2.1.10.2 Registration in Other GHG Programs

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

☐ Yes ☒ No

If yes, provide the registration number and all relevant details, including the date of project inactivity in the other GHG program.¹² Specify how double counting is avoided.

2.1.10.3 Projects Rejected by Other GHG Programs

Has the project been rejected by any other GHG programs?

☐ Yes ☒ No

If yes, provide the program name(s), reason(s) and date for the rejection, justification of eligibility under the VCS Program, and any other relevant information.

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.

¹² The requirement to provide the date of project inactivity only applies to projects which request registration or crediting period renewal under the VCS Program on or after 1 January 2025.

☐ Yes ☒ No

If yes, provide all required evidence of no double claiming as outlined by the VCS Standard.

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

If yes, provide all required evidence of no double claiming as outlined by the VCS Standard.

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

If yes:

Is the project proponent(s) or authorized representative a buyer or seller of the product(s) (goods or services) that are part of a supply chain?

☐ Yes ☒ No

If yes:

Has the project proponent(s) or authorized representative posted a public statement on their website saying, "Carbon credits may be issued through Verified Carbon Standard project [project ID] for the greenhouse gas emission reductions or removals associated with [project proponent or authorized representative organization name(s)] [name of product(s) whose emissions footprint is changed by the project activities]."?

☐ Yes ☒ No

If yes to all:

Provide evidence of the public statement. Evidence must be provided in this section or in an appendix.

2.1.12 Sustainable Development Contributions (VCS, 3.17)

Table 1. Sustainable Development Contributions

Row number	SDG target	SDG indicator	Net impact on SDG indicator	Current contributions project	Contributions over the life of the project
Sequential row number	SDG target number	SDG indicator number and text, or if no official SDG indicator applies, user-defined indicator	Indicate the project's contribution to the SDG indicator (activities implemented to increase or decrease)	Brief description of the quantifiable impact of project activities related to the SDG indicator, during the monitoring period.	Brief description of the quantifiable cumulative impact of project activities related to the SDG indicator over the life of the project.
1	1.2	Beneficiaries improving their livelihoods: #coopaser, #agrobosque, #palsamd, #adapab, #ascart, #Sonene, #PalmaReal	Support is provided for the implementation of the production chain from start to finish.	Implementation of cocoa plots under SAF, use of forest products other than wood, production of handicrafts, sustainable aquaculture, tourism, regenerative livestock.	382 families increased their income from the sale of the product or good offered.
2	2.3	2.3.1 Volume of production per work unit broken down by size and type of farm (agricultural/livestock/forestry).	The project held workshops and events to strengthen the capacities of project beneficiaries and improve productivity.	The productive chain, which has always been the main bottleneck, was closed, achieving the continuous sale of the products of the associations with which the project works.	250 tons/year of cocoa beans (COOPASER) 200 tons/year of cocoa beans (AGROBOSQUE) 3 tons/year of aguaje pulp (PALSAMAD) 4.5 tons/year of balanced feed (ADAPAB) 102 tons/year of peeled chestnuts (ASCART)

					2000 pieces of handicrafts/year (SHI'OI) 1200 pieces of handicrafts/year (MASHEKE)
3	2.4	2.4.1 Proportion of the agricultural area in which productive and sustainable agriculture is practiced.	The project promotes sustainable agriculture and has supported the implementation of plots under agroforestry systems (SAF) in the populated centers of the road axis and in the indigenous communities.	The implementation of the FFS hectares are free of deforestation, which has contributed to a sustainable work taking into account water and soil resources.	1,355 ha of agroforestry systems in cacao, citrus and cassava.
4	4.7	Environmental education for sustainable development	Environmental education activities have been implemented in primary and secondary schools in the highway axis and indigenous communities.	Students and teachers improved and acquired knowledge about the importance of forests, ecosystem services, the importance of fauna in forest dynamics, and sustainable forests.	522 primary and secondary school students/year received training workshops on environmental education.
5	5.5	5.5.2 Proportion of women in managerial positions	Through awareness-raising actions the project has promoted the empowerment of women in the stakeholders with whom it works.	The inclusion of women in management positions has increased through meetings to raise awareness among both men and women about the role of women in decision-making.	29 women in management positions

6	9.3	Proportion of small industries that have obtained access to a financial fund for their integration into value chains and markets.	Technical support was provided to beneficiaries to enable them to apply for co-cursory funds and thus strengthen the production chain.	Cooperatives and competitive funds to improve production chain processes and gain access to markets.	Four organizations were able to win production chain processes and gain market access (ASCART, COOPASER, AGROBOSQUE, SHI'OI).
7	11.4	11.4.1 Total per capita expenditure on the preservation, protection and conservation of all cultural and natural heritage, broken down by source of financing (public and private), type of heritage (cultural and natural) and level of government (national, regional and local/municipal).	The project has conserved hectares of forest and ecosystem, where a large investment has been made in control and monitoring.	595398 hectares of forest were conserved thanks to the project's activities.	RNTAM = 274,690 ha PNBAS = 298,609.97 ha CN Palma Real = 8,684.06 ha CN Sonene = 3,857.6 ha CN Infierno = 9,558 ha
8	13	Tons of greenhouse gas emissions avoided. Support for monitoring and control of NPA forests.	Monitoring of deforestation and forest degradation Promotion of sustainable economic initiatives to avoid pressure on the forests.	By conserving 00000 hectares of tropical forest, the Tambopata - Bahuaja REDD+ Project has avoided the release of 000000 tons of carbon into the atmosphere during the monitoring period 2021 - 2023.	The release of 000 thousand tons of carbon into the atmosphere was avoided.

9	15.1	15.1.2 Proportion of important sites for terrestrial and freshwater biodiversity included in protected areas by ecosystem type.	Project activities prevent the deforestation of forest in NPAs, which leads to the conservation of terrestrial biodiversity and watersheds that supply the population of Madre de Dios.	ha of forest that harbor and maintain terrestrial biodiversity and freshwater watersheds.	RNTAM = 274,690 ha PNBAS = 298,609.97 ha ACP in the ZA: 3907 ha destined for conservation.
10	15.3	15.3.1 Proportion of degraded land compared to total land area.	Project activities have reclaimed more than 1,000 ha of land degraded by extensive agriculture and livestock, mining, and other activities.	More than 1,000 ha of soil recovered through SAF, SSP and pioneer forest plantations.	1,337.3 hectares recovered with agroforestry and forest plantations for future use. 6.5 ha in special use zone (Nueva América) within the RNTAM (regenerative cattle ranching). 3 ha recovered with forest species in a zone affected by mining (Azul).
11	15.5	15.5.1 Red List Index	The project helps protect important species found in the forests of the project area, which are on the IUCN Red List.	It contributes to the conservation of more than 15 species.	Species to be conserved According to the IUCN Red List 4 species of fauna - near threatened 3 species of fauna - endangered 1 species of flora - endangered 4 species of fauna - Least Concern 13 species of fauna - vulnerable 4 species of flora - vulnerable

2.2 Project Implementation Status

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

The baseline of the REDD+ project established for 10 years ended in December 2020. For this new verification period, the baseline was updated with information from the project and new projections were made to determine the future deforestation scenario, taking into account the latent threat from illegal gold mining, agriculture, cattle ranching and other activities carried out by the population living adjacent to the project area, i.e. in the area known as the project's leakage belt.

For the quantification of emissions in the project area, only emissions resulting from the loss of aerial biomass and subway biomass caused by the elimination of forest cover have been considered. Other pools such as dead wood, litter, soil organic carbon and wood products have not been included.

The strategy was updated taking into account the current threats, the population settled in the leakage belt, and therefore the activities in the REDD+ strategy continued to be implemented:

Biological monitoring

Monitoring of environmental elements (species and ecosystems of great importance to both Natural Protected Areas) has been carried out using camera traps, which has led to the development of specific protocols for monitoring jaguar dams, giant otter, Brazil nut and macaw clay licks according to the master plans of each NPA. In addition, rapid fauna assessments have been carried out to obtain information on species dynamics. Investigación

During this period, the promotion of research within the project area has increased thanks to outreach actions and the promotion of the PNAs. This includes a scholarship fund for junior researchers, support for priority research, and the organization of scientific events at the Malinowski and San Antonio biological stations, which offer adequate facilities for researchers. In recent years, these efforts have resulted in a gradual increase in research, positioning these NPAs as ideal sites for scientific research.

Systematization of CA plans and experiences

The project has provided support to both NPAs in updating their master plans, which are important management documents for managing these NPAs and conserving the ecosystems and species they harbor. The project has also carried out diagnostics to determine the current situation of the populations in the buffer zone or escape belt, since the population has been increasing and it is necessary to know what economic activities the different population centers carry out in order to make an appropriate intervention to avoid deforestation and reduce the threats within the REDD+ project area.

Promotion of sustainable economic activities and sustainable land management.

The project continues to provide technical assistance to cocoa producers who have installed cocoa plots under Agroforestry Systems (SAF), training events to strengthen and generate knowledge in producers, and monitoring of each plot to prevent pests and improve production, taking into account that these plots have been established in degraded soils.

The project also strengthened the relationship with the Ese Eja Sonene and Palma Real indigenous communities, enabling the creation of the Shi'O'i artisan women's association in Palma Real. These women received support to improve the quality of their crafts and market their products. Craftswomen's houses were built in both communities, providing exclusive spaces for their work, meetings and training. In addition, these facilities have promoted cultural tourism in Palma Real, and the REDD+ Tambopata - Bahuaja project has contributed to the development of this new sustainable economic activity.

The strengthening of the technical and management capacities of the Sonene and Palma Real community members has been remarkable. Currently, a Palma Real community member, supported as an agroforestry technician, has been asked to teach in his community's elementary school. Likewise, an agroforestry technician from Sonene, supported by the project, was elected head of his community for his responsibility and leadership.

The implementation of regenerative cattle ranching represents a sustainable and environmentally friendly economic alternative, transforming practices that previously contributed to deforestation into sustainable practices that protect soil and water, reduce emissions and apply holistic sustainability principles.

We have identified land with potential for recreational and tourism activities, and are supporting these ventures to improve their supply and the quality of life of families through additional income. In addition, support is being provided to Private Conservation Areas (ACP) to generate income through tourism and recreational activities, taking advantage of the scenic beauty of their forests.

Surveillance and control:

The REDD+ project has contributed significantly to the maintenance and construction of control posts (PVCs) that house park rangers responsible for forest protection in Natural Protected Areas (NPAs). An adequate number of park rangers have been hired to deal with various threats, especially illegal mining. In addition, park rangers and specialists have been trained to ensure effective surveillance and control in the NPAs. The necessary vehicles and equipment have also been provided for routine and special patrols in the controlled areas of each NPA.

In conjunction with the Tambopata and Bahuaja control and surveillance specialists, we have worked to identify people from neighboring communities, including indigenous communities. These people, selected as community vigilantes through a SERNANP resolution, receive training and support to patrol and monitor their communal territories near the NPAs. This helps to close surveillance gaps in the project area and even in the leakage belt.

Organizational strengthening of committees, indigenous communities and local bases:

The project supports the management committees of both NPAs so that they can hold assemblies, meetings and negotiations with authorities, one of the achievements in this period was the beginning of the procedures to establish the patronage of the management committee of the PNBAS this patronage allows them to apply for competitive funds so they can carry out more actions related to the care of the buffer zone and especially of the NPAs.

The indigenous communities were also supported in making representations to local and national authorities so that they can benefit the people of the communities in terms of education, health, sanitation, and generate projects that help improve the quality of life of the communities that do not have the resources or advice to carry out these types of procedures, as well as strengthen the community boards so that they can play their role effectively.

The project also supports the Federación Nativa del Río Madre de Dios y Afluentes, and the Federación de Agricultores de Madre de Dios, strengthening their boards of directors and facilitating the organization of assemblies and meetings, promoting the well-being of their members.

Strengthening of organizations for commercial articulation.

One of the weaknesses of the organizations supported by the project (cocoa growers, palm growers, chestnut growers, fish farmers, artisans, etc.) is the need to strengthen each of them, especially their boards of directors, so that they can assume their roles efficiently and manage the commercial linkages necessary to close the production chain. The search for markets is the main bottleneck in most cases. For this reason, the project has supported the organizations in their participation in fairs and business rounds at the local and national level, enabling them to close commercial deals for the direct sale of their products.

Communication and environmental education

The project works with almost all the schools located in the project's buffer zone or leakage belt, including schools in indigenous communities. As a result, students and teachers have installed school gardens to promote food security, where children learn in a practical way. In addition, awareness-raising activities are being promoted in schools with park rangers from both Natural Protected Areas (NPA) on the topics of forest care, important species of fauna and flora in the forest dynamics, Natural Protected Areas, and the role of park rangers.

In terms of REDD+ project communication, talks and events are held to publicize the project, including the publication on social networks of the various activities carried out under the project.

Management of the REDD+ project and the CA

Management of the REDD+ project continues to be carried out through meetings to follow up on the Management Contract between AIDER and SERNANP and with the project verification processes from the audit to the publication of VCUs that can be traded, having all this process the actions to be carried out in the implementation of the REDD+ strategy are planned on a five-yearly and annual and quarterly basis.

Date	Milestone(s) in the project's development and implementation
January 1, 2009	Start of the Partial Administration Contract of the RNTAMB and the PNBS - Madre de Dios area (initially only for 7 years).
October 26, 2010	Extension of the Administration Contract for a period of 20 years.
July 1, 2010	Validation of the REDD + project under VCS and CCB standards.
April 9, 2013	First verification VCS (verification deed of representation).

May 29, 2015	First verification CCB (verification statement).
July 27, 2016	Verified VCS verification (verification deed of representation).
July 27, 2016	CCB verification (verification statement).
March 8, 2019	VCS verification (verification deed of representation).
July 30, 2019	VCS verification (verification report).
July 30, 2019	CCB verification (verification report).
August 05, 2021	Last VCS verification (verification report).
August 05, 2021	Last CCB verification (verification report).
April 00, 2024	MINAM authorized early REDD+ initiatives to verify the 2021, 2022 and 2023 periods under its own baseline or under MINAM's baseline, which will be ready from mid-2025.

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)

1) Reference region for projecting the Deforestation Rate (DRR).

In this section, the deviation focuses on the inclusion of the leakage belt and the project area in the DRR, which are justified in the following paragraphs:

The reference region should capture similar patterns and conditions that lead to deforestation, such as mining activity, an activity that strongly impacts forests in Madre de Dios, compared to neighboring regions such as Cusco and Puno. Therefore, the reference region should be in Madre de Dios and not outside of it. On the other hand, Madre de Dios contains one of the few cases of subtropical forest with a unique ecology in the country, including the high density of Chestnut trees, which largely determine local livelihood patterns and zoning in the area.



Figure 1. Satellite view of the Madre de Dios region in November 2020

Fuente: Imágenes Planet - Noviembre del 2020 (4.77m resolución espacial)



Figure 2. Visual comparison of coverage as of November 2020 in the Cusco, Puno and Madre de Dios regions

Fuente: Imágenes Planet - Noviembre del 2020 (4.77m resolución espacial)

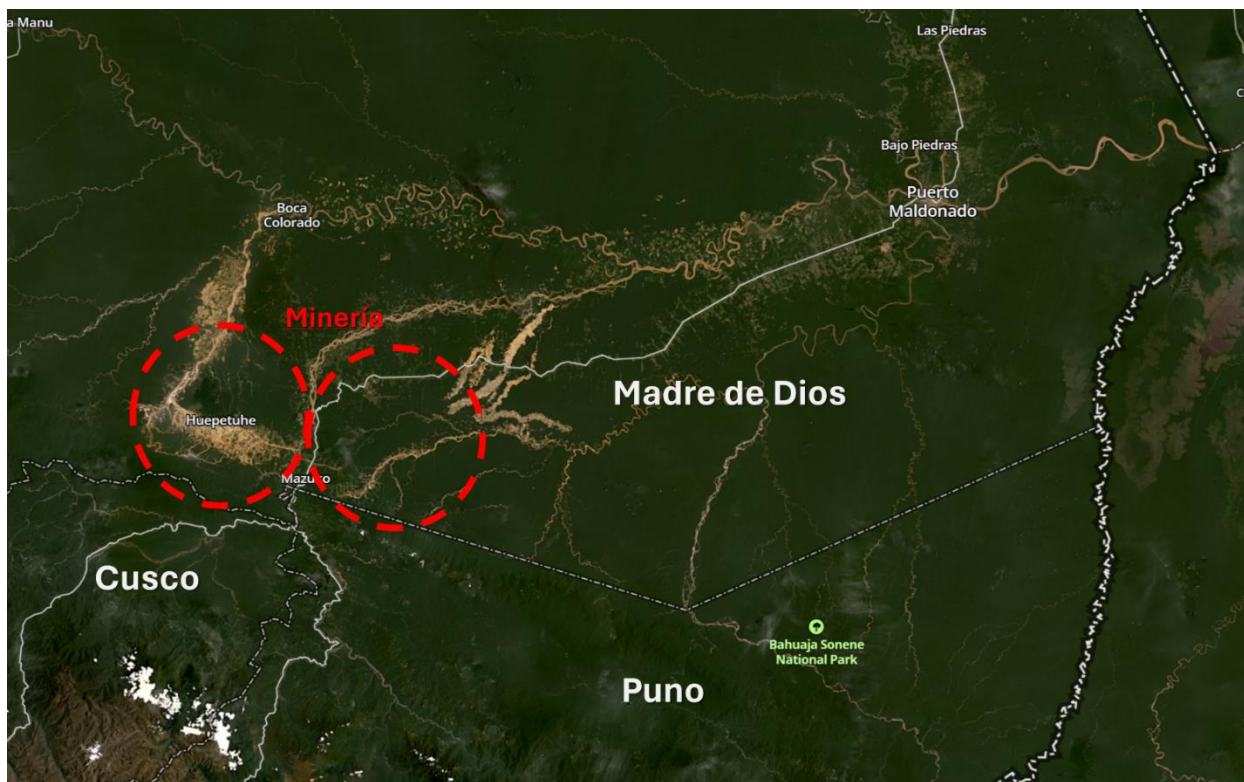


Figure 3. Location of mining areas in the Madre de Dios region

Fuente: Imágenes Planet - Noviembre del 2020 (4.77m resolución espacial)

The Madre de Dios region has a particular access and is summarized in a relative isolation due to the fact that the interoceanic highway is the only way to enter or leave the region from Puno or Cusco, and the rivers do not connect with other parts of the country.



Figure 4. Location of the interoceanic highway that crosses the Madre de Dios region

Fuente: Ministerio de Transportes y Comunicaciones (MTC. 2018)



Figure 5. Hydrographic network of the Madre de Dios region

Fuente: Instituto Geográfico Nacional (IGN)

The hydrological and geological characteristics of Madre de Dios have resulted in relatively rich gold deposits which have helped drive a rush of small-scale mining and have ultimately led to large areas of deforestation and degradation. The rate of extraction is positively correlated with the increase in the price of gold. This has led to rampant deforestation in the area and is a unique driver acting on the region that should be captured in the DRR.

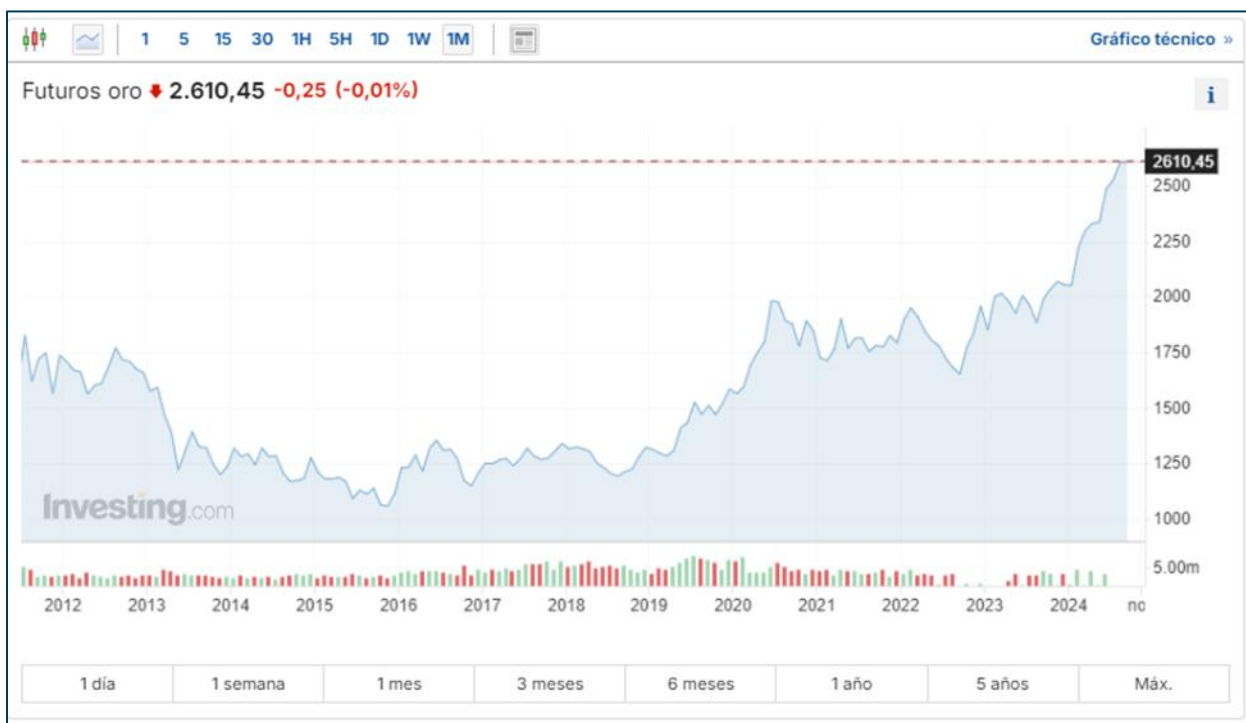


Figure 6. Gold price from 2012 to the present

Fuente: Investing (<https://es.investing.com/commodities/gold-streaming-chart>)

Failure to include the project area and the leakage belt within the DRR would exclude the main agents and drivers of deforestation, which would result in the analysis to calculate the deforestation rate of the DRR not being adequately represented.

This includes the high presence of indigenous territories near the project area and their role as actors in the landscape and artisanal mining areas, which are more concentrated in the leakage belt and on the edges of the project area.

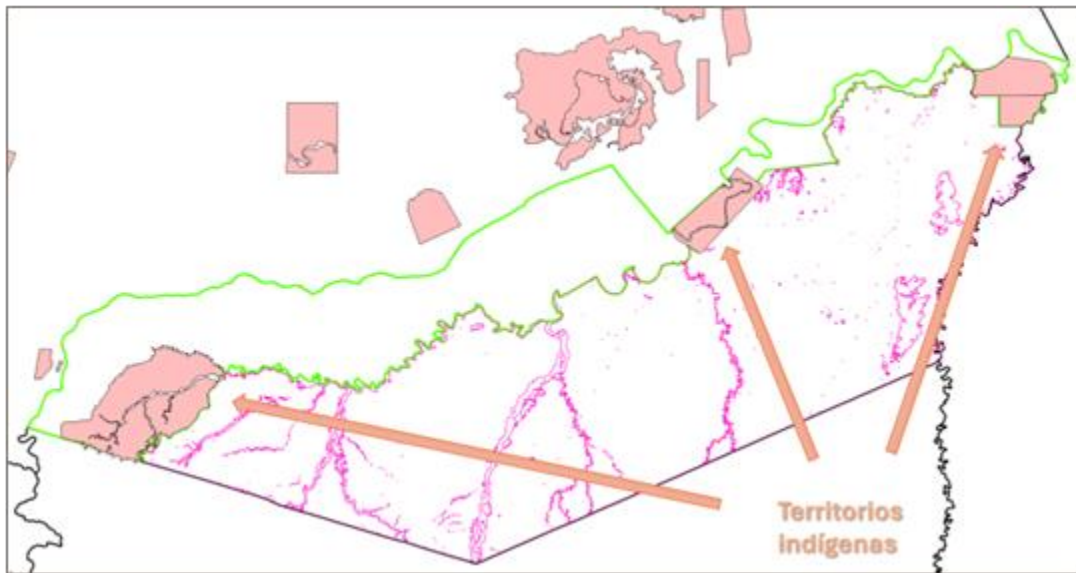


Figure 7. Location of indigenous territories in the leak belt

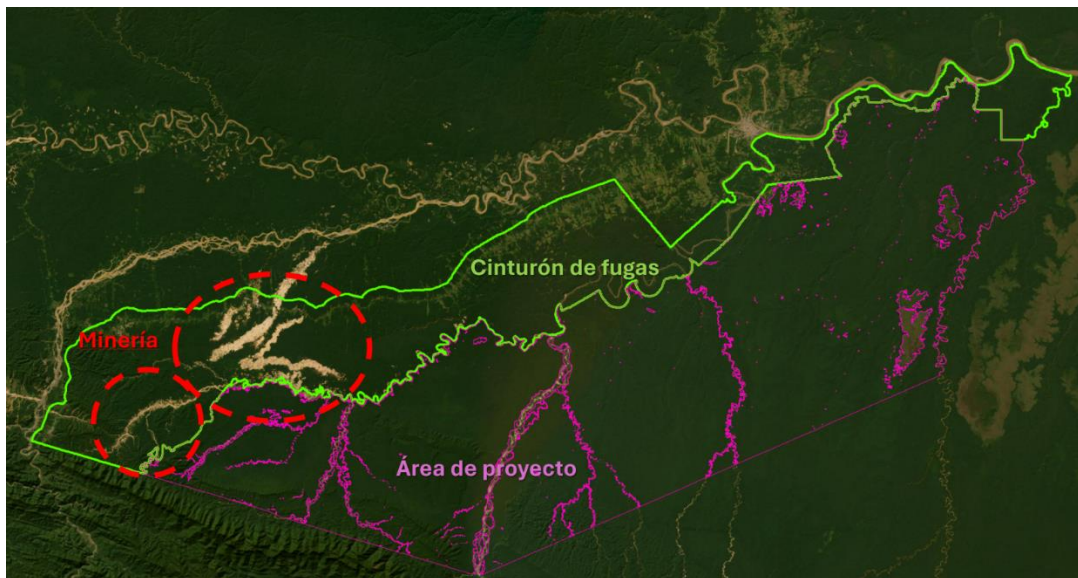


Figure 8. Artisanal mining within the leak belt

Finally, excluding the project area, and especially the leakage belt, would seriously affect the accuracy of the deforestation rate and therefore of the spatial modeling, resulting in a rather conservative model and not omitting the important role of mining, which is strongly concentrated along the leakage area.

1. Criteria for the delimitation of the RRD

The road density and settlement density conditions corresponding to criterion “c” do not meet the minimum requirements of 20% similarity, since there are not enough structures of this type on the margins of a protected area, so relaxation is requested in these two conditions.

2. Criteria for the delimitation of the leakage belt

The road density and settlement density conditions corresponding to criterion “e” do not meet the minimum requirements of 20% similarity, even with the relaxation provided by the methodology (similarity of 50%) in case the forest of the belt is less than 75% in relation to the project area. This is because there are not enough structures of this type on the margins of a protected area, so relaxation is requested in these two conditions.

3. Minimum area of the leakage belt

According to the methodological requirements, the leakage belt is the forest area that must be equal to or at least 90% of the project area; however, the leakage belt in this case has a surface area of 35.22% in relation to the project area. On the other hand, even with the relaxation provided by the methodology (similarity of 50% for the requirements in condition “e”) the minimum size could not be met, so this characteristic will be included within the methodological deviations, which is justified by the following:

- Initially, it must be considered that within the leakage belt, it is expected that we will displace the deforestation agents from the project area to the belt through the activities of the REDD+ strategy, however, in this particular case the deforestation agents are not displaced from one area to another, the mining activities expand throughout the right and left margin of the Madre de Dios River, and in a similar way, it expands along the left side of the Tambopata River, that is, the leakage belt will count as leaks all those openings for change of use that are found within it, so the project will be penalized for the mining activities, which are independent of the project and which are expanding in an uncontrolled manner.
- Within the limits of the leakage belt, there are already large areas of mining that have occurred independently of the activities of the first baseline project, so part of the new deforested areas in the verification periods would not be caused by the project; however, they should be accounted for as if they were.
- Deforestation from both mining and agriculture occurs in areas where there are roads, so the leakage belt is prone to deforestation. This can be seen if we compare the northern side of the belt, where the behavior of deforestation is observed in areas with roads (south side of the Madre de Dios River) and without roads (north side of the Madre de Dios River). This clarification reinforces the reason why the leakage belt should be considered as part of the DRR, since, if it is excluded, the analysis of the deforestation rate calculation would not represent reality.



Por último, el intentar expandir el cinturón de fugas traería consigo la contabilización de áreas de minería que no deben ser atribuidas al proyecto, además se tiene en cuenta el requisito metodológico que solicita que el cinturón debe estar sesgado espacialmente en términos de distancia, debe estar contiguo al área de proyecto, que debe ser accesible para los agentes para que pueda darse cuenta de la movilidad y lo más importante, que el área de proyecto y cinturón de fugas tienen una misma regulación otorgada por el SINANPE, ya que el cinturón de fugas corresponde estrechamente a la zona de amortiguamiento del área protegida.

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

This verification period required updating the baseline of the project, therefore the REDD+ strategy was updated with minimal modifications, these modifications comply with the requirements of the criteria and indicators of the CCB standards and were made to address the threats of deforestation and forest degradation in the project area, which involves hard work with the population settled in the leakage belt and the activities they perform as their main livelihood, as shown in the figure 2.

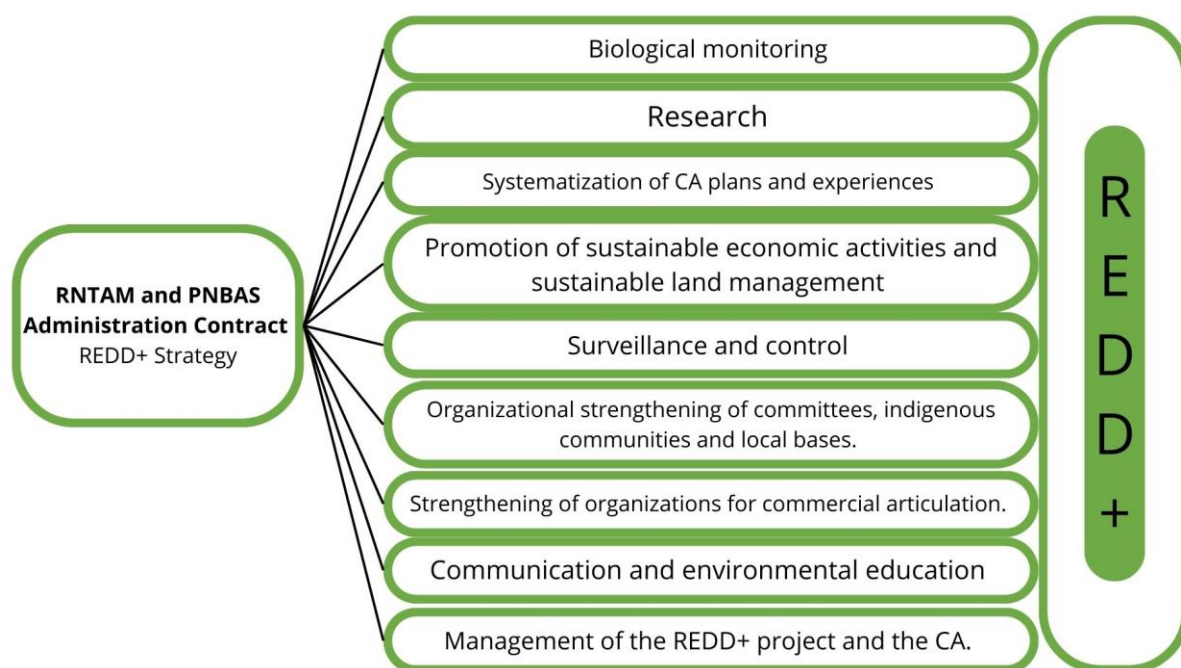


Figure 2. REDD+ Project strategy

Promotion of sustainable economic activities and sustainable land management:

This strategy not only includes the recovery of degraded soils through the installation of plots with agroforestry systems with cacao, but also includes SAF plots with cassava and other agricultural products, regenerative cattle ranching under silvopastoral systems, support for Private Conservation Areas, Rural Community Tourism in agricultural plots that work in a sustainable manner, sustainable use of non-timber forest resources (palm and Brazil nut fruits) and aquaculture. This update of the REDD+ strategy includes more actions that will reduce deforestation and forest degradation in the project area, providing a sustainable economic alternative for the population.

Strengthening of organizations for commercial articulation:

Sustainable economic activities promoted in the project's leakage belt require closing the productive chain. To achieve this, it is necessary to strengthen the boards of directors of each organization, ensuring that they play their role efficiently. In addition, it is important to strengthen all members of each organization so that they make coherent decisions that are in the best interest of all. This implies an introspective look inside each organization, allowing them to better understand the processes that need to be improved to ensure the economic, social and environmental sustainability of the economic activities they carry out. Likewise, the participation of the organizations supported in local and national fairs and business rounds is promoted in order to have more opportunities to make direct sales contracts and make their offerings visible to potential markets or clients.

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

Monitoring the changes in land use, based on Landsat 8 – OLI satellite images, will be performed annually, involving all the changes in forest cover. The deforested area (in hectares) is calculated for the project area and leakage belt. Also, once the deforestation map is generated, validation was given through the visual interpretation employing high-resolution satellite images "Sentinel-2 Images with 10 x 10 meter spatial resolution". The precision calculation was conducted through a confusion matrix.

After the validation of the project, changes were made regarding the activities of the REDD + Strategy (First version of 2008 - Second version of 2012 – Third version of 2014).

This Deviations were added to the deviations made from the first verification period (July 1, 2010 through June 30, 2011).

Discarding of Claslite software use to support delimitation of the area potentially impacted by degradation process

During the verification period 2013-2014, CLASLite software version 2.2 had not been updated for non-governmental users; this prevented to use it to support monitoring of degradation in this period, because the software requires updates every three months based on atmospheric data, which were not provided by the software creator.

The delimitation of the potentially affected area by degradation processes was worked according to the provisions of the VCS VMD0015 module "Methods for monitoring of GHG emissions and removals in REDD and CIW projects (M-REDD)", version 2.2, which was approved on September 08, 2020, complying with the provisions of the methodological framework.

Monthly monitoring of hotspots

For verification period 2014-2015, monthly monitoring of hotspots was not performed because little information was available. The data source selected for this monitoring and indicated at Project Description, the University of Maryland in agreement with Conservation International Peru, was not available because the reports of hotspots in the Amazon region of Peru were not continuous.

Likewise, the available information, provided by INPE from Brazil through their web data base13, had errors at hotspot location; these errors were detected when info was contrasted between satellite imagery and field. Therefore, using this data source was dismissed.

More trustable sources were sought, choosing data from National Aeronautics and Space Administration (NASA), which were available from user record in 2011. Nevertheless, monitoring of burned areas was performed according to specified in module E-BB.

Tambopata - Bahuaja REDD+ Strategy

Tambopata Bahuaja REDD+ Strategy has been updated by AIDER staff in order to be more effective and efficient in the activities realization for reduce emissions of greenhouse gases from deforestation and forest degradation in the Tambopata National Reserve (RNTAMB) and Bahuaja Sonene (PNBS).

This strategy includes the components of previous strategy and it includes biological monitoring and research activities since these actions also contributed to control and reduce the threat of deforestation and forest degradation in both ANP. Also there has been included the Systematization of management documents of Protected Areas and experiences of the administration contract, Promotion of sustainable economic activities and sustainable land management, strengthening organizations to achieve the direct sale of products.

Changes made to the REDD + strategy

REDD + strategy – initial	REDD + Strategy – Updated in 2014	REDD + Strategy – Updated in 2021
Component 1: Productive economic activities	Component 1: Comprehensive biological monitoring system that feeds REDD + monitoring	Component 1: Biological monitoring
Component 2: Control and surveillance	Component 2: Promotion of research as a strategic activity for the channeling of resources in favor of conservation	Component 2: Research
Component 3: Forest governance	Component 3: Agroforestry plots installed for cocoa production in sectors 3 and 4 of the buffer zone, avoiding the advance of the agricultural frontier	Component 3: Systematization of management documents of Protected Areas and experiences of the administration contract

<i>Component Conservation agreements</i>	<i>4:</i>	<i>Component Strengthening organizations in the buffer zone</i>	<i>4:</i>	<i>Component 4: Promotion of sustainable economic activities and sustainable land management</i>
<i>Component Communication and dissemination</i>	<i>5:</i>	<i>Component 5: Expanded and strengthened control and surveillance mechanisms in the RNTAMB and PNBS</i>	<i>5:</i>	<i>Component Surveillance and control</i>
		<i>Component 6: Promotion of sustainable mining in sector 2 of the buffer zone</i>	<i>6:</i>	<i>Component Organizational strengthening of committees, indigenous communities and local bases</i>
		<i>Component 7: Promotion of rural community tourism in sector 6 of the buffer zone</i>	<i>7:</i>	<i>Component Strengthening organizations to achieve the direct sale of products</i>
		<i>Component 8: Environmental education and communication</i>	<i>8:</i>	<i>Component Communication and environmental education</i>
		<i>Component Management</i>	<i>9:</i>	<i>Component Management of the REDD+ project and the Administration Contract</i>

Software equipment for monitoring

As part of the monitoring of the period 2021 - 2023, at the time the monitoring report was prepared, the computers with which the office had is Microsoft .NET Framework 3.5, which was only compatible with arcgis versions lower than 10.3, later the computers were updated to Microsoft .NET Framework 4.5 and the compatible arcgis versions were superior to version 10.4, it is for this reason that version 10.5 was chosen (mentioned in the deforestation report).

Similar to the arcgis theme, ENVI 5.1 software is only compatible with windows XP SP2, Vista, 7 and 8 versions, but due to the software update to the windows 10 version (which is a mandatory version for all operating systems that use windows), it was decided to use the ERDAS software.

Project area

The last verification reported a change in size, being 541,808.17 ha, and not 541,620.14 ha as indicated in the PD. This was due to an error in the order of the documents, which led to an error in the transcription of the data from the spreadsheet to the DP document.

Although it is true that the area is greater than that validated at 188.03 ha, the project continues to comply with the applicability of the methodology, additionality and does not alter the suitability of the baseline scenario.

This change has occurred since the beginning of the project, and was identified in the last verification, while the monitoring the remaining forest, finding that the shapes have an area greater than that indicated in the PD.

The areas at the beginning of the project, by stratum were:

Estratum	Area (ha)
Mixed Aguajal	29,407.09
Alluvial floodplain	150,628.04
Strong High Hill	24,792.88
Soft High Hill	17,146.44
Strong Low Hill	7,302.52
Soft Low Hill	6,707.01
High Terrace	45,127.21
Low Terrace	125,008.67
Strong Dissected Terrace	24,102.45
Soft Dissected Terrace	111,585.87
Total	541,808.17

Base line updated:

The baseline of the project, ended on June 30, 2020, but the Peruvian government allowed existing projects (Early Initiatives) to use their baselines until December 2020, the national nesting process would begin from mid 2025. For this reason, the Peruvian government allowed the early initiatives to make the validation of the periods 2021, 2022 and 2023.

For the current period, it was necessary to update the base line, to calculate the tons of carbon that would be avoided emitting with the project were calculated, which gave a total of 903,316 tCO₂-e, with this and the monitoring of deforestation from 2021-2023 period, it was possible to calculate the amount of emissions avoided.

The calculation of net emissions in the updated baseline scenario for the current period was done according to the indications of the methodology.

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

Does not apply

2.2.6.1 New Project Areas and Communities (VCS, 3.6; CCB, G1.13)

Does not apply

2.2.6.2 Removed Project Areas and Communities (CCB, G1.13)

Does not apply

2.2.6.3 Eligibility Criteria for Grouped Projects (VCS, 3.6.14; CCB, G1.14)

Does not apply

2.2.6.4 Risk Mitigation for Grouped Projects (VCS, 3.6; CCB, G1.15)

Does not apply

2.2.6.5 Project Zone Map (CCB, G1.13)

Does not apply

2.2.6.6 Changes to Management (CCB, G4.1)

Does not apply

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

Identified Risk	Potential impact of risk on climate, community and/or biodiversity benefits	Actions needed and designed to mitigate the risk
Illegal mining activities in the project area.	Loss of forest due to deforestation within the project area.	Constant support for surveillance and control inside and outside the project area.

Increase in agricultural and livestock activities.	Loss of forest due to deforestation within the project area.	Promotion of sustainable economic activities to provide an economic alternative and reduce pressure on the forests.
Land encroachment	Loss of forest due to deforestation within the project area.	Support for land surveillance in the leakage belt through communal surveillance with indigenous communities and settlers that make up the management committee.
<i>Illegal logging</i>	<i>Loss of forest due to degradation inside the project area.</i>	<i>Constant support for monitoring and control inside and outside the project area.</i>

2.2.8 Benefit Permanence (CCB, G1.11)

At the end of the life cycle of the project, the surface of the ANP (RNTAM and PNBAS - Madre de Dios area) will be duly physically and legally titled, which will facilitate its management as well as the resolution of possible possession conflicts.

Through the work of communication and awareness of the project, the role of the ANP will be properly understood by the population, conceptualizing them as a reserve of resources; in the same way, they will have an adequate knowledge of the property of the State over the ANP.

The ANP will have an improved control and surveillance system. It will also have a biological monitoring system already implemented that will help the management of the ANP.

The project, through the Management Committee, will participate in the Territorial Organization of Madre de Dios, which will serve as an instrument for an adequate management of the territory inside and outside the project area and will transcend its life cycle.

By building and strengthening the capacities of the Management Committee, producer associations and inter-institutional relations, the benefits of climate, community and biodiversity of the project will be able to continue once the life cycle has concluded. Through the strengthening of the institutional framework, better control of economic activities and compliance with environmental standards will be carried out, as is the case of the current mining exclusion zone. The productive chain, for its part, will be established by the project and, with the appropriate capacity building, may continue after its end.

The sustainable economic activities implemented through the REDD+ project, via organizations such as cooperatives and associations, will endure beyond the project's lifespan due to the robust organizational structure developed during its implementation. Each member of these organizations has benefited with new knowledge from the hard work carried out over the years, sparking an interest in maintaining and increasing the current pace of trade. Additionally, they have come to appreciate the importance of sustainable practices, as clients and buyers demand adherence to sustainable standards. All of this ensures that, even after the project's conclusion, the residents in the leakage belt will continue to work sustainably.

2.3 Stakeholder Engagement & Safeguards

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

The REDD+ Project's stakeholder identification process was carried out through a socioeconomic diagnosis.

1) Definition of the project scope

Objectives: Specific objectives were determined for the elaboration of the diagnosis taking into account the REDD+ project strategy and expected results.

2) Study Area: According to the geographical limit of the project and the leakage belt.

3) Preliminary Information Collection

- Documentary review: In the first baseline of the project, previous documents, existing studies and secondary data on the area and its inhabitants were reviewed. For the baseline update, documents previously prepared during the verification periods of the first baseline were reviewed.

- Initial stakeholder mapping: The groups and communities potentially affected or benefited by the project were preliminarily identified through interviews and surveys of the inhabitants and associations located inside and outside the project area; this action was carried out for both baselines.

Design of the socioeconomic diagnosis

Methodology: The methodology to be used was defined and included surveys, interviews and participatory observation.

Data collection instruments: Questionnaires and interview guides were developed to obtain information on social conditions, economic activities, community organization and perceptions of land use.

Implementation of the socioeconomic diagnosis:

Fieldwork: Visits were made to communities and relevant areas to collect primary data.

Community participation: Actively involved local people in the data collection process, ensuring their collaboration and trust.

Data Analysis:

Information processing: The data collected was organized and analyzed using statistical and qualitative tools.

Socioeconomic Profile: Detailed profiles of the identified communities and groups were prepared, highlighting their socioeconomic characteristics, main economic activities, needs and vulnerabilities.

Stakeholder identification:

Categorization: Stakeholders were classified into different categories, such as indigenous communities, agricultural producers, collectors of forest resources other than timber (Brazil nuts and palm fruits), aquaculturists, cattle ranchers and tourism ventures.

Analysis of interests and needs: The interests, needs and expectations of each group in relation to the REDD+ project and implementation of its strategy were evaluated.

Validation and prioritization

Consultation and validation: Consultation meetings were organized with the communities and groups identified to validate the diagnostic results and ensure their accuracy.

Stakeholder prioritization: We determined which key groups require greater attention and involvement in the project, based on their degree of influence and impact on land use change.

Systematization and final document preparation

All the information was systematized and the stakeholders were identified with this information and the diagnostic document was prepared.

Preparation of the planning document

A work plan is prepared annually detailing the implementation of REDD+ project strategies with specific actions to directly address stakeholder participation, including training, organizational strengthening workshops and the identification of community watchdogs, among other activities.

Monitoring and follow-up: Ongoing monitoring and evaluation mechanisms were established to ensure that stakeholders are being adequately involved and that their needs are being addressed throughout the project.

Stakeholders identified are as follows:

Indigenous Communities (Ese'Eja: Sonene, Palma Real and Infierno and Harakbut: Kotsimba): These communities receive support to carry out sustainable economic activities that provide them with economic alternatives other than land use change. This includes training to improve their leadership skills and strengthen each community organization. In addition, they are helped to identify people who can act as community watchmen, which contributes to the protection of their territories and natural resources.

Cacao Producers: They are supported in the adoption of sustainable agricultural practices that improve the quality and productivity of cocoa. These practices help preserve the soil and natural resources, offering a viable economic alternative without the need to deforest or change land use.

Palm Fruit Pickers: They receive training in sustainable harvesting techniques that allow them to harvest palm fruits without damaging the trees or the surrounding ecosystem. This ensures a continuous and sustainable source of income.

Chestnut farmers: They are supported to improve their methods of harvesting and processing chestnuts, ensuring that these activities are sustainable and economically viable. This includes training in techniques that minimize environmental impact and maximize production.

Fish farmers: They are supported in implementing sustainable aquaculture practices that enable them to raise fish and other species in a way that does not harm local water bodies and the environment. These practices ensure a stable and sustainable source of income over the long term.

Cattle ranchers: They are trained in sustainable livestock management techniques that improve the efficiency and sustainability of their practices through soil regeneration, including pasture rotation and proper waste management to minimize environmental impact.

Tourism Enterprises: They are supported in the development of ecotourism projects that promote the conservation of the environment and local culture. These projects offer an economic alternative to land use change, while promoting the conservation of natural and cultural resources.

These villagers are part of the management committee of the RNTAM and PNBAS. In addition, the heads of both Natural Protected Areas (ANP) and the General Directorate of Natural Protected Areas (DGANP) are involved.

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

On a quarterly basis, a detailed progress report on the implementation of the REDD+ project is delivered to the chairmen of the RNTAM and PNBAS management committees. Through the chairmen of each committee, the interested parties have access to the detailed documents.

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

In 2021, a primer on the REDD+ project was developed, detailing the project, its inception, the REDD+ strategy, the scope of the project and the ways in which beneficiaries have been supported. This booklet is distributed at meetings and events.

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

Meetings with stakeholders of the management committees are held periodically and a presentation is prepared to report on the progress of the implementation of the REDD+ strategy and actions framed in the CA.

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

	<i>Risk(s) identified</i>	<i>Potential impact of the risk on stakeholders, ecosystem health and biodiversity.</i>	<i>Mitigation or preventive measures taken</i>
Impacts on biodiversity and ecosystems.	Illegal mining activities in the project area.	Loss of forest due to deforestation, loss of ecosystems within the project area.	Constant support for surveillance and control inside and outside the project area.

	Land invasion	Loss of forest due to deforestation within the project area.	Support for land surveillance in the leakage belt through communal surveillance with indigenous communities and settlers that make up the management committee.
Soil degradation and soil erosion.	Increase in agricultural activities	Loss of forest due to deforestation within the project area to change land use from forestry to agriculture.	Promotion of sustainable economic activities to provide an economic alternative and reduce pressure on the forests.
Forest degradation	Illegal logging	Loss of forest due to degradation within the project area.	Constant support for surveillance and control inside and outside the project area with the support of community vigilantes.
Forest loss due to natural disasters	Forest fires, droughts, floods and other natural disasters can damage the protected area and compromise project objectives.	Loss of forest inside and outside the project area.	Mitigation plan and capacity building to extinguish forest fires,

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

Relevant project information has been provided in follow-up meetings with SERNANP and the presidents of the management committee, during management committee assemblies, meetings with stakeholders and meetings with associations and cooperatives that are being supported by the REDD project. It should be noted that financial issues and costs are only carried out as long as SERNANP authorizes it, since the project does not include any communal territory.

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

1. The initial method of communication consists of sending a letter informing about the possible meeting or visit of an organization in charge of the verification process of the REDD+ project.
2. A face-to-face meeting is held to explain the verification process. It should be noted that it is the auditing company that determines if it is pertinent to meet with the organizations or communities involved in the implementation of the project strategies.

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

1. Communication and coordination is done by sending a letter, email or call to inform about the visit of an organization in charge of the verification process of the REDD+ project.
2. The communication is done at least two weeks in advance and the auditor is asked to choose the locations that need to be visited for the audit process for the validation or verification of the project.

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

Ongoing consultation	Communication and consultation with stakeholders has always been done through formal letters to send documents on the progress of REDD+ project implementation and its strategy and for important meetings such as follow-up meetings where a presentation is made on the progress of REDD+ project implementation, this meeting is held twice a year.
Date(s) of stakeholder consultation	DD-Month-YYYY
Communication of monitored results	The monitoring results are sent quarterly, annually and even every five years through a letter to the presidents of the management committee of each NPA.
Consultation records	For the current verification period there is no document for the registration of stakeholder consultation, but a format for the registration of consultations regarding the REDD+ project is being developed.

	Consultations prior to the development of the format have always been conducted verbally during follow-up meetings with representatives of the management committees and during meetings with stakeholders.
Stakeholder input	Stakeholder input and suggestions were taken into account and the result was the incorporation of new activities into the REDD+ strategy by expanding support to other sustainable economic activities.

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

Although there is no specific format for the current verification period to collect stakeholder consultations, communication has always been done in a direct way during follow-up meetings, in these meetings, representatives of the management committee participate as well as in meetings with the stakeholders of each management committee. All these meetings have been documented in minutes.

The most relevant stakeholder input has been to broaden support to other sustainable economic initiatives, such as tourism and Private Conservation Areas (PCAs). This has resulted in the integration of these activities in the updating of the REDD+ strategy and, consequently, in the annual planning of actions through the annual work plans.

It is important to note that the documents developed are adapted to the current needs of the beneficiaries.

Use the table below to provide a summary of all comments received as part of the stakeholder consultation and any comments received outside of the public comment period. Include details on when comments were received and any updates to the project design or demonstrate the insignificance or irrelevance of the comments below:

Summary of comments received	Actions taken
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Comment from RNTAM chestnut growers, who demand the delivery of cash from the REDD+ project.	During a meeting with the RNTAM and PNBAS chestnut farmers, it was explained that the funds from the sale of VCU's are invested in the implementation of the project's REDD+ strategy. This strategy involves them directly as beneficiaries, providing them with training, support with equipment and goods necessary to facilitate and improve nut harvesting. It was emphasized that this type of support is the most effective way to benefit them, since a direct economic retribution would not guarantee the adequate implementation of the REDD+ strategy and the individual amounts received would not be significant. They were also made to understand that the project seeks to ensure a positive and sustainable impact for the group of Brazil nut harvesters as a whole..
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2.3.11 Stakeholder Consultation Channels (CCB, G3.5)

To carry out any activity with stakeholders for the project, such as indigenous communities, producer associations or other groups involved, the technical team responsible for the REDD+ project has always initiated its interventions through the presidents and boards of directors, who are the leaders of these groups.

Ensuring effective communication and respecting existing organizational structures. In addition, consultations with these stakeholders have always been conducted verbally, promoting a direct and open dialogue that strengthens trust and collaboration among all parties.

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

The processes implemented with stakeholders are carried out after meetings with the presidents and boards of directors. Subsequently, assemblies or direct meetings are organized with the stakeholders involved in the activity to be carried out. In response to a positive response from these groups, they draw up a work plan that they present to the project's technical team. This plan identifies specific needs or bottlenecks that require attention.

Depending on the type of intervention needed within the framework of REDD+ strategies, it is communicated how the project can contribute to each beneficiary group or collective. This allows beneficiaries to make informed decisions about further activities to be carried out with the project and to organize themselves on the basis of a schedule of activities that they themselves draw up.

This form of intervention not only ensures that the activities to be carried out are relevant and effective, but also encourages the active participation and empowerment of stakeholders, allowing them to play a leading role in the planning and execution of project activities.

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

To ensure that all entities involved in REDD+ project design and implementation do not engage in or are complicit in any form of discrimination or sexual harassment, rigorous processes and activities are implemented. These include:

Clear Policies and Standards: clear policies and standards are established that prohibit any form of discrimination and harassment. These policies are communicated to all participants and integrated into all phases of the project.

Workshops and sensitization meetings: Workshops and sensitization meetings are held for the project's technical team, community leaders and beneficiaries. These sensitization events address issues of gender equality, diversity and inclusion.

Commitment to Diversity and Inclusion: Diversity and inclusion is actively promoted at all levels of the project, ensuring equitable representation of gender, race, religion and sexual orientation. This is reflected in the composition of the work teams and in the participation of the beneficiary communities.

These measures demonstrate the REDD+ project technical team's commitment to a safe and respectful work environment for all participants, ensuring that sexual harassment and discrimination has not and will not occur as a result of project activities.

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

An updated complaints form is available, although no complaints have been received during the current verification period. This format was socialized in previous periods, and a new socialization is being planned for the next verification period in order to improve this process.

To improve this process, the following actions will be implemented:

Expanded Dissemination: Dissemination efforts of the complaint form will be increased to ensure that all participants are fully informed about its existence and use.

Workshops and training sessions will also be organized to instruct beneficiaries and project members on how to use the grievance form, as well as the importance of reporting any problems or concerns regarding the REDD+ project.

Access to the complaint form will be facilitated through digital and physical means, ensuring that it is available on multiple platforms and strategic locations.

Monitoring and Evaluation: Periodic monitoring and evaluation will be conducted to ensure the effectiveness of the grievance form and make necessary adjustments.

By taking these steps we will be able to ensure a more efficient and accessible process for receiving and managing grievances, promoting an environment of transparency and trust among all project stakeholders.

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

Training for workers and stakeholders can be detailed in the following aspects:

Training plan: A comprehensive training program is implemented for members of the organizations with which we are working. It covers relevant areas, oriented to production and resource management, as well as organization and management to improve the sales processes of the products that each organization is dedicated to, sustainable practices, conservation, leadership, gender, among others of relevance. A methodological script has been developed for each learning session.

Capacity building in indigenous communities: A group of community members from Palma Real and Sonene have been trained to provide technical assistance in agricultural activities in their respective communities, which allows for constant monitoring and improved attention to producers in these communities that are distant from the common work areas (road axis) and which can only be reached by river.

Promotion of local leadership: Local leadership is promoted through the identification and empowerment of community leaders who can assume key roles in the management and sustainability of the activities implemented in the REDD+ project. These leaders act as focal points and guarantors of the continuity of the acquired capacities.

Training of the project's technical team is carried out through workshops focused on several key areas. These include teamwork, community intervention techniques, gender equity and interculturality. In addition, each team member is encouraged to participate in events organized by other entities, as long as the subject matter is relevant and pertinent to REDD+ project activities.

It should be noted that access to educational resources is facilitated: Access to a variety of educational resources, including digital libraries, webinars and online courses, is provided to complement face-to-face training.

These actions not only strengthen the capacities of the REDD+ project's technical team, but also contribute to a collaborative, inclusive and committed work environment with the project's objectives, making them effective and achieving a positive impact on the communities and populations with which the project is working.

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

It is important to note that the project is developed outside communal territories or areas with land tenure conflicts. For this reason, the intervention with the population is focused exclusively on the implementation of activities, mostly oriented to the production of agricultural products or forest products other than timber, tourism and handicrafts in the case of the communities. If a business or work opportunity arises for these populations, the choice to apply is an autonomous decision of each member belonging to a stakeholder group that is a beneficiary of the project. This autonomy guarantees respect for the internal decisions of each community, promoting self-determination and social cohesion of each community, population center or organization.

With this in mind, the project's technical team has been assigned positions based on meritocracy, through a rigorous selection process that guarantees gender equity, equal pay and inclusiveness. This approach not only promotes fairness and diversity, but also ensures that all individuals interested in joining the team have the opportunity to participate in the selection process, thus providing them with equal access to job opportunities.

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

Although there is no formal evaluation, there is an occupational safety guideline. This guideline is implemented and strictly enforced to minimize any risks and protect the health and integrity of all workers. In addition, a culture of accident prevention is promoted and regular inspections are carried out to ensure that all safety measures are kept up to date. These collective actions contribute to a safe and healthy work environment, reinforcing the commitment to the well-being of the employees working for this project.

The following are the main actions carried out to minimize risks

Safety Protocols and Procedures before performing activities in the field:

1. Verification

- The field first aid kit is checked to ensure that it is properly implemented.

- The activity leader verifies that each team has the appropriate equipment or elements, such as helmets and protective gloves in case the team enters the forest, appropriate rubber boots, appropriate clothing, life jackets, fire extinguisher for the boat, that the insurance of each team member is in force, that the insurance of each vehicle is in force, as well as an inspection and preventive maintenance of each vehicle (boat, pickup truck and motorcycles).

2. Safe Routes and Schedules:

Safe routes for travel, both by river and road, are planned and mapped, taking into account the presence of natural obstacles and potential threats.

Work schedules are established to avoid high-risk hours, such as at night or during periods of high animal activity that could be dangerous.

3. Reporting and feedback:

Workers are encouraged to report any incidents or unsafe conditions immediately, this action allows for constant feedback to improve safety protocols based on workers' experiences and suggestions.

These activities and processes not only inform workers about risks, but also provide them with the tools and knowledge necessary to minimize them, creating a safer and more efficient work environment taking into account the field scenarios in which we operate.

2.4 Management Capacity

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

The technical team implementing the REDD+ project possesses the following skills, depending on the technical area to which they belong:

Communication skills, participatory techniques, mediation and conflict resolution.

Biodiversity inventory methods, species identification, data analysis.

Remote sensing techniques, use of GIS software, biomass measurement, soil and vegetation carbon monitoring, biomass measurement, forest species recognition.

Graphic design skills, preparation of press releases, taking photographs.

Management skills, accounting software handling, warehouse management and control skills.

Organize events such as courses, workshops, symposiums.

Analytical skills, good writing skills, intermediate/advanced excel skills.

The team is made up of professionals from various areas, including forestry, environmental, social, biology, administration, tourism, marketing, communication and design. These professionals receive regular training and work in a multidisciplinary, eloquent and efficient manner. Thanks to teamwork, significant progress has been made in the implementation of the REDD+ project.

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

AIDER has more than 36 years of experience in project management of conservation of natural resources in the Amazon, which has developed capacities to interact with different types of actors, as a result of which has established cooperation agreements with local governments, research institutions, companies' private organizations, producer organizations and native communities. It has also developed a PM & E system applicable to environmental projects, which has effective tools and methodologies to have effective control over the interventions carried out.

As a result of the experience in the execution of development projects with rural populations, mainly indigenous, AIDER has developed capacities in the management of participatory natural resource management tools and in the application of the principles of interculturality and gender approach, the same which are recognized nationally and internationally and have allowed, among other achievements, the validation of a proposal for the management of communal forests and the voluntary forest certification of native communities, under FSC standards.

Regarding the issue of carbon and environmental services, AIDER has capacities for the formulation of CDM and REDD forestry projects, thanks to the participation of its professional staff in training courses run by the Tropical Agricultural Research and Higher Education Center— CATIE, Winrock International and the National Environment Fund.

In 2010, has implemented the first reforestation project in the country, with the purpose of carbon sequestration that already has financing and an assured market, in the Ucayali Region. He has also managed to design a reforestation project in a rural community, endorsed by the national environmental authority, with the aim of becoming the first MDL forest project in Peru and the second in the world. Both projects are in the validation phase.

In terms of REDD projects, AIDER has been developing a PD for Native Communities with FSC forest certification, under the VCS standards, a project that already has the interest of companies that purchase carbon credits, such as Ecoresources.

As a result of the experiences described above, AIDER has established contact with various specialists at an international level, so that the institution keeps updated on the advances in international protocols and tendencies within the framework of the Kyoto Protocol, post-Kyoto agreements and REDD.

AIDER professionals permanently working on the development of the project, made up of forestry engineers, geographers, biologists, agronomists, economists, social and administrative specialists, which are shown in the following table.

Table 2. Project Staff

Components	Name	Profession	Skills	
Management and Monitoring	Jaime Nalvarte Armas	Ing. Forestal Mg. Sc. Forest Resources Management	AIDER management	With training in forestry policy, legislation and administration. She has extensive professional experience in conducting the processes of design and management of projects for the conservation, management and sustainable use of forest resources, with special emphasis on Forest Management with a participatory approach. Active participation in the design and implementation of REDD + projects and policies
	Marioldy Sánchez Santivañez	Forestry Engineer' with a Master's Degree in Social Management	Monitor the activities of the REDD project within the framework of the administration contract	Specialized in the formulation, planning and monitoring of development projects in the environmental field, with extensive experience working in the Amazon. With experience in the design of carbon forestry projects (REDD), with participation in two validation processes under the VCS and CCB standards.
Climate, Carbon and Community	Percy Recavarren Estares	Engineer in Renewable Natural Resources (forestry mention) Master in Forests and Forest Resources Management and PhD	Manage, assist and monitor REDD + Project activities	Experience in community forest management, with the use of GIS and remote sensing tools, as well as in the preparation and monitoring of environmental impact studies (EIA). With experience in the design, implementation and

Components	Name	Profession	Skills	
		candidate in Environment and sustainable development		monitoring of forest carbon projects (REDD + and A / R) in 8 initiatives in Peru.
	Sylvia Mayta D'Ugard	Forestry engineer, with Master in Management and Management of Hydrographic Basins	Direct and technically assist in the formulation and implementation and monitoring of the project	Professional experience in the implementation and monitoring of forest carbon projects, execution of forest conservation projects in the Peruvian Amazon, forest inventory, identification of drivers of deforestation, climate change, capacity building in native communities and knowledge of Standards and methodologies VCS and CCB and their tools.
	Sofía Molero Denegri	Sociologist	Social Support and Preparation of DRP, Social baseline, Guide for conflict management	Experience in managing social projects, conflict management. Experience in a gender and intercultural approach, handling participatory tools for conducting diagnoses. Project elaboration.
	Luis Villena	Sociologist	Social Support and Preparation of DRP, Social baseline, Guide for conflict management	

Components	Name	Profession	Skills	
	Sandra Anccasi Lazo	Bachelor in Forestry	Project implementation activities	Experience in the implementation of the project activities
Remote sensing and geographic information system	Rodrigo Recavarren Estares	Environmental Engineer	Monitoring changes in land use and early warning system for deforestation and degradation	Knowledge and advanced experience in the management, analysis and interpretation of Remote Sensing and Geographic Information Systems and monitoring of vegetation cover. Development of simulated models of land use change.
Biodiversity	Vanessa Hilaes	Bachelor in Forestry	Monitoring of biodiversity and research	Experience in biological studies, entomology, wildlife monitoring and management, management of statistical programs and SIG.
Social	Luis Villena	Social specialist	Social support and Development of DRP, Social baseline, Guide for conflict management	Experience in social project management and conflict management. Experience in the application of a gender and intercultural approach. Management of participatory tools for the realization of diagnoses.
Economic financial	Luis Castillo Mena	Economist	Commercial and financial support of the project	Experience in conducting business plans, market studies of forest products and economic feasibility analysis of projects.
Productive	Jim del Alcazar	Forestry Engineer	REDD+ Strategy	Experience in forest management, scientific data collection, monitoring, logistics and technical assistance.

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

This project does not require the inclusion of an additional figure in management, as it has a technical team trained to carry out its implementation effectively. However, strategic alliances are established with other interested parties, such as NGOs and state institutions, in order to achieve the project objectives more efficiently.

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

AIDER has received technical cooperation funds since 1992 and has directed a US \$ 1,664,764 project called "Jemabaon Nii: Managing communal forests to alleviate poverty", funded by the Royal Netherlands Embassy from 2003 to 2005, and which was the continuation of the project "Conservation of communal forests in the Peruvian Amazon", developed between 1999 and 2003 with the support and funding of the Embassy itself. In the last two years, AIDER has reported a total income of US \$ 800,000 from the execution of projects, consulting and technical assistance, and is expected to receive a budget of US \$ 450,000 during 2009. The financial statements of AIDER of the last five years are attached to this document.

In 2008, AIDER signed a partial Administration Contract with the Peruvian State of the RNTAMB and the PNBS-area of Madre de Dios for seven years (with the possibility of renewing it for 20 years) that contemplate the financing of the World Bank, through the project GPAN, executed in Peru by PROFONANPE. This financing is US \$ 1 177 040 for the first two years of the Contract.

The Administration Contract considers the management of three components of the protected natural areas: Biological Monitoring, Research and Environmental Services. This last component will be fully financed by BAM S.A.C., a Peruvian company with British private capital, which has signed a financial agreement with AIDER for US \$ 5 177 045, which are in the process of being transferred to AIDER for the design and execution of the REDD project.

In 2009, SFM-BAM S.A.C. transferred to AIDER US \$ 539 150 for the design of the project, baseline and preparation of the CCB PDD. In 2010, the amount transferred will be US \$ 191,700 and, from 2011 until 2015, financing will be US \$ 4,446,119 to guarantee activities to mitigate deforestation

AIDER is also establishing agreements to finance other activities that contribute to the sustainability of the REDD project, for example, international research entities, Peruvian universities and the Regional Government of Madre de Dios.

The cash flow of the project for the life cycle of the project (10 years) is attached to this document. It should be noted that this information is commercially sensitive.

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

In this case, both AIDER and SERNANP are entities with extensive experience. AIDER specializes in the implementation of conservation and development projects, while SERNANP is a Peruvian government entity charged with overseeing the conservation of Natural Protected Areas (NPAs). Both organizations have demonstrated transparency in all work processes.

A guarantee of transparency in all processes has been the signing of an administration contract between AIDER and SERNANP. This contract is constantly monitored and meetings are held periodically to evaluate progress in the implementation of the REDD+ strategy. This process ensures fair and transparent work.

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

No sensitive information has been excluded from the monitoring report.

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)

Since the previous reporting period, there have been several changes and updates to laws and regulations affecting REDD+ projects:

General Environmental Law (Law No. 28611): remains a framework law that regulates environmental protection in the country, providing general guidelines for environmental management, including REDD+ projects.

Forestry and Wildlife Law (Law No. 29763): This law regulates the use, exploitation and enjoyment of carbon sequestration environmental services. Forest concession holders, native communities and other entities can generate and trade carbon credits, as long as these rights are included in their forest management plans.

Natural Protected Areas Law (Law No. 26834) and its Regulations (Supreme Decree No. 038-2001-AG): These regulations continue to be fundamental for the management of protected areas, within which REDD+ projects can be developed.

Framework Law on Climate Change (Law No. 30754): This law establishes the framework for climate change mitigation and adaptation in Peru. It includes specific provisions on emission reduction units, which are important for REDD+ projects. The law and its regulations detail how these credits are to be managed and ensure that they meet international standards.

Regulation of Nationally Determined Contributions (NDCs): Since the Paris Agreement, REDD+ projects have been integrated into Peru's NDCs. This means that efforts to reduce deforestation and forest degradation are aligned with the country's international commitments to combat climate change (CIMA).

REDD+ projects in Natural Protected Areas: The implementation of REDD+ projects in areas such as the Tambopata National Reserve and Bahuaja Sonene National Park is an example of how these projects are being carried out under the new regulations. These projects not only seek to reduce carbon emissions, but also to conserve biodiversity and improve the quality of life of the local communities located within the NPAs.

These laws and regulations for REDD+ projects have been constantly evolving to adapt to the needs of conservation and carbon markets, impacting REDD+ projects including:

Law on Mechanisms for the Retribution for Ecosystem Services (Law No. 30215): This law is still in force and establishes the basis for compensation for ecosystem services, including forest carbon services.

National Registry of Mitigation Measures (RENAMI): A key tool that has been developed to register and monitor greenhouse gas mitigation initiatives, including REDD+ projects.

Guidelines for the Forest Reference Emission Level (NREF) and the Forest Reference Level (NRF): These guidelines establish the basis for measuring and reporting emission reductions in REDD+ projects at the national and regional levels, improving the transparency and environmental integrity of these initiatives.

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

The technical team in charge of implementing REDD+ Project activities are covered by the following laws in the country, which ensure the right of workers:

Accuracy regarding the obligation to carry out occupational medical examinations at the beginning: In accordance with the provisions of Supreme Decree No. 016-2016-TR, which modifies the Regulations of the Occupational Health and Safety Law, occupational medical examinations must be carried out every two years, counted from the entry of the worker (for new workers) or from the date of his last occupational medical examination performed by the employer (in the case of workers with a valid link). Therefore, as established by the Occupational Health and Safety Law, it will only be mandatory to carry out these examinations at the beginning of the employment relationship when the worker carries out a high-risk activity.

Use of technology in the signing of labor documents: Legislative Decree No. 1310 establishes that, in all types of employment documents, the employer can substitute his signature or grapher and the manual seal by the following options: digital signature, electronic signature and micro shapes.

Implementation of virtual means for the delivery of tickets and proof of payment: The same device provides that when the payment of economic labor obligations is deposited into an account through companies of the financial system, the employer can substitute the printing and physical delivery of the bills or proof of payment for the provision of said documents to the worker through the use of information and communication technologies. For this, it is required that the means used guarantee the proof of its issuance by the employer and an adequate and reasonable access by the worker. In this case, the worker's signature is not required.

Conservation of labor documents: Legislative Decree No. 1310 provides that, for all legal purposes, employers are obliged to keep documents and proof of payment of economic labor obligations only up to five (5) years after the payment is made. This period must be observed in its actions by the administrative, inspecting, judicial and arbitration bodies. On the other hand, it prescribes that, in the case of the ONP, the employer may destroy the payroll information of periods prior to July 1999, after digitization with legal value or physically deliver it to the entity.

Delimitation of the intervening authority of the National Civil Service Authority due to effects on the principle of probity: One of the attributions of the National Authority of the Civil Service is the intervenor, in case of detecting irregularities in the administration or management of human resources in contest matter. Now, through Legislative Decree No. 1337, the National Authority of the Civil Service will exercise, exceptionally, this attribution in case of request of a holder of the entity of the Executive Power, in cases of serious damage to the principle of probity and public ethics. In this sense, an intervenor will be appointed who will act as the disciplinary administrative procedure organ that motivated the intervention.

Disqualification of the civil servant to provide services for five years: The sanctions of dismissal or dismissal that remain firm or that have exhausted the administrative route, and have been duly notified, entail the automatic disqualification for the exercise of the public function and to provide services for five years. During this period, the civil servant will not be able to re-enter to provide services to the State, under any form or modality. It is mandatory the registration of the server in the National Registry of Sanctions against Civil Servants and in the Register of Disability, as provided for by Legislative Decree No. 1295.

Prohibition of providing services to the State for the commission of corruption offenses: According to Legislative Decree No. 1295, persons with a convicted and / or enforceable conviction for any of the offenses set forth in articles 382, 383, 384, 387, 388, 389, 393, 393-A, 394, 395, 396, 397, 397-A, 398, 399, 400 and 401 of the Penal Code, cannot provide services in favor of the State, in any form or form.

Publicity of sanctions against civil servants: Sanctions registered in the National Registry of Sanctions against Civil Servants are public access as long as they remain in force.

2.5.3 Human Rights (VCS, 3.19)

The following are the considerations that the REDD+ project takes into account to guarantee the inclusion of the rights of indigenous peoples and local communities:

Prior consultation and participation 2.

For each intervention we ensure that indigenous peoples and local communities are fully and comprehensibly informed about the implementation of project activities that involve their participation as beneficiaries, so that they can deliberate whether or not to participate as beneficiaries of the project.

2. Recognition of territorial rights

The project activities do not include recognizing and formalizing the land ownership and land use rights of indigenous and local communities, since the project area does not include these geographic spaces, however, the project beneficiaries are requested to have title to their land in order to implement REDD+ project activities in terms of sustainable productive or economic activities.

3. Protection of Traditional Knowledge

The activities implemented in the project integrate and respect the traditional knowledge and cultural practices of the communities in the planning and execution processes. Likewise, the project ensures that traditional knowledge is not exploited without the consent and benefit of the communities.

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

Recovery of Traditional Practices: Ancestral techniques are being rescued, such as the use of natural dyes in basket weaving and the production of bio-jewelry with seeds. These practices not only preserve the cultural heritage, but also strengthen the cultural identity of the Ese'Eja Sonene community.

Training and Skills Development: Training workshops have been conducted to improve artisanal techniques, ensuring the appropriate and sustainable use of natural dyes and seeds. These workshops not only improve the quality of the handicrafts, but also provide the artisans with the necessary skills to increase their competitiveness in the market.

Preservation of Cultural Heritage: The integration of these traditional practices into the REDD+ project not only contributes to environmental sustainability, but also plays a crucial role in the preservation of cultural heritage. By revitalizing these techniques, the project helps to keep alive the traditions and ancestral knowledge of indigenous communities.

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

Disputes over rights to territories and resources	There are no disputes over ownership of the territory. Property rights associated with the project area are limited exclusively to the area belonging to the Peruvian State and administered by the National Service of Natural Protected Areas of the State (SERNANP). The existence or recognition of customary rights linked to indigenous communities or settlers in this area is not contemplated.
Respect for property rights	The project ensures the protection of the property rights of stakeholders, indigenous peoples or settlers.

2.5.6 Benefit Sharing Mechanism (VCS, 3.18, 3.19)

Summary of the benefit sharing plan	The project belongs to SERNANP. They validate the activities that are carried out within the framework of REDD+ strategy implementation and, based on this, work plans are prepared every five years and annually, which are validated by SERNANP.
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Benefit sharing during the monitoring period

Does not apply

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

Consent	Not applicable to this project
Outcome of FPIC	Not applicable to this project

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

The project is being carried out in the forest areas of SERNANP's protected natural areas, therefore no relocation is required.

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

The identified activities that could affect or generate some type of impact to the Climate, Community and Biodiversity objectives of the project are those mentioned below:

- Illegal gold mining
- Illegal extraction of wood
- Burns
- Expansion of the agricultural frontier
- Agricultural invasion of areas with another type of land use (timber concessions, chestnut concessions, etc.)

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

No activities carried out within the framework of the project have led to any type of dispute with stakeholders.

3 CLIMATE

Note that Section 3 relates exclusively to data and parameters for monitoring GHG emission reductions and removals. No community or biodiversity parameter should be entered here with the exception of any relevant information for fulfilling the optional Gold Level criteria.

3.1 Monitoring GHG Emission Reductions and Removals

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

Data / Parameter	Forest / Non Forest Cover Regional Map
Data unit	-
Description	Map showing the location of forest areas within the reference region, project area and leakage belt at the Start of the crediting period.
Source of data	Landsat 5 images. GPS points taken in the case of field verifications.
Value applied	-
Justification of choice of data or description of measurement methods and procedures applied	Image interpretation done using ENVI 5.1 and Arc Gis 10.1 software. Minimum precision of the map will be of 90%, according to the specified in the M-REDD module.
Purpose of data	The map will be validated on the field through a systematic unaligned sampling; precision calculation and commission and omission mistakes will be done through a confusion matrix.
Comments	Determination of baseline scenario (AFOLU projects only)

Data / Parameter	Δ CBSL,unplanned
Data unit	

Description	t CO2e
Source of data	Net greenhouse gas emissions in the baseline from unplanned deforestation.
Value applied	Landsat 5 TM and ETM satellite images
Justification of choice of data or description of measurement methods and procedures applied	
Purpose of data	INEI, MINAM, IGN, digital Peru, Master Plans of the RNTAMB and PNBS-MDD, DGFFS, SERNANP, MINAGRI, IIAP, experts with knowledge about the reality of agents of deforestation in the buffer zone adjacent to the Madre de Dios river area.
Comments	

Data / Parameter	Ai
Data unit	Ha
Description	Area of stratum i
Source of data	Landsat 5 satellite images
Value applied	IGN-MINEDU, Tambopata National Reserve master plan, Bahuaja Sonene National Park master plan, SERNANP.
Justification of choice of data or description of measurement methods and procedures applied	
Purpose of data	All data sources that were used are detailed in Annex 21 "Stratification of forests of Tambopata National Reserve and Bahuaja-Sonene National Park within the area of Madre de Dios region", of Project Development Design (PDD).

Comments	The number of hectares per strata for project area and leakage belt are detailed in the "Database of calculation of carbon stock .xls" spreadsheet "Table 1" worksheet
Data / Parameter	ARRD,unplanned,hrp
Data unit	Ha
Description	Total area deforested during the historical reference period in the RRD.
Source of data	Landsat 5 TM and ETM satellite images
Value applied	
Justification of choice of data or description of measurement methods and procedures applied	INEI, MINAM, IGN, digital Peru, Master Plans of the RNTAMB and PNBS-MDD, DGFFS, SERNANP, MINAGRI, IIAP, experts with knowledge about the reality of agents of deforestation in the buffer zone adjacent to the Madre de Dios river area.
Purpose of data	
Comments	All sources of data used are shown in Annex 23 "Estimation of unplanned deforestation in the baseline scenario", of Project Development Design (PDD).

Data / Parameter	CF
Data unit	t C-1 t d.m.
Description	Carbon fraction of dry matter
Source of data	Default value 0.50 t C-1 t d.m. is from literature "Pearson, T; Walker, S; Brown, S. 2005. Sourcebook for Land use, Land-use Change and forestry Projects. Winrock international. EEUU. 57 p."
Value applied	0.5

Justification of choice of data or description of measurement methods and procedures applied	-
Purpose of data	Determination of baseline scenario (AFOLU projects only)
Comments	• Calculation of baseline emissions.

Data / Parameter	fj (X,Y)
Data unit	t d.m. tree-1
Description	Allometric equation for species j linking measured tree variable(s) to aboveground biomass of living trees
Source of data	The resulting data comes from aboveground biomass of living trees inventory
Value applied	The values applied are in the Project Document-PD.
Justification of choice of data or description of measurement methods and procedures applied	Feitas et al. Research Institute of the Peruvian Amazon. 2006. Environmental Services Storage and Carbon Sequestration Ecosystem Aguajal in the Pacaya Samiria National Reserve - Loreto. Technical Document. N° 29. Iquitos, Perú. 65 p.
Purpose of data	
Comments	PASA, A. s.f. Small holders' Contribution on Climate Change Mitigation and Water Quality: The Case of the CBFM Project in Midwestern Leyte, Department of Agroforestry, College of Forestry and Natural Resources Visayas State University Philippines. 12 p.

Data / Parameter	R
Data unit	t root d.m. t-1 shoot d.m.

Description	Root to shoot ratio appropriate to species or forest type / biome.
Source of data	The resulting data comes from aboveground biomass of living trees inventory.
Value applied	0.37
Justification of choice of data or description of measurement methods and procedures applied	Cairns et al. 1997 is a widely accepted peer reviewed scientific publication. Cairns, M. A., S. Brown, E. H. Helmer, and G. A.
Purpose of data	Baumgardner. 1997. Root biomass allocation in the world's upland forests. Oecologia 111, 1-11.
Comments	

Data / Parameter	COMFi
Data unit	Dimensionless
Description	Combustion factor for stratum i (vegetation type)
Source of data	Default values in Table 2.6 of IPCC, 2006 (Annex 2) of Project Development Design (PDD).
Value applied	0.5
Justification of choice of data or description of measurement methods and procedures applied	
Purpose of data	N/A
Comments	Calculating emissions baseline

Data / Parameter	G gi
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Data unit	Dimensionless
Description	Combustion emissions factor for i stratum and g gas - source of data
Source of data	Defaults can be found in Volume 4, Chapter 2, of the IPCC 2006 Inventory Guidelines in table 2.5 (see Annex 2: emission factors for various types of burning for CH ₄ and N ₂ O).
Value applied	6.80 for CH ₄ and 0,20 for N ₂ O in tropical forest
Justification of choice of data or description of measurement methods and procedures applied	
Purpose of data	N/A
Comments	Calculating emissions baseline

Data / Parameter	CAB _{tree,i}
Data unit	t CO ₂ -e ha ⁻¹
Description	Carbon stock in aboveground biomass in trees in the project case in stratum i
Source of data	The resulting data comes from aboveground biomass of living trees inventory
Value applied	The values applied are in the Project Document-PD.
Justification of choice of data or description of measurement methods and procedures applied	The inventory made for the carbon stock determination was exploratory type with temporary sample plots. As a base was used the stratification and variability of each stratum, which is the principle design of the optimal fixation.
Purpose of data	The sample plots were circular and concentrically nested.
Comments	Calculating emissions baseline

Data / Parameter	CBB,tree,i
Data unit	t CO ₂ -e ha ⁻¹
Description	Carbon stock in belowground biomass in trees in the project case in stratum i
Source of data	The resulting data comes from aboveground biomass of living trees inventory
Value applied	The values applied are in the Project Document-PD.
Justification of choice of data or description of measurement methods and procedures applied	Allometric equation for predicting root biomass density as a function of aboveground biomass density.
Purpose of data	Calculating emissions baseline
Comments	Calculate project emissions

3.1.2 Data and Parameters Monitored (VCS, 3.16)

Data / Parameter	Forest cover monitoring map for the project area.
Data unit	Ha
Description	Map showing the location of forest areas within the project area at the beginning of every monitoring period. If within the Project Area some forest land is cleared, the benchmark map must show the deforested areas at each monitoring event.
Source of data	Landsat 8 - OLI images. GPS points taken in the case of field verifications.
Description of measurement methods and procedures to be applied	Image interpretation done using geographic information systems (GIS).

Frequency of monitoring/recording	Annual
Value monitored	540,878.92 ha
Monitoring equipment	Computer (desktop/laptop) with an i7 processor and 6 GB of RAM memory.
QA/QC procedures to be applied	Software: ERDAS IMAGINE and Arc GIS 10.5
Purpose of the data	GPS Garmin Navigator
Calculation method	The map was validated by visual interpretation of high resolution satellite images "Sentinel-2 Images (10m x 10m)". The precision calculation was conducted through a confusion matrix.
Comments	

Data / Parameter	Leakage Belt Forest Cover Benchmark Map
Data unit	Ha
Description	Forest cover monitoring map for the leakage belt.
Source of data	Map showing the location of forest areas within the leakage belt age belt at the end of every monitoring period.
Description of measurement methods and procedures to be applied	Landsat 8 - OLI images. GPS points taken in the case of field verifications.
Frequency of monitoring/recording	Image interpretation done using geographical information systems.
Value monitored	Annual
Monitoring equipment	170,966.78 ha

QA/QC procedures to be applied	Computer (desktop/laptop) with an i7 processor and 6 GB of RAM memory.
Purpose of the data	Software: ERDAS IMAGINE and Arc GIS 10.5
Calculation method	GPS Garmin Oregon600
Comments	The map was validated by visual interpretation of high resolution satellite images "Sentinel-2 Images (10m x 10m)". The precision calculation was conducted through a confusion matrix.

Data / Parameter	ADefPA,i,t
Data unit	Ha
Description	Area of recorded deforestation in the project case in stratum i in year t
Source of data	Landsat 8 Landsat 8 - OLI images.
Description of measurement methods and procedures to be applied	Image interpretation done using geographical information systems.
Frequency of monitoring/recording	Annual
Value monitored	34.20 ha
Monitoring equipment	Computer (desktop/laptop) with an i7 processor and 6 GB of RAM memory.
QA/QC procedures to be applied	Software Arc GIS 10.5
Purpose of the data	The map was validated by visual interpretation of high resolution satellite images "Sentinel-2 Images (10m x 10m)".
Calculation method	The precision calculation was conducted through a confusion matrix.

Comments	Minimum precision of the map will be of 90%, according to the specified in the M-REDD module.
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Data / Parameter	ADefLB,i,u,t
Data unit	Ha
Description	Area of recorded deforestation in the leakage belt in the project in stratum I in year t
Source of data	Landsat 8 - OLI images.
Description of measurement methods and procedures to be applied	Image interpretation through the use of geographic information systems (GIS).
Frequency of monitoring/recording	Annual
Value monitored	2,102.61 ha
Monitoring equipment	Computer (desktop/laptop) with an i7 processor and 6 GB of RAM memory.
QA/QC procedures to be applied	Software Arc GIS 10.5
Purpose of the data	The map was validated by visual interpretation of high resolution satellite images "Sentinel-2 Images (10m x 10m)".
Calculation method	The precision calculation and commission and omission mistakes was conducted through a confusion matrix
Comments	Minimum precision of the map will be of 90%, according to the specified in the M-REDD module.

Data / Parameter	ADegW,i
Data unit	Ha
Description	Area potentially impacted by degradation processes in stratum i

Source of data	Reports from the rangers of the TAMBNR and BSNP regarding illegal extraction of wood. Location map of the physical components of the project area.
Description of measurement methods and procedures to be applied	Delimitation of the potential area subject to forest degradation based on the expertise of the rangers (see the participatory workshop memory on Annex 2 of the corresponding section).
Frequency of monitoring/recording	Quinquennial
Value monitored	1,500.54 ha
Monitoring equipment	Computer (desktop/laptop) with an i7 processor and 6 GB of RAM memory.
QA/QC procedures to be applied	Software Arc GIS 10.5
Purpose of the data	Participatory workshop performed with the rangers to validate the preliminary delineation of the potential area subject to forest degradation.
Calculation method	Estimating project emissions
Comments	Using the UTM coordinates of the points of interventions performed by the rangers during the monitoring period and their knowledge of the area and of degradation activities, the area of the critical sectors within the project area was determined. See appendix 3.

Data / Parameter	ADistPA,q,i,t
Data unit	Ha
Description	Area impacted by natural disturbance in the project stratum i converted to natural disturbance stratum q at time t; ha
Source of data	Image interpretation by software using geographic information systems. GPS points taken in the case of checks in the field.

Description of measurement methods and procedures to be applied	Computer (desktop/laptop) with i7 processor and 6 GB of RAM memory.
Frequency of monitoring/recording	Software Arc GIS 10.5
Value monitored	Annual
Monitoring equipment	0
QA/QC procedures to be applied	Computadora (desktop/portátil) con procesador i7 con 6 GB de memoria RAM.
Purpose of the data	Software Arc GIS 10.5
Calculation method	GPS Garmin Oregon600
Comments	Georeferenced photographic record of the disturbance

Data / Parameter	$CDegW_{i,t}$
Data unit	t CO ₂ -e
Description	<i>Biomass carbon of trees cut and removed through illegal logging and fuelwood and charcoal extraction degradation process from plots measured in stratum i at time t</i>
Source of data	<i>Field measurements</i>
Description of measurement methods and procedures to be applied	<i>Field measurements according to the procedure described in M-REDD module, v2.2.</i>
Frequency of monitoring/recording	<i>Every five years</i>
Value monitored	2,314.5
Monitoring equipment	<i>Caliper</i>

QA/QC procedures to be applied	<i>The gathering of information on the field will be done according to the Standard Operational Procedure elaborated for this purpose. See appendix 3.</i>
Purpose of the data	<i>Estimating project emissions</i>
Calculation method	<i>Allometric equations used to calculate aerial biomass (Brown, 1997, as quoted by Pearson et al., 2005) and underground biomass (Source: Cairns et al., 1997, as quoted by IPCC, 2003).</i>
Comments	-

Data / Parameter	Aburn,i,t
Data unit	Ha
Description	Total of burnt areas within the project area for the monitoring period
Source of data	Landsat 8 images. GPS points taken in the case of field verifications.
Description of measurement methods and procedures to be applied	Image interpretation through the use of geographic information systems (GIS)
Frequency of monitoring/recording	Annual
Value monitored	18.79 ha
Monitoring equipment	Computer (desktop/laptop) with an i7 processor and 6 GB of RAM memory.
QA/QC procedures to be applied	Software: ERDAS IMAGINE and Arc GIS 10.5
Purpose of the data	GPS Garmin Navigator

Calculation method	The map will be validated on the field through the sampling of 10% of the total analyzed area; the classes on the map must correspond to the ones on the field.
Comments	Minimum precision of the map will be of 90%.

Data / Parameter	APi
Data unit	Ha
Description	Total area of the degradation sampling plots in i stratum
Source of data	Field measurements
Description of measurement methods and procedures to be applied	Systematic random sampling, covering at least 3% of the potential area subject to degradation.
Frequency of monitoring/recording	Every five years
Value monitored	450 ha
Monitoring equipment	Computer (desktop/laptop) with an i7 processor and 6 GB of RAM memory.
QA/QC procedures to be applied	GPS Garmin Navigator
Purpose of the data	The gathering of information on the field will be done according to the Standard Operational Procedure elaborated for this purpose. See appendix 3.
Calculation method	Estimating project emissions
Comments	Cabinet processing of the information gathered on the field using geographic information systems (GIS).

Data / Parameter	TOTFOR
Data unit	Ha
Description	Total available national forest area

Source of data	Official data, peer reviewed publications, remotely sensed imagery (coarse scale imagery is appropriate) or cadastral maps and other verifiable sources
Description of measurement methods and procedures to be applied	Not applicable
Frequency of monitoring/recording	Must be monitored at least every 5 years or if verification occurs on a frequency of less than every 5 years examination must occur prior to any verification event
Value monitored	1,776,276.53
Monitoring equipment	-
QA/QC procedures to be applied	It's considered the forest area available for unplanned deforestation corresponding to area of Madre de Dios, due to the spatial characteristics of accessibility of the region.
Purpose of the data	
Calculation method	More details are in Annex 24 of VCS-PDD
Comments	Calculation of leakage emissions

Data / Parameter	PROTFOR
Data unit	Ha
Description	Total area of fully protected forests nationally.
Source of data	Official data, peer reviewed publications and other verifiable sources.
Description of measurement methods and procedures to be applied	
Frequency of monitoring/recording	Not applicable

Value monitored	Must be monitored at least every 5 years or if verification occurs on a frequency of less than every 5 years examination must occur prior to any verification event.
Monitoring equipment	148,311.31
QA/QC procedures to be applied	-
Purpose of the data	-
Calculation method	Calculation of leakage emissions
Comments	-

Data / Parameter	MANFOR
Data unit	Ha
Description	Total area of forests under active management nationally
Source of data	Official data, peer reviewed publications and other verifiable sources
Description of measurement methods and procedures to be applied	
Frequency of monitoring/recording	Not applicable
Value monitored	Must be monitored at least every 5 years or if verification occurs on a frequency of less than every 5 years examination must occur prior to any verification event.
Monitoring equipment	834,337.89
QA/QC procedures to be applied	-
Purpose of the data	-
Calculation method	Calculation of leakage emissions

Comments	-
Data / Parameter	PROPIMM
Data unit	Proportion
Description	Estimated proportion of baseline deforestation caused by immigrating population
Source of data	Calculated based on official data the INEI 2007.
Description of measurement methods and procedures to be applied	Estimated as proportion of the area deforested in the past 5 years by population that migrated into the Leakage Belt and project area in the past 5 years.
Frequency of monitoring/recording	Must be monitored at least every 5 years or if verification occurs on a frequency of less than every 5 years examination must occur prior to any verification event.
Value monitored	0.187
Monitoring equipment	-
QA/QC procedures to be applied	It's established based on official information provided by INEI, considering the persons performing activities of agriculture and mining in the influence area.
Purpose of the data	More details are in Annex 24 of VCS-PDD
Calculation method	Calculation of leakage emissions
Comments	-
Data / Parameter	PROPRES
Data unit	Proportion
Description	Estimated proportion of baseline deforestation caused by population that has been resident for ≥5 years
Source of data	Calculated based on official data the INEI 2007.

Description of measurement methods and procedures to be applied	Estimated as proportion of the area deforested in the past 5 years by population resident in the Leakage Belt and project area for ≥ 5 years (all areas within 2km of the boundaries of the project area and the leakage belt shall be considered here).
Frequency of monitoring/recording	Must be monitored at least every 5 years or if verification occurs on a frequency of less than every 5 years examination must occur prior to any verification event.
Value monitored	0.813
Monitoring equipment	-
QA/QC procedures to be applied	-
Purpose of the data	Calculation of leakage emissions
Calculation method	-
Comments	-

Data / Parameter	Δ CLK-AS,unplanned
Data unit	t CO ₂ -e
Description	Net greenhouse gas emissions due to activity shifting for projects preventing unplanned deforestation
Source of data	Deforested area in the leakage belt
Description of measurement methods and procedures to be applied	Calculated based on official data the INEI 2007
Frequency of monitoring/recording	-
Value monitored	Annual
Monitoring equipment	0

QA/QC procedures to be applied	-
Purpose of the data	-
Calculation method	Calculation of leakage emissions
Comments	-

Data / Parameter	□CP, LB
Data unit	T CO2e
Description	Net greenhouse gas emissions within the leakage belt in the project case up to year t
Source of data	Deforested area in the leakage belt
Description of measurement methods and procedures to be applied	
Frequency of monitoring/recording	Annual
Value monitored	0
Monitoring equipment	-
QA/QC procedures to be applied	-
Purpose of the data	Calculation of leakage emissions
Calculation method	-
Comments	-

3.1.3 Monitoring Plan (VCS, 3.16, 3.20)

The monitoring purpose is to obtain the necessary information in order to estimate the amount of avoided emissions during the crediting period, evaluate the effectiveness of the project activities and collect all the information required to ensure the realization of the project's emissions reduction targets.

The monitoring plan is directed to the following activities that need to be monitored:

Baseline revision

Monitoring of actual carbon stock changes and greenhouse gas emissions

Monitoring of leakage carbon stock changes and greenhouse gas emissions

Estimation of *ex-post* net carbon stock changes and greenhouse gas emissions

Monitoring activities include the use of remote sensors and in-situ inspections. The combination of both data sources gives as a result the required calculations and estimates to determine whether the project is being developed in accordance to the VCS-PD.

For the monitoring of the areas subject to deforestation and forest degradation and associated emissions, the VCS VMD0015 module "Methods for monitoring of GHG emissions and removals in REDD and CIW projects" (M-REDD) version 2.2 will be used; likewise, the report of leakages caused by the project due to activity displacement will be prepared according to the VCS VMD0010 module "Estimation of emissions from activity shifting for avoiding unplanned deforestation and avoiding unplanned wetland degradation" (LK-ASU) version 1.2. As for the estimate of GHG other than CO₂ produced by burning biomass, the VCS VMD0013 module "Estimation of greenhouse gas emissions from biomass and peat burning" (E-BPB) version 1.2 will be used and the "Tool for testing the significance importance of GHG emissions from A / R CDM project activities" (T-SIG) to evaluate whether it is correct to rule out emission sources and leakage sources.

It is conservatively considered that the carbon stored in the aerial and underground biomass reservoirs keeps constant, so it will not be monitored. Likewise, the secondary forest growth (carbon increment) is omitted in a conservative way, considering, however, the mosaic of secondary forest and agriculture as a single category, due to the complications in differentiating secondary forests from areas with agricultural management (by presenting similar visual and spectral characteristics) on the pixel size of the images to be used. It is necessary to point out that, in many occasions, forest regeneration is impeded (as in the case of areas affected by mining or those invaded by aggressive and competitive exotic).

Monitoring the changes in land use, based on Landsat 8 – OLI satellite images, will be performed. These images are downloaded (if possible, level 2 images are downloaded, which already have atmospheric correction at ground level), an atmospheric correction processing is carried out in case the level 2 images are not downloaded, then a cloud masking. On the other hand, a water index - NDWI is carried out to obtain the coverage of water bodies. Following this, unsupervised classifications are made until a layer is obtained that adjusts as closely as possible to the covers (forest and non-forest). This classification will later be used to extract representative spectral signatures of each cover. Once the resulting layer of the unsupervised classification has been obtained that conforms to the coverage as closely as possible, spectral signatures are extracted for each coverage, relying on the result of the unsupervised classification in order to carry out a supervised classification. Then a filtering of isolated pixels is performed.

Once the Forest, Non-forest and Water Bodies layers have been obtained, it is validated, initially it is indicated that it will be validated in the field, but that is only in case there are no Sentinel 2 images (10mx10m) available where The study area cannot be appreciated (a problem that is generally caused by clouds), however, until now there has been no such problem, so Sentinel 2 images (10mX10m) have been used for validation. The samples are then calculated and a confusion matrix and kappa index are made to calculate the confidence level of the map.

On the other hand, it has been used the spectral vegetation indices like a tool for identification and determination of burned areas, specifically the index of normalised burning ratio (NBR). In addition, once the map of burning was generated, validation occurred through field verification and visual interpretation by used of RapidEye satellite images, with 6.5 meters of spatial resolution and Landsat Panchromatic Image pansharpening with 15 meter of spatial resolution.

Spatial information that may be provided by government entities will be updated annually.

All the monitoring activities will be implemented using Standard Operational Procedures (SOP) elaborated by the project team. The staff will be permanently trained to ensure the quality of the data.

The Group Assurance and Quality Control program schedules auditing visits to verify the compliance of the SOPs, choosing random processes to ensure their correct implementation.

Monitoring data is stored and processes in the cities of Puerto Maldonado and Lima following the procedure described in the See appendix 4.

Monitoring is performed by a professional monitoring team that will be found in the cities of Lima and Puerto Maldonado, in coordination with the headship of Tambopata National Reserve and Bahuaja-Sonene National Park. The monitoring team answers to the Ecosystem Services Area of AIDER coordinator, with an office in Lima.

In-situ monitoring will be in charge of the professional monitoring team in Madre de Dios, with the cooperation of the Rangers of the Protected Natural Areas (within the project area) and their extensive knowledge, the ones who receive training through training workshops to fulfill these tasks.

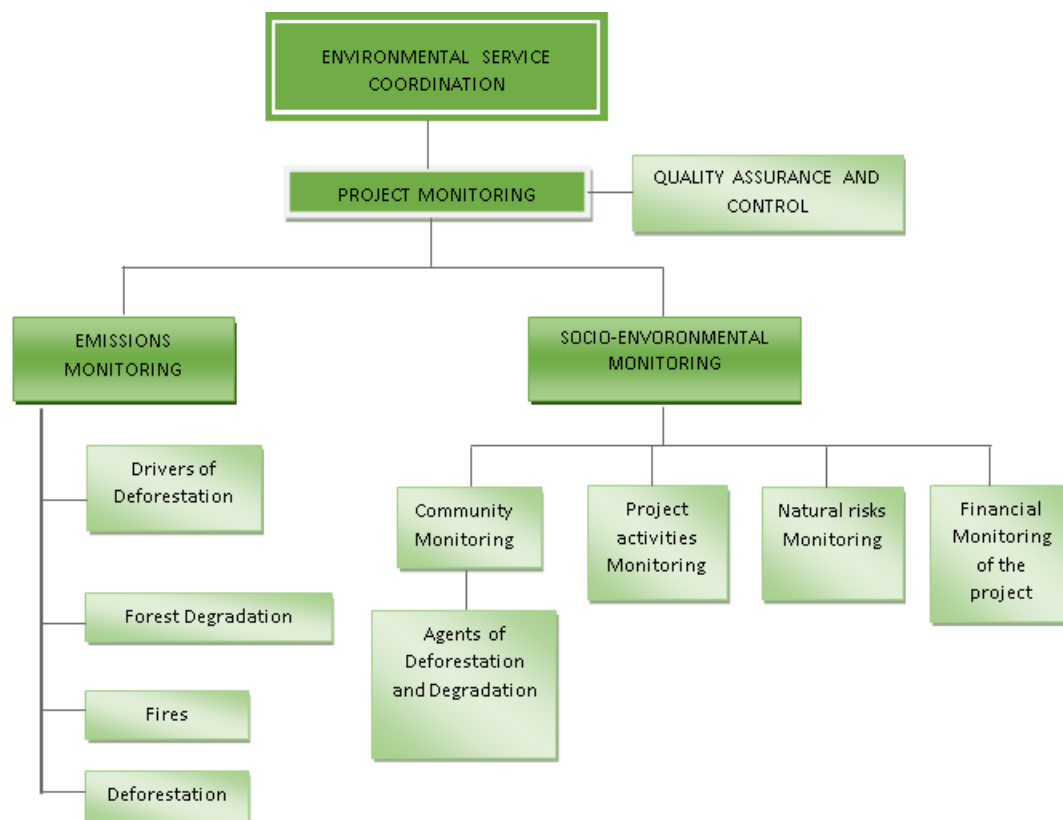


Figure 3. Monitoring organization chart

Baseline Review

The reference scenario will be reviewed every 10 years. The deforestation rate will be updated for the reference region, the project area and the leakage belt, and the same will be done for the drivers of deforestation. Also, the information of the stored carbon will be verified by evaluating 10% of the plots in every stratum to determine the reference scenario. Using the updated information, the deforestation model will be adapted for the project area and the leakage belt in the reference scenario, projecting the deforested areas once again and calculating the carbon emissions in the reference scenario for the subsequent period.

Monitoring of actual carbon stock changes and greenhouse gas emissions

Monitoring is performed using geographic software to process and interpret satellite images, complementing them with field verifications; the parameters subject to monitoring are specified on section 3.1.2.

Monitoring of leakage carbon stock changes and greenhouse gas emissions

Relevant parameters for monitoring of leakage caused by activities shifting are found in section 3.1.2. Deforested areas at leakage belt are being monitored, trying, as much as possible, to cross information from ground- truth data with information of social monitoring at the different populations (according to Climate, Community & Biodiversity standards), to confirm that leakages are, effectively, attributable to the

project activity.

Monitoring of measures to avoid deforestation and reduce risk of leakage: the implementation of the Strategy to Reduce Emissions from Deforestation and Forest Degradation in Tambopata National Reserve (RNTAMB) and Bahuaja-Sonene National Park (PNBS) - Madre de Dios area is annually monitored; in this management document the project activities described on section 1.8 of PD have been developed, through measurement of its targets and indicators and supported by information obtained in community monitoring. Emissions that could result from project activities are considered insignificant, due to the selected technology level (see section 1.7 of PD) and the selected emissions sources (see section 2.3 of PD).

Estimation of ex-post net carbon stock changes and greenhouse gas emissions

The estimation of net ex-post changes in carbon stocks will be conducted according methodology REDDMF. Calculations are detailed in the "REDD project emissions (period 2020).xls" (Annex 5). The following enumerates the procedure steps according to the specified in the M-REDD module, v2.2.

STEP 1. Selection and analysis of land use change and land cover change data sources

The complete procedure is found in Annex 4 of section 3.1.2.

At the end of the monitoring period:

Forest cover maps for the project area and leakage belt were elaborated.

The area of the forest and non-forest cover within the project area and leakage belt were obtained.

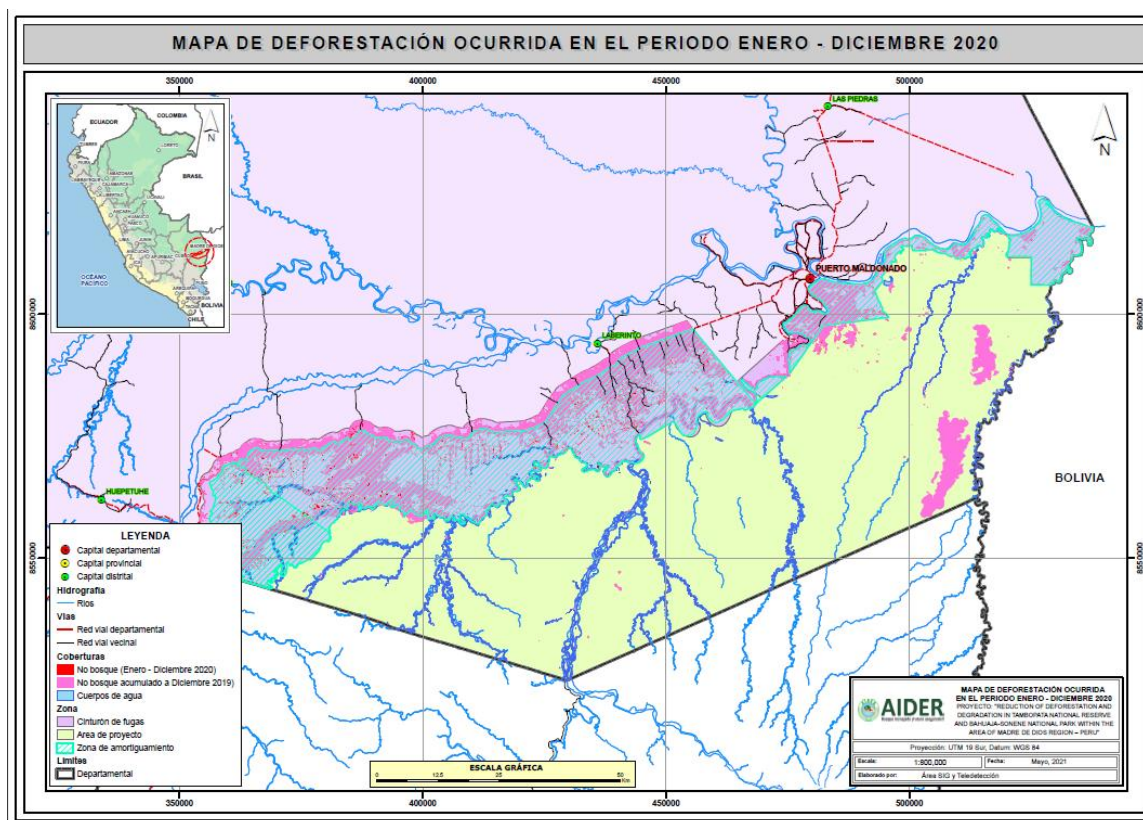


Figure 4. Deforestation map of the project area and the leakage belt

Table 2. Forest and non-forest cover area within the project area and leakage belt

Category	Forest cover (ha)	Non-forest cover (ha)
Project area	543,461.26	110.56
Leakage belt	256,822.37	6,943.55

STEP 2. Interpretation and analysis

Monitoring deforestation

The development of this step consisted in the estimation of the emissions produced due to deforestation within the project area and leakage belt for the period (2021-2023), running from January 1, 2021 to December 31, 2023. The estimate was developed following the applicability of the VMD0015 M-REDD module, v2.2.

Emissions produced due to deforestation

$$\Delta C_{P,DefPA,i,t} = \sum_{u=1} (A_{DefPA,u,i,t} * \Delta C_{pools,P,Def,u,i,t}) \quad \text{(M-REDD Equation 3)}$$

Where:

$\Delta C_{P,DefPA,i,t}$ = net changes in carbon stocks as a result of deforestation in the case of the project, in the project area, i stratum in t time; tCO₂-e.

$A_{DefPA,u,i,t}$ = registered deforestation in the project area, i stratum converted into u land use in t time; ha.

$\Delta C_{pools,P,Def,u,i,t}$ = net changes in carbon stocks in all reservoirs in the case of the project, in u land use, i stratum and t time; t CO₂-e ha⁻¹.

u = 1, 2, 3,... U post-deforestation land uses

i = 1, 2, 3,... M stratum

t = 1, 2, 3,... t* years since the implementation of the REDD project

Table 3. Net changes in carbon stocks in the project area (2021-2023)

Strata	$\Delta C_{DefPA,u,i,t}$	$\Delta C_{pools,P,Def,u,i,t}$	$\Delta C_{P,DefPA,i,t}$
Selva alta difícil	-	480.27	-
Selva alta transita	-	469.30	-
Selva baja	110.57	577.53	63,856.35
Total	110.57		63,856.35

Calculations are detailed in the “REDD project emissions (period 2021-2023).xls” spreadsheet and “Equations 3 and 4” sheet.

$$\Delta C_{P,DefLB,i,t} = \sum_{u=1} (A_{DefLB,u,i,t} * \Delta C_{pols,P,Def,u,i,t}) \quad \text{(M-REDD Equation 4)}$$

Where:

$\Delta C_{P,DefLB,i,t}$ = net changes in carbon stocks as a result of deforestation in the case of the project, in the project area and leakage belt, i stratum in t time; tCO₂-e.

$A_{DefLB,u,i,t}$ = registered deforestation area in the leakage belt area, i stratum converted into u land use in t time; ha.

$\Delta C_{pols,P,Def,u,i,t}$ = net changes in carbon stocks in all reservoirs in the case of the project, in u land use, i stratum and t time; t CO₂-e ha⁻¹

u = 1, 2, 3,... U post-deforestation land uses

i = 1, 2, 3,... M stratum

t = 1, 2, 3,... t* years since the implementation of the REDD project

Table 4. Net changes in carbon stocks in the leakage belt (January –June, 2020)

Strata	$A_{DefLB,u,i,t}$	$\Delta C_{pools,P,Def,u,i,t}$	$\Delta C_{P,DefLB,i,t}$
Difficult high jungle	0.36	435.29	156.70
High jungle transits	3.24	424.32	1,375.39
Lowland jungle	6,939.95	577.53	4,008,033.95
Total	6,943.55		4,009,566.05

Calculations are detailed in the “REDD project emissions (period 2021-2023).xls” spreadsheet and “Equations 3 y 4” sheet.

Changes in carbon content due to deforestation

$$\Delta C_{pools,Def,i,t} = C_{BSL,i} - C_{P,post,i} - C_{WP,i} \quad \text{(M-REDD Equation 5)}$$

Where:

$\Delta C_{pools,Def,u,i,t}$ = net changes in carbon stocks in all reservoirs as a result of deforestation in the case of the project, in u land use, i stratum and t time; t CO₂-e ha⁻¹.

$C_{BSL,i}$ = carbon stocks in all reservoirs for the baseline scenario, i stratum; t CO₂-e ha⁻¹.

$C_{P,post,u,i}$ = post-deforestation carbon stocks in all reservoirs, u land use, i stratum; t CO₂-e ha⁻¹.

$C_{WP,i}$ = sequestrated carbon in wooden products extracted from i stratum; tCO₂-e ha⁻¹

u = 1, 2, 3,... U post-deforestation land use

i = 1, 2, 3,... M stratum

t = 1, 2, 3,... t* years since the implementation of the REDD project

Table 5. Net changes in carbon stocks for the project area, per stratum

Strata	$C_{BSL,i}$ (tCO ₂ -e/ha)	$C_{P,post,i}$ (tCO ₂ -e/ha)	$C_{wp,i}$	$\Delta C_{pools,Def,u,i,t}$ (CO ₂ -e)/ha
Difficult high jungle	480.27	0.00	0	480.27
High jungle transits	469.30	0.00	0	469.30
Lowland jungle	622.51	44.98	0	577.53

(*) Sequestrated carbon for the wooden products is cero, as said reservoir has been considered as not significant in the PD.

Table 6. Net changes in carbon stocks for the leakage belt, per stratum

Strata	C_BSL,i (tCO ₂ -e/ha)	C_P,post,i (tCO ₂ -e/ha)	C_wp,i	ΔC_pools,Def,u,i,t (CO ₂ -e)/ha
Selva alta difícil	480.27	44.98	0	435.29
Selva alta transita	469.30	44.98	0	424.32
Selva baja	622.51	44.98	0	577.53

(*) Sequestered carbon for the wooden products is zero, as said reservoirs have been considered as not significant in the PD.

Calculations are detailed in the “REDD project emissions (period 2021-2023).xls” spreadsheet and “Equation 5” worksheet.

Post-deforestation carbon stocks

$$C_{post,u,i} = C_{AB_tree,i} + C_{BB_tree,i} + C_{AB_nom-tree,i} + C_{BB_nom-tree,i} + C_{DW,i} + C_{LI,i} + C_{SOC,PD-BSL,i}$$

(M-REDD Equation 6)

Where:

$C_{post,u,i}$ = post-deforestation carbon stocks in all reservoirs, u land use, i stratum; tCO₂-e ha⁻¹.

$C_{AB_tree,i}$ = carbon stocks in aerial tree biomass in i stratum; tCO₂-e ha⁻¹.

$C_{BB_tree,i}$ = carbon stocks in underground tree biomass in i stratum; tCO₂-e ha⁻¹.

$C_{AB_nom-tree,i}$ = carbon stocks in aerial other vegetation biomass in i stratum; tCO₂-e ha⁻¹.

$C_{BB_nom-tree,i}$ = carbon stocks in underground other vegetation biomass in i stratum; tCO₂-e ha⁻¹.

$C_{DW,i}$ = carbon stocks in dead wood in i stratum; tCO₂-e ha⁻¹.

$C_{LI,i}$ = carbon stocks in dead leaves in i stratum; tCO₂-e ha⁻¹.

$C_{SOC,PD-BSL,i}$ = post-deforestation average carbon content in the organic carbon in the soil, i stratum; tCO₂-e ha⁻¹.

u = 1, 2, 3, ... U post-deforestation land uses

i = 1, 2, 3, ... M “with project” scenario strata

Within the project area, deforestation and subsequent land use change is aimed at developing agricultural activities; on the northwestern corner of the project area, deforestation due to mining is also registered, but for calculation purposes, it is not considered in the post-deforestation carbon for the mining stratum (which is zero) to have conservative results.

Agricultural activity:

$$C_{post,u,i} = C_{AB_tree,i} + C_{BB_tree,i} + C_{AB_nom-tree,i} + C_{BB_nom-tree,i} + C_{DW,i} + C_{LI,i} + C_{SOC,PD-BSL,i}$$

$$C_{post,u,i} = 31.19 + 13.79 + 0 + 0 + 0 + 0 + 0$$

$$C_{post,u,i} = 44.98 \text{ tCO}_2\text{-e}$$

For further detail see “Post-deforestation.xls” spreadsheet and “post-deforestation index” worksheet.

Monitoring forest degradation

Degradation through extraction of trees for illegal timber

For the specific case of REDD + project, it has replaced sampling limited field by systematizing reports or reports of patrollings special that are periodically made by the rangers of both ANPs, with this an evaluation area was identified and made field work. This work allowed us to refine the area potentially subject to degradation ($ADegW, i$).

Control and surveillance to which it is subjected the entire project area by be protected natural areas, allows the continuous updating of illegal activities found by: checkpoints, reference areas, sectors and geographical coordinates.

For the monitoring period, field monitoring of degradation was carried out, where some areas with the presence of logging were found within the project area. The following figure shows the areas where degradation was found in the project area.

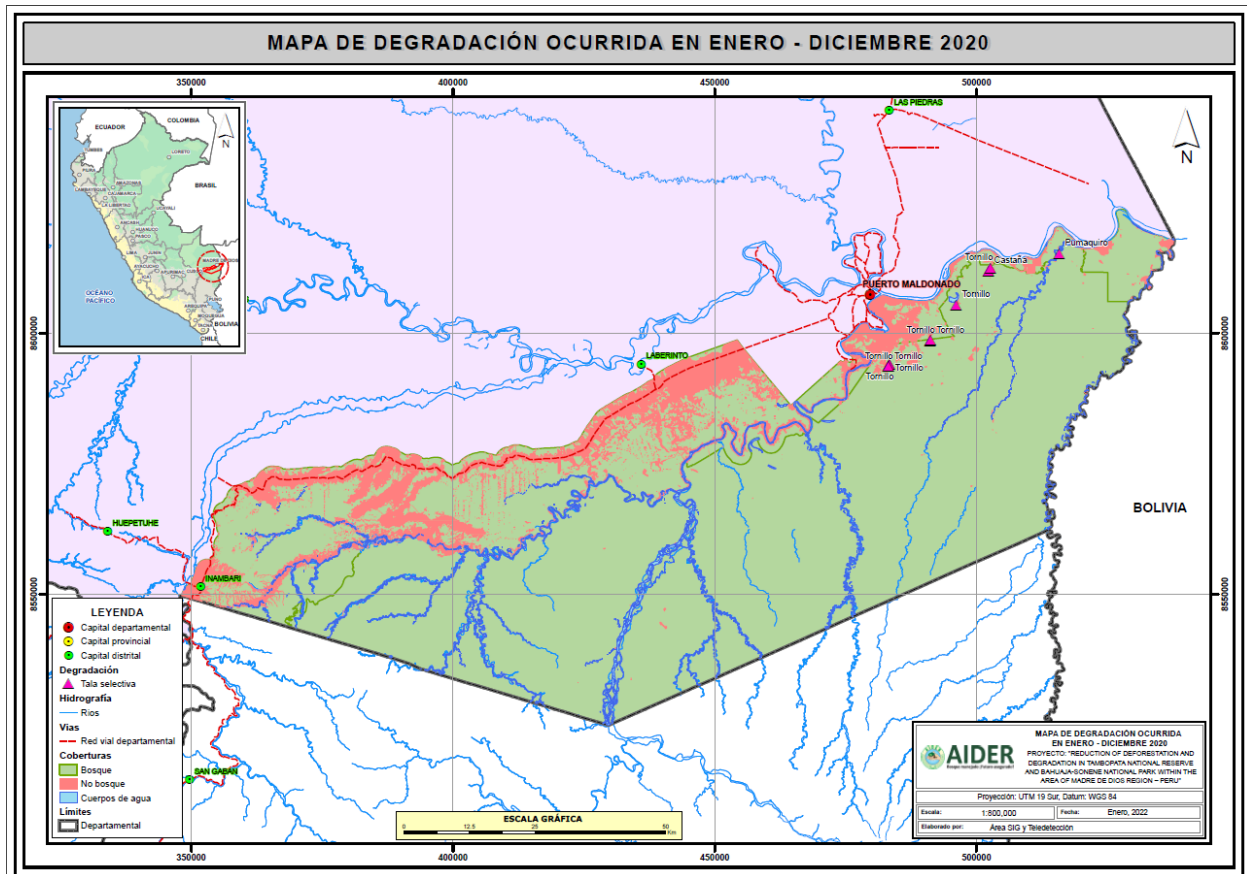


Figure 5. Degradation monitoring map

The methodological process the degradation monitoring is developed in Annex 6, in section 3.1.2.

Monitoring degradation due to selective logging of forest management areas possessing a FSC certificate

Does not apply because there is no FSC forest management areas within the project area, as these operations are incompatible with the objectives of the Protected Natural Areas found within the project area, according to the Project Description.

Monitoring areas undergoing natural disturbance

Legal base

In Peru there is a system for natural disasters management. The National Disaster Risk System – SINAGERD was created with Law No. 29664. Article 1 mentions that it is an inter-institutional, synergistic, decentralized and participatory system, which aims to identify and reduce hazard associated risks or minimize their effects, as well as prevent the generation of new risks by establishing principles, policy guidelines, components, processes or instruments of the Disaster Risk Management.

Article 9 specifies that the National Institute of Civil Defense - INDECI is an integral part of SINAGERD. Article 13 defines the functions of INDECI, which are to develop, coordinate and facilitate the formulation and implementation of the National Plan for Disaster Risk Management.

By Supreme Decree No. 059-2001-PCM, Chapter IV, Article 57, it is established that INDECI is the responsible entity in charge of the programming, gathering and processing of statistical Civil Defense information; it also provides permanent, timely and up to date computer services and communications system of Civil Defense.

Monitoring areas undergoing carbon stock enhancement

Carbon stock enhancement due to forest re-growth has been omitted in a conservative way as specified on the project description.

Monitoring project emissions

The areas burned during monitoring period have been delineated, in order to calculate resulting emissions produced by fires, according to procedure indicated in module E-BB; burned areas mapping procedure can be found in Annex 4 in section 3.1.2.

$$B_{i,t} = (C_{AB_tree,i,t} + C_{DWit} + C_{LI,I,t}) * \frac{12}{44} * \left(\frac{1}{CF}\right) \quad \text{(Equation 2 de E-BB)}$$

Where:

$B_{i,t}$ = Average aboveground biomass stock before burning for stratum i, time t; tonnes d. m. ha⁻¹

$C_{AB_tree,i,t}$ = Mean aboveground biomass carbon stock in stratum i at time t; t CO₂-e ha⁻¹ (estimated using the CP-AB)

C_{DWit} = Carbon stock in dead wood for stratum i, at time t; t CO₂-e ha⁻¹ (estimated using CP-D)

$C_{LI,I,T}$ = Mean carbon stock in litter for stratum i, at time t; t CO₂-e ha⁻¹ (estimated using CP-L)

$\frac{12}{44}$ = Inverse ratio of molecular weight of CO₂ to carbon, t CO₂-e t C⁻¹

CF = Carbon fraction of biomass; t C t⁻¹ d.m. (default carbon fraction of biomass is 0.47 tC t⁻¹ d.m. (see also section III))

i = 1, 2, 3 ...M strata

t = 1, 2, 3, ... t* years elapsed since the start of the REDD project activity

Only there were identified areas burned in the stratum of soft dissected terrace. The area appears in the following table:

Table 6. Average aboveground biomass stock before burning for stratum

Years	Strata	C_(AB_(tree,i,t))	C_Dwit	C_(LI,I,T)	B_(i,t)
2021	Selva baja	325.27	0	0	188.74
2022	Selva baja	325.27	0	0	188.74
2023	Selva baja	325.27	0	0	188.74

Calculations are detailed in the “REDD project emissions (period 2021-2023).xls” spreadsheet and “Equation - burned” worksheet.

$$E_{BiomassBurn,i,t} = \sum_{g=1}^G (((A_{bum,i,t} * B_{i,t} * COMF_I * G_{g,i}) * 10^{-3}) * GWP_g)$$

(Equation 1 de E-BB)

Where:

$E_{BiomassBurn,i,t}$ = Greenhouse emissions due to biomass burning as part of deforestation activities in stratum i in year t; tCO₂-e of each GHG (CO₂, CH₄, N₂O)

$A_{bum,i,t}$ = Area burnt for stratum i at time t; ha

$B_{i,t}$ = Average aboveground biomass stock before burning stratum i, time t; tonnes d. m. ha⁻¹

$COMF_I$ =Combustion factor for stratum i; dimensionless (see annex 1 for default values as derived from Table 2.6 of IPCC, 2006)

$G_{g,i}$ = Emission factor for stratum i for gas g; kg t⁻¹ dry matter burnt (see section III and annex 2 for default values as derived from Table 2.5 of IPCC, 2006)

GWP_g = Global warming potential for gas g; t CO₂/t gas g (default values from IPCC SAR: CO₂ = 1; CH₄ = 21; N₂O = 310)

g= 1, 2, 3 ... G greenhouse gases (to include carbon dioxide¹, methane and nitrous oxide)

i= 1, 2, 3 ...M strata

t= 1, 2, 3, ... t* years elapsed since the start of the REDD project activity

Table 7. Emissions of GHG due to the burned biomass for the period 2021-2023

Period	Estratum	A_(bum,i,t)	B_(i,t)	COMF_I	G_g,i	GWP_g	E_BiomassBurn,i,t
2021	Selva baja	10.88	188.74	0.5	6.80	25	174.55
					0.2	298	61.20
2022	Selva baja	10.88	188.74	0.5	6.80	25	174.55
					0.2	298	61.20
2023	Selva baja	10.88	188.74	0.5	6.80	25	174.55

					0.2	298	61.20
							471.49

Calculations are detailed in the “REDD project emissions (period 2021-2023).xls” spreadsheet and “Equation - burned” worksheet.

$$GHG_{P,E,i,t} = E_{FC,i,t} + E_{BiomassBurn,i,t} + N_2O_{direct-N,i,t}$$

(Equation 30 de M-REDD)

Where:

$GHG_{P,E,i,t}$ = Greenhouse gas emissions as a result of deforestation activities within the project area in the project case in stratum i in year t; t CO₂-e

$E_{FC,i,t}$ = Emission from fossil fuel combustion in stratum i within the project area in year t; t CO₂-e

$E_{BiomassBurn,i,t}$ = Non-CO₂ emissions due to biomass burning in stratum i in year t; t CO₂-e

$N_2O_{direct-N,i,t}$ = Direct N₂O emission as a result of nitrogen application on the alternative land use in stratum i within the project area in year t; t CO₂-e

i = 1, 2, 3 ...M strata

t = 1, 2, 3 ...t* years elapsed since the start of the REDD VCS project activity

Table 3. Emission GEI from activities of the project

Period	$E_{FC,i,t}$	$E_{BiomassBurn,i,t}$	$N_2O_{direct-N,i,t}$	$GHG_{P,E,i,t}$
2021-2023	0	471.49	0	471.49

The emission by burning of fossil fuels and application of fertilizers is considered to be insignificant, in agreement to the explained in the section 2.3 of the description of the project, for what for effects of the calculation they are equal to zero.

Calculations are detailed in the “REDD project emissions (period 2021-2023).xls” spreadsheet and “Equation - burned” worksheet.

STEP 3. DOCUMENTATION

The methodological procedures used in steps 1-2 were documented. The following information will be provided:

Data sources and pre-processing: Type, resolution, source and acquisition date of the remotely sensed data (and other data) used; corrections performed (geometric, radiometric); projection and parameters used to geo-reference the images; error estimate of the geometric correction; software and software version used to perform tasks; etc.

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

Classification accuracy assessment: accuracy assessment technique used; coordinates and description of the ground-truth data collected for classification accuracy assessment; and final classification accuracy assessment.

Changes in data sources and pre-processing / data classification (if this is determined by the technical team): If in subsequent periods changes will be made to the original data or use of data:

Each change and its justification will be explained and recorded; and

When data from new satellites are used documentation will follow “a” to “c” above.

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

The results of the Monitoring Plan were presented to SERNANP at the end of the third quarter (end of October) as part of the quarterly reports that are presented periodically to them and will also be shared between November 22 and 27 during planned meetings held with the SERNANP team and representatives of the stakeholders located around the project area.

3.2 Quantification of GHG Emission Reductions and Removals

3.2.1 Baseline Emissions (VCS, 3.15)

Net emissions for the reference scenario and monitoring period of January, 01 of 2021 to December 31, 2023 are 1,495,709 tCO₂-e, according to the specified calculations in the Project Description.

Thus, there is also an additional for the period granted as a baseline extension, out of a total of VCU.

Table 4. Baseline emissions in the project area and leakage belt

Projected years	Project area base line emissions (t Co ₂ -e)	Leakage belt base line emissions (t Co ₂ -e)
Enero21_Dic21	490,259	1,796,961.70
Enero22_Dic22	480,675	1,910,162.74
Enero23_Dic23	524,775	1,792,397.11
Enero24_Dic24	536,874	1,805,209.59
Enero25_Dic25	600,239	1,898,336.84
Enero26_Dic26	591,068	1,858,594.83
Enero27_Dic27	623,656	1,901,745.44
Enero28_Dic28	687,371	2,003,218.68
Enero29_Dic29	760,955	2,038,332.46
Enero30_Dic30	772,022	2,094,039.99

3.2.2 Project Emissions (VCS, 3.15)

Emissions produced due to the project's activities have been considered insignificant according to the justification given in section 2.3 of the Project Description.

Net emissions calculation

(M-REDD Equation 1)

$$\Delta C_{WPS-REDD} = \sum_{t=1}^{t^*} \sum_{i=1}^M (\Delta C_{P,DefPA,i,t} + \Delta C_{P,Deg,i,t} + \Delta C_{P,DistPA,i,t} + GHG_{P-E,i,t} - \Delta C_{P,Enh,i,t})$$

Where:

$\Delta C_{WPS-REDD}$ = Net GHG emissions in the REDD project scenario up to year t^* , tCO₂-e.

$\Delta C_{P,DefPA,i,t}$ = Net carbon stock change as a result of deforestation in the project area in the project case in stratum i in year t ; t CO₂-e.

$\Delta C_{P,Deg,i,t}$ = Net carbon stock change as a result of degradation in the project area in the project case in stratum i in year t ; t CO₂-e.

$\Delta C_{P,DistPA,i,t}$ = Net carbon stock change as a result of natural disturbances in the project area in the project case in stratum i in year t ; t CO₂-e.

$GHG_{P-E,i,t}$ = Greenhouse gas emissions as a result of deforestation and degradation in activities within the project area in the project case in stratum i in year t ; t CO₂-e.

$\Delta C_{P,Enh,i,t}$ = Net carbon stock change as a result of forest growth and sequestration during the project in areas projected to be deforested in the baseline in stratum i in year t ; tCO₂-e.

$i =$ 1, 2, 3,...M stratum.

$t =$ 1, 2, 3,... t^* years elapsed since the of the project activity.

Table 5. Net GHG emissions within the project area under the “with project” scenario

Period	Net changes in the carbon stocks due to deforestation (tCO ₂ -e) $\Delta C_{P,DefPA,i,t}$	Net changes in the carbon stocks due to degradation (tCO ₂ -e) $\Delta C_{P,Deg,i,t}$	Net changes in the carbon stocks due to natural disturbances (tCO ₂ -e) $\Delta C_{P,DistPA,i,t}$	GHG emissions due to project activities (tCO ₂ -e) $GHG_{P-E,i,t}$	Net changes in the carbon stocks due to forest growth and carbon sequestration (tCO ₂ -e) $\Delta C_{P,Enh,i,t}$	GHG emissions within the project area (tCO ₂ -e) ΔC_p
2021-2023	63,856.35	35,875.00	0	471.49	0	99,731.35

Emissions produced due to forest degradation were 35,875 for the period January 2021– December 2023 in the project area. For further details, is reached annex 6 of the section 3.1.2, where is described the degradation monitoring according to the methodology.

Areas under natural disturbances have not been registered during the monitoring period January 2021–December 2023, so this factor is equal to zero.

The emissions of fires are 471.49 tCO₂-e, these are considered insignificant for representing less than 5% of the net benefits of the project for the period January 2021– December 2023, so they have not been considered in the final calculation (see “REDD project emissions (period 2021-2023).xls” spreadsheet and “Equations 1-2” and “significance” worksheets).

Increases of carbon are omitted conservatively, according to the specifications in the project description.

The sum total of net GHG emissions within the project area is 99,731.35 tCO₂ result of deforestation in the project area.

For the leakage belt the net greenhouse gas emissions in the project case is equal to the sum of stock changes due to deforestation in the leakage belt:

$$\Delta C_{P, LB} = \sum_{t=1}^t \sum_{i=1}^M \Delta C_{P, DefLB, i, t} \quad (\text{M-REDD Equation 2})$$

Where:

$\Delta C_{P, LB}$ = Net GHG emissions in the leakage belt in the case of the project; t CO₂-e.

$\Delta C_{P, DefLB, i, t}$ = Net change in carbon stocks as a result of deforestation in the case of the project, in the leakage belt, *i* stratum and *t* time; t CO₂-e.

i = 1, 2, 3,...M strata in the “with project” scenario.

t = 1, 2, 3,... *t** years since the implementation of the REDD project.

Table 11. Net GHG emissions in the leakage belt in the case of the project

Period	Net GHG emissions in the leakage belt (tCO ₂ -e)
	$\Delta C_{P, LB}$
2021-2023	4,009,566.05

Calculations are detailed in the “REDD project emissions (period 2021-2023).xls” spreadsheet and “Equations 1-2- M-REDD” worksheet

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

Emissions calculation due to deforestation displacement from the project area to the leakage belt

$$\Delta C_{LK-ASU-LB} = \Delta C_{P, LB} - \Delta C_{BSL, LK, unplanned} \quad (\text{LK-ASU Equation 1})$$

Where:

$\Delta C_{LK-ASU-LB}$ = Net CO₂ emissions due to unplanned deforestation displaced from the project area to the leakage belt; t CO₂-e.

$\Delta C_{P, LB}$ = Net GHG emissions within the leakage belt in the “with project” scenario; tCO₂-e.

$\Delta C_{BSL, LK, unplanned}$ = Net CO₂ emissions in the baseline scenario due to unplanned deforestation in the leakage belt; t CO₂-e.

Table12. Net CO₂ emissions due to unplanned deforestation displaced from the project area to the leakage belt

Years	Net emissions within the leakage belt (tCO ₂ -e) $\Delta C_{P, LB}$	Net emissions in the reference scenario due to deforestation in the leakage belt (tCO ₂ -e) $\Delta C_{BSL, LK, unplanned}$	Net due to unplanned deforestation displaced from the project area to the leakage belt (tCO ₂ -e) $\Delta C_{LK-ASU-LB}$
2021-2023	4,009,566.05	5,499,521.6	1,489,955.51

Regarding leaks, for the corresponding period, according to the baseline, it was expected to have a total of 4,009,566.05 tCO₂-e, as can be seen in table 14. According to the module used for this estimate, negative results were obtained. for net CO₂ emissions due to unplanned deforestation due to leakage. This was obtained, according to the methodological indications, from the subtraction of the emissions within the leak belt for the verification period with the baseline emissions for this same period.

If $\Delta C_{LK-ASU-LB}$ is <0 then $\Delta C_{LK-ASU-LB}$ will be established as 0 (to prevent a positive leak).

$\Delta C_{LK-ASU-LB}$	0
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This result was obtained since the leaks are lower than those projected in the baseline, since the control and surveillance activities inside the project area and the activities carried out in the leak belt have helped the existing deforestation (basically due to mining) outside the AP was less and therefore there are fewer leaks.

Also, although illegal logging activity continues to be monitored within the project area, this activity has decreased notably in the region, and therefore in the project area, which is why there are also fewer leaks due to the activity. With regard to mining, this activity took place within the AP in 2017 and was eradicated, and during the verification period there were no major leaks due to this activity because a previous year (2019) the Peruvian State implemented an operation (Operation Mercury 2019¹³) to eradicate illegal mining activity in the leakage belt (Buffer zone of the RNTAMB) and had good results for that year and the following year (2020), which is why the leaks due to this activity were lower.

Calculations are detailed in the “REDD project emissions (period January-Dec2020).xls” spreadsheet and “LK-ASU ecuación 1” worksheet.

In the following table you can see the results obtained throughout the life of the project:

¹³ <https://www.gob.pe/institucion/mininter/noticias/25784-operacion-mercurio-2019-permitira-restituir-el-principio-de-autoridad-en-la-pampa>

Table 13. Net CO₂ emissions due to unplanned deforestation displaced from the project area to the leakage belt throughout the life of the project

Years	Net emissions within the leakage belt (tCO ₂ -e) $\Delta C_{P, LB}$	Net emissions in the reference scenario due to deforestation in the leakage belt (tCO ₂ -e) $\Delta C_{BSL, LK, unplanned}$	Net due to unplanned deforestation displaced from the project area to the leakage belt (tCO ₂ -e) $\Delta C_{LK-ASU-LB}$
Enero21_Dic21	1,845,987.58	1,796,961.70	5,121.12
Enero22_Dic22	1,958,230.28	1,910,162.74	5,021.01
Enero23_Dic23	1,844,874.62	1,792,397.11	5,481.67
Enero24_Dic24	1,858,897.03	1,805,209.59	5,608.05
Enero25_Dic25	1,958,360.78	1,898,336.84	6,269.95
Enero26_Dic26	1,917,701.64	1,858,594.83	6,174.15
Enero27_Dic27	1,964,111.00	1,901,745.44	6,514.55
Enero28_Dic28	2,071,955.81	2,003,218.68	7,180.11
Enero29_Dic29	2,114,427.96	2,038,332.46	7,948.75
Enero30_Dic30	2,171,242.22	2,094,039.99	8,064.35

Ex-post estimate of the total deforested area due to immigrant agents

Ex post, the ratio of the total area deforested by immigrant agents in the “with project” scenario will be determined from the same ratio calculated with baseline data. It is assumed that the proportional area deforested by immigrant agents in baseline and “with project” scenarios remains the same.

$$A_{LK-IMM,T} = PROP_{IMM} * A_{BSL,PA,unplanned,t} \quad \text{(LK-ASU Equation 7)}$$

Where:

$A_{LK-IMM,T}$ = Total deforested area due to immigrant agents in the baseline and “with project” scenarios in t time; ha.

$PROP_{IMM}$ = Ratio of the deforested area due to immigrant agents in the leakage belt and project area; ratio.

$A_{BSL,PA,unplanned,t}$ = Expected area for unplanned deforestation baseline in the project area on t time; ha.
t = 1, 2, 3...t* years since the implementation of the REDD VCS project.

Table 14. Total deforested area due to immigrant agents in the reference scenario and “with project” scenario.

Years	Ratio of deforested area due to immigrant agents in the leakage belt and project area $PROP_{IMM}$	Expected area for unplanned deforestation baseline in the project area (ha) $A_{BSL,PA,unplanned,t}$	Total deforested area due to immigrant agents in the baseline and “with project” scenarios (ha) $A_{LK-IMM,T}$
2021	0.123	787.64	96.59
2022	0.123	772.16	94.69
2023	0.123	843.00	103.69

Calculations are detailed in the “REDD project emissions (period 2021-2023).xls” spreadsheet and “LK-ASU Equation 7” worksheet.

Calculation of the deforested area due to immigrants in the project area and leakage belt

$$A_{LK-ACT-IMM,t} = PROP_{IMM} * (\sum_{i=1}^M A_{DefPA,i,t} + A_{DefLB,i,t}) \quad \text{(LK-ASU Equation 8)}$$

Where:

$A_{LK-ACT-IMM,t}$ = Deforested area due to immigrants in the project area and leakage belt under the "with project" scenario in t time; ha.

$PROP_{IMM}$ = Ratio of deforested area due to immigrants in the project area and leakage belt; ratio.

$A_{DefPA,i,t}$ = Deforested area registered for the project area under the "with project" scenario in i stratum and t time; ha.

$A_{DefLB,i,t}$ = Deforested area registered for the leakage belt under the "with project" scenario in i stratum and t time; ha.

$i = 1, 2, 3, \dots, M$ stratum for the "with project" scenario.

$t = 1, 2, 3, \dots, t^*$ years since the implementation of the REDD VCS project.

Table 15. Deforested area due to immigrants in the project area and leakage belt

Years	Ratio of deforested area due to immigrants in the project area and leakage belt $PROP_{IMM}$	Deforested area registered for the project area (ha) ¹⁴ $A_{DefPA,i,t}$	Deforested area registered for the leakage belt (ha) ¹⁵ $A_{DefLB,i,t}$	Deforested area due to immigrants in the project area and leakage belt (ha) $A_{LK-ACT-IMM,t}$
2021-2023	0.123	110.57	6,943.55	865.03

Calculations are detailed in the "REDD project emissions (period 2021-2023).xls" spreadsheet and "LK-ASU Equation 8" worksheet.

Calculation of the deforested area due to immigrants outside of the project area and leakage belt

$$A_{LK-OLB,t} = A_{LK-IMM,t} - A_{LK-ACT-IMM,t} \quad \text{(LK-ASU Equation 9)}$$

Where:

$A_{LK-OLB,t}$ = Deforested area due to immigrants outside of the project area and leakage belt under the "with project" scenario in t time; ha.

$A_{LK-IMM,t}$ = Total deforested area due to immigrant agents in the baseline and "with project" scenarios in t time; ha.

$A_{LK-ACT-IMM,t}$ = Deforested area due to immigrants in the project area and leakage belt under the "with project" scenario in t time; ha

$t = 1, 2, 3, \dots, t^*$ years since the implementation of the REDD VCS project

Table 16. Deforested area due to immigrants outside of the project area and leakage belt

¹⁴ Source: Appendix 4

¹⁵ Source: Appendix 4

Period	Total deforested area due to immigrants in the baseline and “with project” scenarios (ha) $A_{LK-IMM,t}$	Deforested area due to immigrants in the project area and leakage belt under the “with project” scenario (ha) $ALK-ACT-IMM,t$	Deforested area due to immigrants outside of the project area and leakage belt (ha) $A_{LK-OLB,t}$
2021-2023	294.96	865.03	-570.06

Determining if there have been leaks outside of the leakage belt

If: $A_{LK-OLB,t} \leq 0 \rightarrow$ there have been no leaks outside of the leakage belt.

If: $A_{LK-OLB,t} > 0 \rightarrow$ there have been leaks outside of the leakage belt.

If there have been no leaks outside of the leakage belt:

$$\Delta C_{LK-ASU,OLB} = 0$$

(LK-ASU Equation 10)

Where:

$\Delta C_{LK-ASU,OLB}$ = Sum of the changes in carbon stocks and GHG emissions due to unplanned deforestation displacement outside of the leakage belt; t CO₂-e.

Calculations are detailed in the “REDD project emissions (period 2021-2023).xls” spreadsheet and “LK-ASU Equation 9 y 10” worksheet.

Emissions from Leakage prevention activities

Not applicable because not activities were implemented leakage prevention, emitting emissions from biomass burning and fertilizer usage.

Total leakage estimate due to displacement of unplanned deforestation (LK-ASU STEP 6)

$$\Delta C_{LK-AS,unplanned} = \Delta C_{LK-ASU-LB} + \Delta C_{LK-ASU-OLB} + GHG_{LK,E} \quad \text{(LK-ASU Equation 13)}$$

$\Delta C_{LK-AS,unplanned}$ = Net GHG emissions due to leaks for displacement of activities for projects preventing unplanned deforestation; t CO₂-e

$\Delta C_{LK-ASU-LB}$ = Net CO₂ emissions due to unplanned deforestation displaced from the project area to the leakage belt; t CO₂-e.

$\Delta C_{LK-ASU-OLB}$ = Net CO₂ emissions due to unplanned deforestation displaced outside of the leakage belt; t CO₂-e.

$GHG_{LK,E}$ = GHG emissions from leaks of activities to prevent deforestation; t CO₂-e.

Table 17. Net GHG emissions due to leaks for displacement of activities.

Period	Emissions due to deforestation displacement from the project area to the leakage belt $\Delta C_{LK-ASU-LB}$	Emissions due to deforestation outside of the leakage belt $\Delta C_{LK-ASU-OLB}$	GHG emissions from activities that prevent deforestation (*) $GHG_{LK,E}$	Net GHG emissions due to leaks related to displacement of activities (t CO ₂ -e) $\Delta C_{LK-AS,unplanned}$
2021-2023	0	0	0	0

(*) As the activities of the project will not produce significant emissions, this parameter is equal to zero.

Calculations are detailed in the “REDD project emissions (period 2021-2023).xls” spreadsheet and “LK-ASU Equation 13” worksheet.

In the following table you can see the results obtained throughout the life of the project:

Table 18. Net GHG emissions due to leaks for displacement of activities, throughout the life of the project

Period	Emissions due to deforestation displacement from the project area to the leakage belt $\Delta C_{LK-ASU-LB}$	Emissions due to deforestation outside of the leakage belt $\Delta C_{LK-ASU-OLB}$	GHG emissions from activities that prevent deforestation (*) $GHG_{LK,E}$	Net GHG emissions due to leaks related to displacement of activities (t CO ₂ -e) $\Delta C_{LK-AS,unplanned}$
2021	-	0	0	-
2022	-	0	0	-
2023	-	0	0	-
2024	0	0	0	0
2025	0	0	0	0
2026	0	0	0	0
2027	0	0	0	0
2028	0	0	0	0
2029	0	0	0	0
2030	0	0	0	0

Calculation of net emissions due to leaks

$$\Delta C_{LK} = \Delta C_{LK-AS-planned} + \Delta C_{LK-AS-unplanned} + \Delta C_{LK-AS,des rad-FW/C} + \Delta C_{LK-ME} \quad (\text{REDD-MF Equation 3})$$

Where:
 ΔC_{LK} = Net GHG emissions due to leaks; t CO₂-e

 $\Delta C_{LK-AS-planned}$ = Net GHG emissions due to leaks from displacement of activities for projects preventing planned deforestation; t CO₂-e (from LK-ASP) Note: this parameter is equal to zero for not presenting planned deforestation (Not apply).

 $\Delta C_{LK-AS-unplanned}$ = Net GHG emissions due to leaks from displacement of activities for projects preventing unplanned deforestation; t CO₂-e (from LK-ASU).

 $\Delta C_{LK-AS,des rad-FW/C}$ = Net GHG emissions due to leaks from displacement of activities for degradation caused by fuel wood extraction; t CO₂-e (from LK-DFW). Note: this parameter is equal to zero for not presenting a significant firewood and coal extraction

 ΔC_{LK-ME} = Net GHG emissions due to market effect leaks; t CO₂-e (from LK-ME). Note: As these leaks have been considered not significant in the PD, this parameter is equal to zero.

Table 19. Net GHG emissions due to leaks

Period	Emissions due to leaks for AUD projects $\Delta C_{LK-AS-unplanned}$	Emissions due to degradation leaks (coal and firewood extraction) $\Delta C_{LK-AS,des rad-FW/C}$	Emissions due to market effect leaks (*) ΔC_{LK-ME}	Net GHG emissions due to leaks (tCO ₂ -e) ΔC_{LK}
2021-2023	0	-	0	0

(*) Considered zero according to the justification given in the Project Description

Emissions produced due to leaks have been considered equal to zero, according to the procedure of the methodology (calculations are detailed in the “REDD project emissions (period 2021-2023.xls” spreadsheet and “REDD-MF Equation 3” worksheet).

In the following table you can see the results obtained throughout the life of the project:

Table 20. Net GHG emissions due to leaks throughout the life of the project

Period	Emissions due to leaks for AUD projects $\Delta C_{LK-AS-unplanned}$	Emissions due to degradation leaks (coal and firewood extraction) $\Delta C_{LK-AS,des rad-FW/C}$	Emissions due to market effect leaks (*) ΔC_{LK-ME}	Net GHG emissions due to leaks (tCO ₂ -e) ΔC_{LK}
2021	0	0	0	0
2022	0	0	0	0
2023	0	0	0	0
2024	0	0	0	0
2025	0	0	0	0
2026	0	0	0	0
2027	0	0	0	0
2028	0	0	0	0
2029	0	0	0	0
2030	0	0	0	0

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

The total net GHG emission reductions of the REDD project are calculated as follows, according to the procedure of the methodology used (REDD-MF):

$$C_{REDD,t} = C_{BSL} - C_P - C_{LK}$$

Donde:

- $C_{REDD,t}$ total net GHG emission reductions at time t; tCO₂-e
 C_{BSL} net GHG emissions in the baseline scenario; tCO₂-e
 C_P net GHG emissions within the project area in the with-project scenario; tCO₂-e
 C_{LK} net GHG emissions due to leakage; t CO₂-e

The project does not include allowing selective timber harvesting, which is considered for REDD as project emissions. As shown in Table 24 (see 2.3), only non-CO₂ gases from biomass burning are considered as possible sources of project emissions, which will be calculated ex-post; likewise, it is considered that 100% of the estimated emissions for the reference scenario within the project area will be avoided.

State the non-permanence risk rating (%)	13%
Has the non-permanence risk report been attached as either an appendix or a separate document?	☒ Yes ☐ No
For ARR and IFM projects with harvesting, state, in tCO ₂ e, the Long-term Average (LTA).	NA
Has the LTA been updated based on monitored data, if applicable?	☐ Yes ☒ No
State, in tCO ₂ e, the expected total GHG benefit to date.	
Is the number of GHG credits issued below the LTA?	☐ Yes ☒ No

Below is a summary of the results obtained in the monitoring period:

Vintage period	Baseline emissions (tCO ₂ e)	Project emissions (tCO ₂ e)	Leakage emissions (tCO ₂ e)	Buffer pool allocation (tCO ₂ e)	Reductions VCU (tCO ₂ e)	Removals VCU (tCO ₂ e)
2021-2023	1,495,709.3	99,731	-	181,477	1,214,501	0
Total	1,495,709.3	99,731	-	181,477	1,214,501	0

The differences between the results obtained ex-ante and ex-post for the monitoring period are presented below:

Vintage period	Ex-ante estimated reductions/removals	Achieved reductions/removals	Percent difference	Explanation for the difference
2021-2023	1,495,709.27	1,395,977.9	6.66%	The percentage difference between the ex ante and ex post results is due to the deforestation that was avoided with the implementation of the project.
Total	1,495,709.27	1,395,977.9	6.66%	

3.3 Optional Criterion: Climate Change Adaptation Benefits

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

The implementation of agroforestry systems is one of the alternatives promoted as a mechanism for adaptation to climate change. Thus, as part of the implementation of sustainable productive activities for the producers and/or native communities that settle in the RNTAMB Buffer Zone; In this sense, during the 2020 verification period, the implementation of agroforestry plots based on the cultivation of cocoa for export continued, as well as the strengthening of the Tambopata Candamo Multiple Services Agricultural Cooperative - COOPASER.

In this period, despite the complications of the COVID-19 pandemic, to the extent possible and in accordance with the restrictions given by the State, technical visits and cocoa harvest activities for producers continued. . The technical visits were made in the first, third and fourth trimesters.

It is worth mentioning that the training workshops for producers could only be held in the first quarter of the year, before the start of the pandemic.

Other activities carried out were the implementation of activities to contribute to the strengthening of the communities, the activities were carried out according to the needs of each community, and the majority were to support their activities, holding workshops or information meetings (Annex 8).

In the region, as well as throughout the country and the world, climate change has been affecting ecosystems and local populations, mainly those whose populations are in conditions of vulnerability, either due to the disorders generated by climate variability, such as by the occurrence of extreme events, desertification processes, etc. This has not been unrelated to the area of the project area, where the population living in its surroundings has been affected by changes in the climate in their crops, due to the change in frequency and intensity of rains, dry periods, cold weather, mainly in their crops, a situation that has been reducing the income of families. Due to this, the project implemented the agroforestry component outside the project area, which in addition to seeking the recovery of areas degraded by livestock and agriculture through the installation of agroforestry systems with fine aroma cocoa, was to improve the activity of agriculture, strengthen the capacities of producers to improve their crops and generate new or better income. For this, areas with agroforestry systems were implemented with semi-permanent or short-term crops (banana, cassava, guava) and permanent crops (cocoa, cupuaçu, citrus, forest species).

It is worth mentioning that agroforestry creates an agroecosystem¹⁶ similar to the natural ecosystem before being intervened, protects the soil from heavy rainfall, maintains the hydrological cycle and biological diversity and, therefore, guarantees greater sustainability compared to systems such as monoculture. By combining annual and perennial woody elements, it guarantees greater sustainability of the productive system to the extent that it reproduces an ecosystem close to the natural one and, therefore, to the cycles that occurred before the disturbance of the space.

In this way, the producers have improved their productive practices (respecting their knowledge and complementing it with new techniques), have reduced the vulnerability of their crops and, in this way, the progress of deforestation in the farmers' plots has been reduced (already that agroforestry systems require less space to manage different products) - this has contributed to preventing deforestation from entering the project area (as well as having served as a front against the advance of mining in the leakage belt) -, and the producers they have improved their income by having different products to sell during the year, reducing the risk of affecting their income, the maintenance of their crops and their food security. With these actions and results that have been obtained to date from the implementation of agroforestry systems, it can be pointed out that this activity has helped the population to adapt to climate change, in addition to mitigating its impacts.

¹⁶ <http://infocafes.com/portal/wp-content/uploads/2016/11/MzM3.pdf>

4 COMMUNITY

4.1 Net Positive Community Impacts

4.1.1 Community Impacts (CCB, CM2.1)

2021

The project benefits a total of 339 producers organized in a social base called Cooperativa Agraria de Servicios Múltiples Tambopata Candamo - COOPASER, of which 285 are full members; duly registered members of the Cooperativa Agraria de Servicios Cacao Fino - AGROBOSQUE with 104 members; and Asociación de castañeros de la Reserva de Tambopata Los Pioneros - ASCART with 28 active members and 46 registered members.

During the year, technical assistance was provided in the following areas: technical advice on maintenance pruning, awareness-raising on productive activities, monitoring of grafted cacao seedlings and free-standing plants, follow-up on forestry plantations, awareness-raising for cacao producers, among other activities.

We have also continued to follow up on the organic and fair trade certification processes of the COOPASER, AGROBOSQUE and ASCART cooperatives.

COOPASER

There are 1,314.85 hectares of cocoa under agroforestry system, however, it has been reduced due to droughts and burns in the area, losing in the last three years 224.1 ha, having, by the end of the year a total of 1,090.75 ha equivalent to 1,090,750 cocoa plants.

COOPASER has a designated budget to ensure compliance with the different activities, such as: personalized technical assistance to members, capacity building for organic certification processes and fair trade, monitoring of established plots on issues such as pruning and fertilization, and monitoring of plantations in production for the collection of cocoa; also to carry out the collection of cocoa production and to have the necessary technical staff for self-management, benefiting 305 farmer members of COOPASER in a personalized way.

During 2021, 8,090 cocoa seedlings were given to members for SAF, which are being installed as a permanent crop, due to the multiple benefits they provide for marketing. Also, during the year, 11470 cacao seedlings were grafted and installed in the final field and 1415 seedlings were planted on the edges of the plots (bolaina, shihuahuaco, pashaco and tornillo).

We have continued to strengthen organic certification programs, fair trade and production under FAIRTRADE compliance criteria.

Chestnut families - ASCART

During 2021, we continued to support the ASCART association (Asociación de Castañeros de la Reserva de Tambopata los Pioneros), who already have organic certification and are in the process of achieving fair

trade certification. The association has a total of 26,966.5 hectares of land and 28 active members, but 46 registered members.

In order to strengthen the production chain and ensure the sustainability of the members, 4,000 cocoa seedlings were delivered. Also, in a tetrapartite agreement between AIDER, FZS, RNTAM and the cooperative, meetings were held to consolidate a loan for the purchase of a rotary cylinder for drying, in order to improve the sustainable productivity of Brazil nut derivatives and optimize the operational capacity of the association.

As part of the actions to strengthen the capacities of the farmers, technical assistance has been provided to cocoa and forestry plantations in the areas of: identification of phytosanitary diseases, awareness-raising on productive activities, pruning, monitoring of grafted cocoa seedlings and free-standing plants, as well as georeferencing of cocoa plots.

AGROBOSQUE:

There are 1735 hectares of cocoa under agroforestry systems and 1195 hectares of purma. In order to ensure compliance with the different activities, the following activities were carried out: personalized technical assistance to members, updating of member information, capacity building for organic certification and fair trade processes, follow-up with beneficiaries on pruning and fertilization, monitoring of plantations in production for the collection of cocoa, installation of grafted cocoa seedlings and free-standing plants, follow-up of cocoa seedlings, untying of rootstock and graft-holder tapes.

Approximately 200 families benefited from technical assistance.

In reference to the support they received, 8,000 cocoa seedlings were delivered under the inter-institutional collaboration agreement between AIDER and Agrobosque.

Native communities

Intervention influences the native communities of Palma Real, Infierno, Sonene and Kotsimba, located in the buffer zone of the Tambopata National Reserve and Bahuaja Sonene National Park.

In the year 2021, the state of emergency, ordered by the State, continued, although little by little some restrictions were lifted, which gradually allowed activities with the communities to resume, especially through support to the community boards of directors.

This allowed us to continue logistically supporting community management with public and private institutions that were able to meet the basic needs in some communities, such as Palma Real and Sonene (food, supply and improvement of water quality, environmental education, internet access, RENIEC, among others).

Also, during the gradual intervention process, the native communities of Palma Real and Sonene updated their legal representation in the SUNARP, registering the new boards of directors elected during the year. Craft activities were also formalized in both communities through the creation of the Palma Real - Paucarcillo (Shi'O'i) Native Community Association of Artisan Women and the Sonene Native Community Association of Masheke Artisans, which also contributed to highlighting the role played by indigenous women in their relationship with the forest and the sustainable use of resources.

The community of Infierno reviewed and approved their life plan through communal assemblies, which due to the pandemic period could not be approved before; this forced them to consider that this document will be valid for the years 2021 - 2025. (See Annex 61)

In reference to the support to the Kotsimba Native Community, this year they had a closer approach to those they consider their strategic allies (PNBAS, AIDER and FZS); to initiate the coordination of support on issues such as territorial sanitation and updating the life plan.

Tour operators

In 2020, tourism was paralyzed and no tourists or external personnel entered the Tambopata National Reserve and Bahuaja Sonene Park due to the COVID 19 pandemic. In November 2020, thanks to a coordinated effort with the Regional Government of Madre de Dios and various local stakeholders, activities and visits to the main tourist attraction of the Madre de Dios Region were progressively resumed, taking into account biosecurity measures that will guarantee the health of visitors, tour operators and personnel working in this protected natural area. However, a greater presence of tourists is expected for next year.

2022

Association of agricultural producers

During the year, support was provided to approximately 355 families of farmers benefiting from the cocoa project; technical assistance was provided in the form of technical advice on maintenance pruning, awareness-raising on productive activities, monitoring of grafted cocoa seedlings and free-standing plants, follow-up on forestry plantations, and awareness-raising for cocoa producers, among other activities.

We have also continued to follow up on the organic certification and fair trade processes of the COOPASER, AGROBOSQUE and ASCART cooperatives.

During this period, plants have been replanted due to climatic fluctuations; it is worth mentioning that at least 10 hectares have been affected by fires caused by irresponsible neighbors.

COOPASER

The COOPASER basin has a designated budget, this to ensure compliance with the different activities, such as: personalized technical assistance to partners, capacity building for organic certification processes and fair trade, monitoring of established plots on issues such as: pruning and fertilization, and monitoring of plantations in production for the collection of cocoa; also to make the collection of cocoa production and to have the necessary technical staff for self-management, achieving benefit farmers COOPASER partners in a personalized way.

During 2022, 64,231 cocoa seedlings were granted to members for SAF, which are being installed as a permanent crop, due to the multiple benefits they provide for marketing. Also, during the year, 17360 cocoa seedlings were grafted in the nursery (Annex 52).

We have continued to strengthen organic certification programs, fair trade and production under FAIRTRADE compliance criteria.

Chestnut families - ASCART

During 2022, we continued to support the ASCART association (Asociación de Castañeros de la Reserva de Tambopata los Pioneros), who already have organic certification and are in the process of achieving fair trade certification. The association has a total of 26,966.5 hectares of land and 28 active members, but 46 registered members.

In order to strengthen the production chain and ensure the sustainability of the members, 4,000 cocoa seedlings were delivered. Work has also been carried out to strengthen the association's organizational skills (Annex 79).

As part of the actions to strengthen farmers' capacities, technical assistance has been provided to cocoa and forestry plantations in the areas of: identification of phytosanitary diseases, awareness-raising on productive activities, pruning, monitoring of grafted cocoa seedlings and free-standing plants, as well as georeferencing of cocoa plots.

AGROBOSQUE:

There are 1735 hectares of cocoa under agroforestry systems and 1195 hectares of purma. In order to ensure compliance with the different activities, the following activities were carried out: personalized technical assistance to members, updating of member information, capacity building for organic certification and fair trade processes, follow-up with beneficiaries on pruning and fertilization, monitoring of plantations in production for cocoa stockpiling, installation of grafted cocoa seedlings and free plants, follow-up of cocoa seedlings, untying of rootstock and graft carrier tapes.

During this period, training has been provided to strengthen real business development (Annex 81).

Native communities

The intervention influences the native communities of Palma Real, Infierno, Sonene and Kotsimba, located in the buffer zone of the Tambopata National Reserve and Bahuaja Sonene National Park.

In 2022, activities were resuming normally with the communities and associations, especially through support to the community boards of directors.

This allowed us to continue logistically supporting community management with public and private institutions that were able to meet basic needs in some communities, such as in Palma Real and Sonene (food, water supply and water quality improvement, environmental education, internet access, RENIEC, among others) (Annex 75).

Also, during the gradual intervention process, the native communities of Palma Real and Sonene updated their legal representation in the SUNARP, registering the new boards of directors elected during the year. Craft activities were also formalized in both communities through the creation of the Association of Women Artisans of the Palma Real - Paucarcillo Native Community (Shi'Oi) and the Association of Masheke Artisans of the Sonene Native Community, which also contributed to highlighting the role played by indigenous women in their relationship with the forest and the sustainable use of resources (Annex 52).

In reference to the support to the Kotsimba Native Community, this year they had a closer approach to those they consider their strategic allies (PNBAS, AIDER and the FZS); to initiate support coordination on issues such as territorial sanitation and the updating of the life plan, although the community decided to postpone the update due to internal issues (Annex 77).

Tour operators

During this period, activities in this area have been resumed through training, workshops and visits to the businesses located in the lower Tambopata tourism corridor in order to strengthen their organizational, business and personal skills and improve the services they offer.

2023

Association of Agricultural Producers

During the year, support was provided to approximately 355 families of farmers benefiting from the cocoa project; they provided technical assistance based on: technical advice on maintenance pruning, awareness-raising on productive activities, monitoring of grafted cocoa seedlings and free-standing plants, follow-up on forestry plantations, awareness-raising for cocoa producers, among other activities.

We have also continued to monitor the organic and fair trade certification processes of the COOPASER, AGROBOSQUE and ASCART cooperatives.

COOPASER

COOPASER has a designated budget to ensure compliance with the different activities, such as: personalized technical assistance to members, capacity building for organic certification processes and fair trade, monitoring of established plots on issues such as pruning and fertilization, and monitoring of plantations in production for the collection of cocoa; also to carry out the collection of cocoa production and to have the necessary technical staff for self-management, benefiting COOPASER's farmer members in a personalized way (Annex 50).

During 2022, 64,231 cacao seedlings were given to members for SAF, which are being installed as a permanent crop, due to the multiple benefits they provide for marketing. Also, during the year, 17360 cocoa seedlings were grafted in the nursery (Annex 52).

This year 37,018 seedlings have been grafted to COOPASER members.

Chestnut families - ASCART

During 2022, we continued to support the ASCART association (Asociación de Castañeros de la Reserva de Tambopata los Pioneros), who already have organic certification and are in the process of obtaining fair trade certification.

As part of the actions to strengthen farmers' capacities, technical assistance has been provided to cocoa and forestry plantations to identify phytosanitary diseases, raise awareness about productive activities, strengthen pruning, monitor grafted cocoa seedlings and free-standing plants, and geo-reference cocoa plots (Annex 73).

AGROBOSQUE:

In order to ensure compliance with the different activities, the following activities were carried out: personalized technical assistance to partners, updating of partner information, capacity building for organic certification and fair trade processes, follow-up with beneficiaries on pruning and fertilization, monitoring of plantations in production for the collection of cocoa, installation of grafted cocoa seedlings and free-standing plants, follow-up of cocoa seedlings, untying of rootstock and graft-holder tapes.

During this period, training has been provided to strengthen real business development (Annex 75)

Native communities

The intervention influences the native communities of Palma Real, Infierno, Sonene and Kotsimba, located in the buffer zone of the Tambopata National Reserve and Bahuaja Sonene National Park.

In 2022, activities were resuming normally with the communities and associations, especially through support to the community boards of directors.

This allowed us to continue logistically supporting community management with public and private institutions that were able to meet basic needs in some communities, such as Palma Real and Sonene (food, water supply and water quality improvement, environmental education, internet access, RENIEC, among others) (Annex 70).

Also, during the gradual intervention process, the native communities of Palma Real and Sonene updated their legal representation in the SUNARP, registering the new boards of directors elected during the year. Likewise, artisan activities continue to be carried out in both communities, through the creation of the Association of Artisan Women of the Palma Real Native Community - Paucarcillo (Shi'O'i) and the Association of Masheke Artisans of the Sonene Native Community; which also contributed to highlighting the role played by indigenous women in their relationship with the forest and the sustainable use of resources (Annex 48).

Tour operators

During this period, activities in this area have been resumed through training, workshops and visits to the businesses located in the lower Tambopata tourism corridor in order to strengthen their organizational, business and personal skills and improve the services they offer.

2021

Community group	Native communities and productive associations settled inside the Tambopata National Reserve and the Bahuaja-Sonene National Park and its Buffer Zone.
Impact	The native communities strengthened their organizational and management capacities in order to face the challenges of the COVID 19 context, receiving support in health and food issues from the local, regional and ecclesiastical governments. Likewise, during this year, women assumed important leadership positions in the communities.

Community group	Native communities and productive associations settled inside the Tambopata National Reserve and the Bahuaja-Sonene National Park and its Buffer Zone.
	Productive associations and cooperatives such as ASCART, COOPASER and AGROBOSQUE continued with the commercialization process of their products: chestnuts and cocoa, respectively.
Type of benefit/cost/risk	For both community groups, the impact is expected, due to the strong organizational tradition of native communities for community management and also for the participation of women in decision making. The impact is direct on community management. The associations managed to improve production conditions for the production and marketing of Brazil nuts and cocoa. The impact is direct on organizational management.
Change in well-being	In the native communities, women's decision making for associativity allowed the formalization of the handicraft activity, representing an opportunity to obtain associative economic benefits. In both community groups, women assumed important positions for organizational management. The productive associations continued to maintain their welfare status, as associates or cooperative members.

2022

Community group	Infierno Native Community
Impact	Community governance will be strengthened through activities that strengthen organizational management; likewise, agroforestry activities will be strengthened with the cultivation of cocoa and the Community's conservation agreements will be followed up and territorial security in the Community will continue to be favored.
Type of benefit/cost/risk	The impact is expected and direct, with benefits.
Change in well-being	

Community group	Palma Real Native community
Impact	Community governance will be strengthened through activities that strengthen organizational management, including: boards of

	directors, committees and productive associations. Activities such as tourism, handicrafts (competitive funds), fishing and others will be part of this process. Through the management of the PNAs, territorial security in the community will also continue to be favored.
Type of benefit/cost/risk	The impact is expected and direct, with benefits.
Change in well-being	

Community group	Sonene Native community
Impact	Community governance will be strengthened through activities that strengthen organizational management, including boards of directors, committees and productive associations. Activities such as handicrafts, fishing and others will be part of this process. Through the management of the PNAs, sustainability and territorial security in the community will continue to be favored and strengthened.
Type of benefit/cost/risk	The impact is expected and direct, with benefits.
Change in well-being	

Community group	Kotsimba Native community
Impact	The formal intervention of the Project with the native community will be resumed when they request their participation in the development of activities.
Type of benefit/cost/risk	
Change in well-being	

Community group	COOPASER
Impact	The management of the ANP and the CA of AIDER will strengthen the organizational representation, marketing and export of the cocoa resource and the improvement of production. This will allow the economic benefit of the families, as well as psychosocial support. The implementation of the project will allow the maintenance or expansion of cocoa production areas through the implementation of

	the FFS. It will also encourage the diversification of sustainable productive activities.
Type of benefit/cost/risk	The impact is expected and direct, with benefits.
Change in well-being	

Community group	ASCART
Impact	The nut harvesting initiative will remain strongly linked to the forest conservation activities carried out by SERNANP in the RNTAM. The management of the ANP and the AIDER CA will strengthen the organizational representation and positioning of the Brazil nut resource to strengthen the marketing and export of the production. This will allow for the economic benefit of chestnut growing families.
Type of benefit/cost/risk	The impact is expected and direct, with benefits.
Change in well-being	

Community group	AGROBOSQUE
Impact	The management of the ANP and the CA of AIDER will strengthen organizational representation, marketing and export of cocoa resources, organic certification process and strengthening of production. This will allow the families to benefit economically. The implementation of the project will maintain or expand the cocoa production areas through the implementation of the FFS. It will also encourage the diversification of sustainable productive activities.
Type of benefit/cost/risk	The impact is expected and direct, with benefits.
Change in well-being	

Community group	ADAPAB
Impact	The management of the ANP and the AIDER CA will strengthen the organizational representation and marketing of the aquaculture resource. This will allow the economic benefit of the families. The implementation of the project will optimize the use of areas for fish farming, through the implementation of a sustainable alternative production related to agroforestry.

Type of benefit/cost/risk	The impact is expected and direct, with benefits.
Change in well-being	

Community group	PALSAMAD
Impact	The management of the ANP and the CA of AIDER will strengthen the organizational representation, the commercialization of the production and transformation (derivatives) of palm fruits. This will allow the economic benefit of the families. .The implementation of the project will optimize the use of areas for fish farming, through the implementation of a sustainable alternative production related to agroforestry.
Type of benefit/cost/risk	The impact is expected and direct, with benefits.
Change in well-being	

2023

Community group	Infierno Native community
Impact	Community governance will be strengthened through activities that strengthen organizational management; likewise, agroforestry activities will be strengthened with the cultivation of cocoa and the Community's conservation agreements will be followed up and territorial security in the Community will continue to be favored.
Type of benefit/cost/risk	The impact is expected and direct, with benefit.
Change in well-being	Better quality of life.

Community group	Palma Real Native community
Impact	Community governance will be strengthened through activities that strengthen organizational management, including: boards of directors, committees and productive associations. Activities such as tourism, handicrafts (competitive funds), fishing and others will be part of this process. Through the management of the PNAs, territorial security in the community will also continue to be favored.

Type of benefit/cost/risk	The impact is expected and direct, with benefit.
Change in well-being	Better quality of life.

Community group	Sonene Native community
Impact	Community governance will be strengthened through activities that strengthen organizational management, including boards of directors, committees and productive associations. Activities such as handicrafts, fishing and others will be part of this process. Through the management of the PNAs, sustainability and territorial security in the community will continue to be favored and strengthened.
Type of benefit/cost/risk	The impact is expected and direct, with benefit.
Change in well-being	Better quality of life

Community group	Kotsimba Native communities
Impact	The formal intervention of the Project with the native community will be resumed when they request their participation in the development of activities.
Type of benefit/cost/risk	
Change in well-being	Better quality of life

Community group	COOPASER
Impact	The management of the ANP and the CA of AIDER will strengthen the organizational representation, marketing and export of the cocoa resource and the improvement of production. This will allow the economic benefit of the families, as well as psychosocial support. The implementation of the project will allow the maintenance or expansion of cocoa production areas through the implementation of the FFS. It will also encourage the diversification of sustainable productive activities.
Type of benefit/cost/risk	The impact is expected and direct, with benefit.
Change in well-being	Better quality of life .

Community group	ASCART
Impact	The nut harvesting initiative will remain strongly linked to the forest conservation activities carried out by SERNANP in the RNTAM. The management of the ANP and the AIDER CA will strengthen the organizational representation and positioning of the Brazil nut resource to strengthen the marketing and export of the production. This will allow for the economic benefit of chestnut growing families.
Type of benefit/cost/risk	The impact is expected and direct, with benefit.
Change in well-being	Better quality of life.

Community group	AGROBOSQUE
Impact	The management of the ANP and the CA of AIDER will strengthen organizational representation, marketing and export of the cocoa resource, organic certification process and strengthening of production. This will allow the economic benefit of the families. The implementation of the project will maintain or expand the cocoa production areas through the implementation of the FFS. It will also encourage the diversification of sustainable productive activities.
Type of benefit/cost/risk	The impact is expected and direct, with benefit.
Change in well-being	Better quality of life.

Community group	ADAPAB
Impact	The management of the ANP and the AIDER CA will strengthen the organizational representation and marketing of the aquaculture resource. This will allow the economic benefit of the families. The implementation of the project will optimize the use of areas for fish farming, through the implementation of a sustainable alternative production related to agroforestry.
Type of benefit/cost/risk	The impact is expected and direct, with benefit.
Change in well-being	Better quality of life.

Community group	PALSAMAD
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Impact	The management of the ANP and the CA of AIDER will strengthen the organizational representation, the commercialization of the production and transformation (derivatives) of palm fruits. This will allow the economic benefit of the families. The implementation of the project will optimize the use of areas for fish farming, through the implementation of a sustainable alternative production related to agroforestry.
Type of benefit/cost/risk	The impact is expected and direct, with benefit.
Change in well-being	Better quality of life.

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

2021

The native communities strengthened their relationship with the PNAs, especially the Palma Real native community, which signed a cooperation agreement and the formation of a technical team with the RNTAM and the PNBS, which committed to develop the prioritization of short and medium term activities in the community and the implementation of productive projects that improve the quality of life in the community (Annex 60).

In the same vein, the Kotsimba native community requested support from the PNBAS to update the life plan. The native communities of Infierno and Sonene, through communal assemblies, elected their Community Volunteer Park Rangers, who were later recognized by SERNANP through a resolution (Annex 59, 61).

The boards of directors of Palma Real and Sonene have developed their respective work plans with support from the CA - AIDER. (Annex 59, 60). Regarding productive associations, the AGROBOSQUE Cooperative signed a conservation agreement with SERNANP (Annex 63).

The actions taken were aimed at strengthening and supporting community management for forest protection through better relations and facilitating opportunities for the development of productive activities of community groups within the framework of project implementation. The native communities, especially Palma Real, are threatened by river mining activities.

2022

The native communities strengthened their relationship with the PNAs, especially the Palma Real native community, which signed a cooperation agreement and the formation of a technical team with the RNTAM and the PNBS, which committed to develop the prioritization of short and medium-term activities in the community and the implementation of productive projects that improve the quality of life in the community (Annex 52).

In the same vein, the Kotsimba native community requested support from the PNBAS to update the life plan, but decided to postpone it until a future date for communal reasons (Annex 77). The native communities of Infierno and Sonene, through community assemblies, elected their Community Volunteer Park Rangers, who have been carrying out patrols and training activities to reinforce their knowledge (Annex 68).

The actions undertaken were aimed at strengthening and supporting community management for forest protection through better relations and facilitating opportunities for the development of productive activities of community groups within the framework of project implementation. The native communities, especially Palma Real, are threatened by river mining activities.

2023

The native communities strengthened their relationship with the PNAs, especially the native community of Palma Real, which signed a cooperation agreement and technical team with the RNTAM and the PNBS, which committed to prioritizing short- and medium-term activities in the community and implementing productive projects to improve the quality of life in the community.)

The native communities of Infierno and Sonene, through communal assemblies, elected their communal vigilantes (Annex 65).

The actions taken were aimed at strengthening and supporting community management for the protection of the forests through better relations and facilitating opportunities for the development of productive activities of the community groups within the framework of project implementation.

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

2021

The impacts of the activities carried out during the verification period have been in favor of the project's beneficiary populations and communities, insofar as they respond to the objectives of the standard.

In this sense, activities related to the strengthening of resource governance, organizational strengthening, development of sustainable productive activities and increased control and surveillance will generate positive impacts on stakeholders within and outside the project site.

2022

The project demonstrates the net positive impacts according to the activities carried out during the corresponding period, such as the alliances that have been implemented with competitive fund programs, capacity building in agroforestry systems, technical assistance to farmer partners and active participation in the conservation of ecosystems in the project area.

It can be noted that the agents of change are being noticed because they are using the land in a sustainable way, achieving real impacts for the environment.

Demonstrate that the net welfare impacts of the project are positive for all identified community groups compared to their welfare conditions in the without-project land use scenario.

2023

The project demonstrates the net positive impacts according to the activities carried out during the corresponding period, such as the alliances that have been implemented with competitive fund programs, capacity building in agroforestry systems, technical assistance to farmer partners and active participation in the conservation of ecosystems in the project area.

It can be noted that the agents of change are being noticed because they are using the land in a sustainable way, achieving real impacts for the environment.

Demonstrate that the net welfare impacts of the project are positive for all identified community groups compared to their welfare conditions in the without-project land use scenario.

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

2021

The project will not affect any of the High Conservation Values of importance to the communities. By avoiding deforestation and forest degradation in the project area, the project will contribute to maintaining critical ecosystem services, especially with regard to the provision of clean water. Those actions of the productive activities proposed by the project (low impact gold production, timber forest management, agroforestry, among others) that will require mitigation measures for soil and water quality impacts have been identified in the Preliminary Environmental Impact Assessment. Subsequently, these mitigation measures will be designed and implemented according to the specific conditions and location of each productive activity.

The productive activities proposed by the project will be developed in the Buffer Zone, so there will be no overlap with the areas of traditional use of the Native Communities; likewise, their use will not be restricted, since this is already recognized and regulated by the NPA Master Plan. Project activities will not intervene in areas that are important for the cultural identity of the Ese' Eja people, since they are located within the NPAs.

High Conservation Value	Watercourses in the project area.
Qualifying Attribute	These are the sources of water for consumption by local populations.
Focal Area	The project area.

High Conservation Value	Wilderness zone of the RNTAM that includes two sectors: Malinowsquillo-Tambopata and El Gato- Palma Real Grande.
Qualifying Attribute	These areas provide some basic necessities for the native communities, mainly subsistence hunting and fishing, as well as the collection of medicinal plants, taricaya eggs, and construction materials. The riverside dwellers, indigenous people, and chestnut growers sustain part of their economy with the supply of resources from the project area, which also includes tourism activities.
Focal Area	Sectors: El Gato-Palma Real Grande, Malinowsky river, Patuyacu creek, La Torre river, stretches of the Elías Aguirre and Tambopata rivers, Heath river, Briolo and Palma Real chico creeks, Colorado collpa..

High Conservation Value	Headwaters of the Tambopata River.
Qualifying Attribute	Hydrographic area with high cultural value because it is related to the myths and traditions of the Ese'Eja people and the existence of archaeological evidence.

Focal Area	Upper Malinowsky sector (Azul and Malinowsquillo rivers), Tambopata River, El Gato, Palma Real Grande, Sandoval Lake and the southern part of the project area (Tambopata River, inside the PNBAS).
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The project did not affect any of the High Conservation Values of importance to the communities. The sustainable use of forest resources by the native communities within the NPA is recognized and regulated by the master plans; this allowed the native communities to continue carrying out traditional activities such as handicrafts, hunting, fishing, and others (ANNEX 15).

2022

The project will not affect any of the High Conservation Values of importance to the communities. By avoiding deforestation and forest degradation in the project area, the project will contribute to maintaining critical ecosystem services, especially with regard to the provision of clean water. Those actions of the productive activities proposed by the project (low impact gold production, timber forest management, agroforestry, among others) that will require mitigation measures for soil and water quality impacts have been identified in the Preliminary Environmental Impact Assessment. Subsequently, these mitigation measures will be designed and implemented according to the specific conditions and location of each productive activity.

The productive activities proposed by the project will be developed in the Buffer Zone, so there will be no overlap with the traditional use areas of the Native Communities; likewise, their use will not be restricted, since this is already recognized and regulated by the NPA Master Plan. Project activities will not intervene in areas that are important for the cultural identity of the Ese' Eja people, since they are located within the NPAs.

High Conservation Value	Watercourses in the project area.
Qualifying Attribute	These are the sources of water for consumption by local populations.
Focal Area	The Project area

High Conservation Value	Wilderness zone of the RNTAM that includes two sectors: Malinowsquillo-Tambopata and El Gato- Palma Real Grande.
Qualifying Attribute	These areas provide some basic necessities for the native communities, mainly subsistence hunting and fishing, as well as the collection of medicinal plants, taricaya eggs, and construction materials. The riverside dwellers, indigenous people, and chestnut growers sustain part of their economy with the supply of resources from the project area, which also includes tourism activities.
Focal Area	Sectors: El Gato-Palma Real Grande, Malinowsky river, Patuyacu stream, La Torre river, sections of the Elías Aguirre and Tambopata rivers, Heath river, Briolo and Palma Real chico streams, Colorado clay lick.

High Conservation Value	Headwaters of the Tambopata River.
Qualifying Attribute	Hydrographic area with high cultural value because it is related to the myths and traditions of the Ese'Eja people and the existence of archeological evidence.
Focal Area	Upper Malinowsky sector (Azul and Malinowsquillo rivers), Tambopata River, El Gato, Palma Real Grande, Sandoval Lake and south of the project area (Tambopata River, inside the PNBAS).

The project will not affect any of the High Conservation Values of importance to the communities. By avoiding deforestation and forest degradation in the project area, the project will contribute to maintaining critical ecosystem services, especially with regard to the provision of clean water to the population. Those actions of the productive activities proposed by the project (low impact gold production, timber forest management, agroforestry, sustainable tourism, among others) that will require mitigation measures for soil impacts. Subsequently, these mitigation measures will be designed and implemented according to the specific conditions and location of each productive activity.

2023

The project will not affect any of the High Conservation Values of importance to the communities. By avoiding deforestation and forest degradation in the project area, the project will contribute to maintaining critical ecosystem services, especially with regard to the provision of clean water. Those actions of the productive activities proposed by the project (low impact gold production, timber forest management, agroforestry, among others) that will require mitigation measures for soil and water quality impacts have been identified in the Preliminary Environmental Impact Assessment. Subsequently, these mitigation measures will be designed and implemented according to the specific conditions and location of each productive activity.

The productive activities proposed by the project will be developed in the Buffer Zone, so there will be no overlap with the traditional use areas of the Native Communities; likewise, their use will not be restricted, since this is already recognized and regulated by the NPA Master Plan. Project activities will not intervene in areas that are important for the cultural identity of the Ese' Eja people, since they are located within the NPAs.

High Conservation Value	Watercourses in the project area.
Qualifying Attribute	These are the sources of water for consumption by local populations.
Focal Area	The project area.

High Conservation Value	Wilderness area of the RNTAM comprising two sectors: Malinowsquillo-Tambopata and El Gato- Palma Real Grande.
Qualifying Attribute	These spaces provide some basic needs for the native communities, mainly subsistence hunting and fishing, as well as the collection of medicinal plants, taricaya eggs, and construction materials. The riverside dwellers, indigenous people, and chestnut growers sustain part of their economy with the supply of resources from the project area, which also includes tourism activities.
Focal Area	Sectors: El Gato-Palma Real Grande, Malinowsky River, Patuyacu Creek, La Torre River, stretches of the Elías Aguirre and Tambopata Rivers, Heath River, Briolo and Palma Real chico creeks, and Colorado clay lick.

High Conservation Value	Headwaters of the Tambopata River.
Qualifying Attribute	Hydrographic area with high cultural value because it is related to the myths and traditions of the Ese'Eja people and the existence of archaeological evidence.
Focal Area	Upper Malinowsky sector (Azul and Malinowsquillo rivers), Tambopata River, El Gato, Palma Real Grande, Sandoval Lake and the southern part of the project area (Tambopata River, inside the PNBAS).

The project will not affect any of the High Conservation Values of importance to the communities. By avoiding deforestation and forest degradation in the project area, the project will contribute to maintaining critical ecosystem services, especially with regard to the provision of clean water to the population. Those actions of the productive activities proposed by the project (low impact gold production, timber forest management, agroforestry, sustainable tourism, among others) that will require mitigation measures for soil impacts. Subsequently, these mitigation measures will be designed and implemented according to the specific conditions and location of each productive activity.

4.2 Other Stakeholder Impacts

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

Mitigation of negative impacts on off-site stakeholders is mainly based on strengthening resource governance, organizational strengthening and the implementation of sustainable productive activities.

2022

As part of its functions, RNTAM will continue to monitor the use of natural resources in the NPA. Currently, traditional hunting and fishing are monitored by RNTAM staff through monthly reports from park rangers; these will also serve to obtain information about the integrity of the territory and to diagnose possible conflicts, and rural community tourism is being developed in the Buffer Zone. In addition, RNTAM annually monitors the harvesting of Brazil nuts or aguaje. Biological monitoring reports will provide information about species of economic importance. Regular control and surveillance activities (patrols) will monitor the integrity of the areas of cultural importance to the Ese'Eja people. In addition to this, the participation of community members who will act as Community Volunteer Park Rangers or guards in ancestral territories will also help safeguard the cultural identity of the Ese'Eja people.

2023

As part of its functions, RNTAM will continue to monitor the use of natural resources in the NPA. Currently, traditional hunting and fishing are monitored by RNTAM staff through monthly reports from park rangers; these will also serve to obtain information about the integrity of the territory and to diagnose possible conflicts, and rural community tourism is being developed in the Buffer Zone. In addition, RNTAM annually monitors the harvesting of Brazil nuts or aguaje. Biological monitoring reports will provide information about species of economic importance. Regular control and surveillance activities (patrols) will monitor the integrity of the areas of cultural importance to the Ese'Eja people. In addition to this, the participation of community members who will act as Community Volunteer Park Rangers or guards in ancestral territories will also help safeguard the cultural identity of the Ese'Eja people.

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

2021

During the year 2021, the State continued to adopt biosecurity measures to contain and prevent the spread of Covid19; this situation affected the normal development of activities in community groups and generated a strong impact on them, which is not related to the impacts generated by the project.

Community groups developed their management capacities to deal with the pandemic situation, which generated support from the State, regional and local government, private institutions and the church in health and nutrition issues for vulnerable populations, especially native communities (Annex 59, 60). (Annex 59, 60).

Activities affected by project activities are illegal (Annex 17, 18).

2022

Mitigation of displacement of activities, especially illegal gold mining, will be linked to the strengthening of forest governance, which will serve to manage natural resources within and outside the project area. This includes the formalization of farmers' properties that seek to conserve the forest in the Buffer Zone. Likewise, the promotion of sustainable productive activities and the establishment of Conservation Agreements among the families of the hamlets and native communities settled in the Buffer Zone will help them reduce their dependence on illegal activities to generate income, ensuring that these impacts do not generate high levels of risk against nature.

The impact of the project is positive; the activities that will be affected are illegal activities.

High Value	Conservation	Watercourses in the project area.
Qualifying Attribute		These are the sources of water for consumption by local populations.
Focal Area		The project area.

High Value	Conservation	Wilderness area of the RNTAM that includes two sectors: Malinowsquillo-Tambopata and El Gato - Palma Real Grande.
Qualifying Attribute		These areas provide some basic needs for the native communities, mainly hunting and fishing for subsistence, as well as collecting medicinal plants, taricaya eggs, and construction materials. The riverside dwellers, settlers, indigenous people, and chestnut growers sustain part of their economy with the supply of resources from the project area, which also includes tourism activities.
Focal Area		Sectors: El Gato-Palma Real Grande, Malinowsky river, Patayacu stream, La Torre river, sections of the Elías Aguirre and Tambopata rivers, Heath river, Briolo and Palma Real chico streams, Colorado Collpa.

High Value	Conservation	Headwaters of the Tambopata River.
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Qualifying Attribute	Hydrographic area with high cultural value because it is related to the myths and traditions of the Ese'Eja people and the existence of archaeological evidence.
Focal Area	Upper Malinowsky sector (Azul and Malinowsquillo rivers), Tambopata River, El Gato, Palma Real Grande, Sandoval Lake and the southern part of the project area (Tambopata River, inside the PNBAS).

As part of its functions, RNTAM will continue to monitor the use of natural resources in the NPA. Currently, traditional hunting and fishing are monitored by RNTAM staff through monthly reports from park rangers; these will also serve to obtain information about the integrity of the territory and to diagnose possible conflicts, and rural community tourism is being developed in the Buffer Zone. In addition, RNTAM annually monitors the harvesting of Brazil nuts or aguaje. Biological monitoring reports will provide information about species of economic importance. Regular control and surveillance activities (patrols) will monitor the integrity of the areas of cultural importance to the Ese'Eja people. In addition to this, the participation of community members who will act as Community Volunteer Park Rangers or guards in ancestral territories will also help safeguard the cultural identity of the Ese'Eja people.

2023

Mitigation of displacement of activities, especially illegal gold mining, will be linked to the strengthening of forest governance, which will serve to manage natural resources within and outside the project area. This includes the formalization of farmers' properties that seek to conserve the forest in the Buffer Zone. Likewise, the promotion of sustainable productive activities and the establishment of Conservation Agreements between the families of the hamlets and native communities settled in the Buffer Zone will help reduce their dependence on illegal activities to generate income, so that these impacts do not generate high levels of risk against nature.

The impact of the project is positive; the activities that will be affected are illegal activities.

High Conservation Value	Watercourses in the project area.
Qualifying Attribute	These are the sources of water for consumption by local populations.
Focal Area	The project area.

High Value	Conservation	Wilderness area of the RNTAM that includes two sectors: Malinowsquillo-Tambopata and El Gato - Palma Real Grande.
	Qualifying Attribute	These areas provide some basic needs for the native communities, mainly hunting and fishing for subsistence, as well as collecting medicinal plants, taricaya eggs, and construction materials. The riverside dwellers, settlers, indigenous people, and chestnut growers sustain part of their economy with the supply of resources from the project area, which also includes tourism activities.
	Focal Area	Sectors: El Gato-Palma Real Grande, Malinowsky river, Patayacu creek, La Torre river, stretches of the Elías Aguirre and Tambopata rivers, Heath river, Briolo and Palma Real chico creeks, Colorado collpa.

High Value	Conservation	Headwaters of the Tambopata River.
	Qualifying Attribute	Hydrographic area with high cultural value because it is related to the myths and traditions of the Ese'Eja people and the existence of archaeological evidence.
	Focal Area	Upper Malinowsky sector (Azul and Malinowsquillo rivers), Tambopata River, El Gato, Palma Real Grande, Sandoval Lake and the southern part of the project area (Tambopata River, inside the PNBAS).

As part of its functions, RNTAM will continue to monitor the use of natural resources in the NPA. Currently, traditional hunting and fishing are monitored by RNTAM staff through monthly reports from park rangers; these will also serve to obtain information about the integrity of the territory and to diagnose possible conflicts, and rural community tourism is being developed in the Buffer Zone. In addition, RNTAM annually monitors the harvesting of Brazil nuts or aguaje. Biological monitoring reports will provide information about species of economic importance. Regular control and surveillance activities (patrols) will monitor the integrity of the areas of cultural importance to the Ese'Eja people. In addition to this, the participation of community members who will act as Community Volunteer Park Rangers or guards in ancestral territories will also help safeguard the cultural identity of the Ese'Eja people.

4.3 Community Impact Monitoring

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

2021

Social impact monitoring matrix in the RNTAM and PNBAS - MDD REDD+ project area.							
Monitoring objective: to collect and generate information to permanently guide management actions and decision making by AIDER coordination, relevant to the fulfillment of the net positive effects proposed in the PDD.							
Component	Indicator	Responsible	Frequency	Locations of action and/or sampling	Methodology	January – December	Observations
Governance	% of boards of directors improve and strengthen relations among their representatives and with local authorities.	AIDER	Semiannual	Palma Real, Infierno, Sonene and Kotsimba	Management committees, report of meetings and agreements		During the year 2021, the State continued to adopt biosecurity measures to contain and prevent the spread of Covid19; this situation affected the normal development of activities in the community groups and generated a strong impact on them, which is unrelated to the impacts generated by the project. The community groups developed their management capacities to cope with the pandemic situation, which generated support from the State, regional and local government, private and ecclesiastical institutions, in terms of health and food for vulnerable populations, especially native communities (Annex 59, 60). (Annex 59, 60). Activities affected by project activities are illegal (Annex 17, 18).
				COOPASER, AGROBOSQUE, ASCART, ADAPAB, PALSAMAD	Report of meetings and agreements		During the year 2021, the State continued to adopt biosecurity measures to contain and prevent the spread of Covid19; this situation affected the normal development of activities in the community groups and generated a strong impact on them, which is unrelated to the impacts generated by the project. The community groups developed their management capacities to cope with the pandemic situation, which generated support from the State, regional and local government, private and ecclesiastical institutions, in terms of health and food for vulnerable populations, especially native communities (Annex 59,60). Activities affected by project activities are illegal (Annex 17, 18).
	% of boards of directors participate in organizational strengthening	AIDER	Semiannual	Palma Real, Infierno, Sonene, Kotsimba	Review of the reports of the activities carried out		Palma Real Native Community: A work plan was developed for the management of the community's board of directors and a workshop was held to analyze the situation of the prioritized activities with the participation of Palma Real's

Social impact monitoring matrix in the RNTAM and PNBAS - MDD REDD+ project area.							
Monitoring objective: to collect and generate information to permanently guide management actions and decision making by AIDER coordination, relevant to the fulfillment of the net positive effects proposed in the PDD.							
Component	Indicator	Responsible	Frequency	Locations of action and/or sampling	Methodology	January – December	Observations
	g workshops.						community members. A work plan was also developed for the management of the community's board of directors for the period August - December 2021. (Annex 60). Sonene Native Community: A work plan was developed for the management of the community's board of directors for the period September - December 2021. (Annex 59).
				COOPASER, AGROBOSQUE, ASCART, ADAPAB, PALSAMAD	Review of workshop and project activity reports		No activities have been reported during this period in any of the productive associations.
	% of workshops for the elaboration and implementation of the Life Plan.	AIDER	Semiannual	Infierno, Palma Real, Sonene y Kotsimba	Workshop for the elaboration and implementation of the Life Plan		Infierno Native Community: the socialization and approval of the community's Life Plan for the period 2021 - 2025 was completed (Annex 61). Kotsimba Native Community: through a meeting with representatives of the PNBS, AIDER and FZS, the community requested support to update its life plan. Palma Real Native Community: a situational analysis of the activities prioritized by the community was conducted, taking into account the Life Plan for the period 2020 - 2024 (Annex 60).
	% of boards of directors receive training in document archiving methodology	AIDER	Semiannual	Infierno, Palma Real, Sonene y Kotsimba	Review of the training course reports of project activities		Technical assistance has been provided to the directors of the three communities, indicating the importance of proper document filing. The board of directors of Palma Real received support in the form of a log book, filing cabinets and a stamp for the treasurer (Annex 60). The directors of the Sonene native community were also able to legalize their new minute book (Annex 59).
	% of boards of directors	AIDER	Semiannual	Infierno,	Meeting with the		Although no activities have been reported during this period regarding training in archiving methodology, a PC was delivered as a session in use for organizational strengthening, where management members can make use of it (Annex 62). During the year 2021, the Native communities of Sonene and Palma

Social impact monitoring matrix in the RNTAM and PNBAS - MDD REDD+ project area.							
Monitoring objective: to collect and generate information to permanently guide management actions and decision making by AIDER coordination, relevant to the fulfillment of the net positive effects proposed in the PDD.							
Component	Indicator	Responsible	Frequency	Locations of action and/or sampling	Methodology	January – December	Observations
	are duly registered in public registries.			Palma Real, Sonene y Kotsimba	board of directors		Real had their boards of directors in force and duly registered with SUNARP. (Annex 59, 60).
				COOPASER, AGROBOSQUE, ASCART, ADAPAB, PALSAMAD	Meeting with the board of directors		By 2021, the productive associations have all the necessary documents for their operations; to date, fair trade and organic certification initiatives are being promoted; however, no updating processes have been registered.
	% of boards of directors that make decisions in a participatory and democratic manner.	AIDER	Semiannual	Infierno, Palma Real, Sonene y Kotsimba	Participatory workshop with the assembly.		Infierno Native Community: The community approved its life plan (Annex 61) and elected its communal park rangers (Annex 54). Palma Real Native Community: Generated a cooperation agreement with the PNBAS, AIDER and FZS (Annex 60), which considered the prioritization of productive activities that need intervention in the short and medium term. They also decided to form the community's JASS through an assembly (Annex 60). Sonene Native Community: The community completed the registration process for the formation and municipal recognition of the Sonene JASS (Annex 59); in addition, 07 community members were recognized as community park rangers by SERNANP (Annex 54).
				COOPASER, AGROBOSQUE, ASCART, ADAPAB, PALSAMAD	Participatory workshop with the assembly.		ASCART: As a board of directors and with the sole purpose of recovering the operational capacity and institutionally AIDER, in coordination with RNTAM, PNBAS, FZS, it was established that a sum of money would be given as a loan for the acquisition of a rotary cylinder for drying, an amount financed through ANP funds. (Annex 66). With AIDER, as an institutional partner, and the chestnut growers' cooperative, inputs were delivered to improve the cooperative's production conditions (Annex 62).
	% of boards of directors receiving business training.	AIDER	Semiannual	COOPASER, AGROBOSQUE, ASCART, ADAPAB, PALSAMAD	Meeting with boards of directors, review of project reports.		No training has been reported during this period for the productive associations.

Social impact monitoring matrix in the RNTAM and PNBAS - MDD REDD+ project area.							
Monitoring objective: to collect and generate information to permanently guide management actions and decision making by AIDER coordination, relevant to the fulfillment of the net positive effects proposed in the PDD.							
Component	Indicator	Responsible	Frequency	Locations of action and/or sampling	Methodology	January – December	Observations
	% of boards of directors that include women in their governing team.	AIDER	Semiannual	Infierno, Palma Real, Sonene y Kotsimba	Workshop with the board of directors.		In the Infierno native community, Mrs. Hilda María Cordero Vacasahua continued as president of the community; likewise, the positions of secretary, treasurer, vocal, 1, vocal 2, assumed by women, were continued. In the Palma Real community, the Shi'Oi craftswomen's association was created with a board of directors made up mostly of women (Annex 60). Sonene native community, the treasurer, secretary and member positions were assumed by women. Likewise, with the creation of the Masheke women's artisan association, 06 women assumed the leadership positions (Annex 59).
				COOPASER, AGROBOSQUE, ASCART, ADAPAB, PALSAMAD	Workshop with the board of directors		COOPASER: Ms. Lina Palomino is a member of the board of directors as secretary of COOPASER. Mrs. Benedicta Lozano Alarcón is a member of COOPASER. The beneficiary Tomasa Solier Eccoña and Obdulia Paca Machaca as women beneficiaries of COOPASER, received forest seedlings to surround their plots as windbreaks. AGROBOSQUE: Mrs. Lilia Carape Álvarez is a member of the supervisory board, and Mrs. Leandra Mamani Mamani is also a second member of the board. Mrs. Yessica Ccarita Mamani is a member of the electoral committee. ASCART: Mrs. Heidly Pereyra Meléndez is part of the board of directors, occupying the position of president and Mrs. Jenny Juscamayta assumes the role of ASCART's administrator.
	% of assemblies democratically make decisions on the development of their life plans.	AIDER	Semiannual	Infierno, Palma Real, Sonene y Kotsimba	Participatory workshop.		Infierno Native Community. Through a community assembly, the community approved its life plan for the period 2021 - 2025 (Annex 61). Palma Real Native Community: Considering the life plan, the community, through a workshop, prioritized the productive activities that need intervention in the short and medium term (Annex 60).
	% of assemblies are	AIDER	Semiannual	Infierno,	Participatory workshop.		During the current year, the native communities gradually resumed the management actions that have been

Social impact monitoring matrix in the RNTAM and PNBAS - MDD REDD+ project area.							
Monitoring objective: to collect and generate information to permanently guide management actions and decision making by AIDER coordination, relevant to the fulfillment of the net positive effects proposed in the PDD.							
Component	Indicator	Responsible	Frequency	Locations of action and/or sampling	Methodology	January – December	Observations
	strengthened organization ally.			Palma Real, Sonene y Kotsimba			developed according to the contact and needs of each community (Annex 59, 60).
				COOPASER, AGROBOSQUE, ASCART, ADAPAB, PALSAMAD	Participatory workshop.		No activities have been reported for this period in the sustainable productive associations.
	% of assemblies democratically deciding on the incursion into new productive activities	AIDER	Semiannual	Infierno, Palma Real, Sonene y Kotsimba	Participatory workshop.		The implementation of a pilot agroforestry plot began in the native community of Sonene (Annex 59).
				COOPASER, AGROBOSQUE, ASCART, ADAPAB, PALSAMAD	Participatory workshop.		COOPASER: Through its institutional ally AIDER, 8090 seedlings were delivered; also this quarter, inputs for the maintenance of seedlings were delivered to one of the members of this cooperative (Annex 69). AGROBOSQUE: In support of the sustainable management of the cooperative's properties, 8,000 cocoa seedlings were delivered, as well as inputs for the maintenance of the seedlings (Annex 69).
	% of boards of directors update their communities' bylaws.	AIDER	Semiannual	Infierno, Palma Real, Sonene y Kotsimba	Meeting with the board of directors and review of its document		Not reported for this period.
				COOPASER, AGROBOSQUE, ASCART, ADAPAB, PALSAMAD	Meeting with the board of directors and review of its document		Not reported for this period..
	% of boards of directors promote the development or revision of the life plan for their communities	AIDER	Semiannual	Infierno, Palma Real, Sonene y Kotsimba	Meeting with the board of directors and review of their document.		Infierno Native Community: Revised and approved the life plan 2021 - 2025 (Annex 61). Kotsimba Native Community: Through a meeting with representatives of the PNBAS, AIDER and FZS, the community leaders requested support to update the life plan.
	% of committees created to improve the management of productive	AIDER	Semiannual	Infierno, Palma Real, Sonene y Kotsimba	Review of community documents		Infierno Native Community: Revised and approved the life plan 2021 - 2025 (Annex 61). Kotsimba Native Community: Through a meeting with representatives of the PNBAS, AIDER and FZS, the

Social impact monitoring matrix in the RNTAM and PNBAS - MDD REDD+ project area.							
Monitoring objective: to collect and generate information to permanently guide management actions and decision making by AIDER coordination, relevant to the fulfillment of the net positive effects proposed in the PDD.							
Component	Indicator	Responsible	Frequency	Locations of action and/or sampling	Methodology	January – December	Observations
	activities in the community						community leaders requested support to update the life plan (Report meeting Kotsimba).
	% of boards of directors participating in coordination meetings of the RNTAM Management Committee and the PNBAS Management Committee.	AIDER	Semiannual	Infierno, Palma Real, Sonene y Kotsimba	Meeting with the RNTAM Management Committee		During this year, the State decreed the extension of the health emergency declaration, from March 7, 2021, for a period of one hundred and eighty (180) days, which is why the representatives of the management committees of the RNTAM and the PNBAS did not have members of the boards of directors of the Native Communities as participants.
				COOPASER, AGROBOSQUE, ASCART, ADAPAB, PALSAMAD	Meeting with the RNTAM Management Committee		AGROBOSQUE: As an institutional ally of AIDER and SERNANP, an agreement was signed for the use of the "Allies for Conservation" brand (Annex 63). ASCART: As an institutional ally, AIDER, in coordination with RNTAM, PNBAS, FZS, and within the framework of the tetrapartite agreement, established a loan for the purchase of a rotary drying cylinder, financed through ANP funds (Annex 62). (Annex 62).
Economic	% of committees receiving resource management training	AIDER	Semiannual	Infierno, Palma Real, Sonene and Kotsimba	Participation in training workshops and review of project activity reports		No activities have been reported for this period.
				COOPASER, AGROBOSQUE, ASCART, ADAPAB, PALSAMAD	Participation in training workshops and review of project activity reports		COOPASER: For the proper management of resources in the production chain and to ensure its sustainability, in the first quarter of the year 8090 seedlings were delivered to COOPASER. During the second quarter, 3,832 forestry seedlings were delivered to COOPASER members, and during the third quarter 2,200 cocoa seedlings were delivered (Annex 65). Likewise, during the year 2021, training and technical assistance modules were developed, each on different dates (Annex 39). On April 19, inputs were delivered to the El Castañal sector for the production of cocoa seedlings (Annex 69).

Social impact monitoring matrix in the RNTAM and PNBAS - MDD REDD+ project area.							
Monitoring objective: to collect and generate information to permanently guide management actions and decision making by AIDER coordination, relevant to the fulfillment of the net positive effects proposed in the PDD.							
Component	Indicator	Responsible	Frequency	Locations of action and/or sampling	Methodology	January – December	Observations
							AGROBOSQUE: For the first quarter, 7875 were delivered to AGROBOSQUE (Annex 69). During the third quarter, 1,370 forestry seedlings were delivered to AGROBOSQUE partners to form part of the forestry component of the FFS (Annex 69). ASCART: To ensure the proper management of resources in the production chain and guarantee its sustainability, during the first quarter of the year, 4,000 cacao seedlings were delivered.
	% of committees participating in workshops on product processing	AIDER	Semiannual	Infierno, Palma Real, Sonene y Kotsimba	Review of project reports		No activities have been reported during this period.
				COOPASER, AGROBOSQUE, ASCART, ADAPAB, PALSAMAD	Review of project reports		No activities have been reported during this period.
	% of committees participating in workshops on market research	AIDER	Semiannual	Infierno, Palma Real, Sonene y Kotsimba	Review of project reports		No activities have been reported during this period.
				COOPASER, AGROBOSQUE, ASCART, ADAPAB, PALSAMAD	Review of project reports		COOPASER: In the current period, a financial assistance contract offer has been signed within the framework of the "Project to strengthen the productivity of organic and conventional FT cocoa through the development of productive and social capacities of COOPASER Tambopata Candamo", financed by Stichting Rabo Foundation, and AIDER as provider of technical assistance (Annex 65). COOPASER submitted the project to the SME PRODUCTIVE SMME TECHNOLOGICAL SERVICES DEMAND SUPPORT COMPETITION - category 2, presenting the project: ORGANIC CACAO CARBON NEUTRAL IN THE COOPERATIVA AGRARIA DE SERVICIOS MULTIPLES TAMBOPATA CANDAMO - COOPASER - TAMBOPATA CANDAMO (Annex 47). Signed the purchase-sale contract for conventional FLO - Fairtrade cocoa

Social impact monitoring matrix in the RNTAM and PNBAS - MDD REDD+ project area.							
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Component	Indicator	Responsible	Frequency	Locations of action and/or sampling	Methodology	January – December	Observations
							beans and Fairtrade organic cocoa beans with ICAM S.P.A. Negotiations are ongoing with commercial clients (Icam SPA, Walter Matter, and Minka scs), with whom purchase volumes for the 2021 season are being negotiated. (Exhibit 65). AGROBOSQUE: Through calls and invitations to participate in local and national craft fairs, the cooperative was present at the National Chocolate and Cocoa Fair, held at the Lima convention center, where it was able to access a wider market (Annex 63). (Annex 63). ASCART: During the first quarter, as part of the agreement signed with ASCART, coordination was carried out to support the establishment of sales contracts, and the buyer Michael Metz De La Selva Regenwaldprodukte eG (German company) was assisted in establishing direct contact with ASCART's management to sell its product (Annex 69).
	% of family farmers have benefited from new sustainable productive activities.	AIDER	Semiannual	Infierno, Palma Real, Sonene and Kotsimba	Review of project reports		Infierno Native Community: 100 mahogany seedlings and 100 red pashaco seedlings were delivered as part of the support to native communities sponsored by the German company KATJES (Annex 61). Sonene Native Community. Plantain and yucca seedlings were planted in Mr. Carlitos Huajohuajo's agroforestry pilot plot, which not only encourages this new activity, but also promotes food security (Annex 59).
				COOPASER, AGROBOSQUE, ASCART, ADAPAB, PALSAMAD	Review of project activity reports and visits to plots.		COOPASER: In the first quarter there were 274 members in good standing; as of the fourth quarter and the end of the year, 11 new members have been added, bringing the total to 285 members in good standing with whom we have been working. Membership will be updated during the first quarter of 2021, in accordance with the bylaws, since, according to the current registry, there are 368 members, including members in good standing, members not in good standing and passive members.

Social impact monitoring matrix in the RNTAM and PNBAS - MDD REDD+ project area.							
Monitoring objective: to collect and generate information to permanently guide management actions and decision making by AIDER coordination, relevant to the fulfillment of the net positive effects proposed in the PDD.							
Component	Indicator	Responsible	Frequency	Locations of action and/or sampling	Methodology	January – December	Observations
							AGROBOSQUE: In the case of AGROBOSQUE, 64 families are registered as members, both men and women, with whom the company has been working; however, there is no updated registry of members, including those who are able, those who are unable and those who are passive. ASCART: ASCART currently has 46 registered members and 28 active members.
	% of family farmers trained in the processes of a production chain	AIDER	Semiannual	COOPASER, AGROBOSQUE, ASCART, ADAPAB, PALSAMAD	Meeting with boards of directors, review of workshop report on the project activities		COOPASER: For the proper management of resources in the production chain and to ensure its sustainability; during the year 2021, training modules, technical assistance and strengthening of cocoa producers were carried out on different dates (Annex 39). The plots were also verified through a quick inspection. Support is being provided to strengthen COOPASER Tambopata Candamo's organic and fair trade certification programs. AGROBOSQUE: For the proper management of resources in the production chain and to ensure its sustainability, during the year 2021, training modules, technical assistance and strengthening of cocoa producers will be carried out on different dates (Annex 39). To date, the cooperative has been producing cocoa on a reserve of 250 hectares with fair trade certification (FLO) and organic certification (AGROBOSQUE_NOTICIA). ASCART: An agreement was signed with ASCART during the first quarter of the year to initiate the planned activities and to maintain and obtain the certifications already in place (Annex 69).
	% of producer families receiving new income from sustainable productive activities	AIDER	Semiannual	Infierno, Palma Real, Sonene y Kotsimba	Workshop with boards of directors		In view of the extension of the sanitary emergency declaration, from March 7, 2021, for a period of one hundred and eighty (180) days, support has been provided for the logistics and mobility of the leaders of the native communities of Palma Real, Sonene and Infierno, which has allowed us to make arrangements for the provision

Social impact monitoring matrix in the RNTAM and PNBAS - MDD REDD+ project area.							
Monitoring objective: to collect and generate information to permanently guide management actions and decision making by AIDER coordination, relevant to the fulfillment of the net positive effects proposed in the PDD.							
Component	Indicator	Responsible	Frequency	Locations of action and/or sampling	Methodology	January – December	Observations
							of donations and support to the families of the communities (delivery minutes).
				COOPASER, AGROBOSQUE, ASCART, ADAPAB, PALSAMAD	Workshop with boards of directors		COOPASER: During the second and third quarters of the year, 55 plots of land belonging to COOPASER's organic production were geo-referenced (Annex 69). AGROBOSQUE: Through calls and invitations to participate in local and national craft fairs, the cooperative was present at the National Chocolate and Cocoa Fair, held at the Lima Convention Center, where it was able to access a wider market (Annex 63).
	% of boards of directors receiving training on new technologies	AIDER	Semiannual	Infierno, Palma Real, Sonene y Kotsimba	Workshops		Infierno native community: During the first quarter, printed materials (manuals) were provided for the use of GPS (Annex 54). In the last quarter, a training workshop was held for community park guards on the use of technological tools: drones, GPS and others (Annex 61).
				COOPASER, AGROBOSQUE, ASCART, ADAPAB, PALSAMAD	Workshops		No activities have been recorded during this period.
	% of chestnut-growing families have been trained to add value to their raw materials.	AIDER	Semiannual	ASCART	Review of project activity reports		On September 21, a meeting was held with the head of RNTAM, FZS and AIDER and the board of directors, within the framework of a tetrapartite agreement, and in order to recover the cooperative's operational capacity, it was established that a sum of money would be provided as a loan for the purchase of a rotary cylinder for drying, financed through ANP funds (Annex 66). (Annex 66). With AIDER as an institutional partner and the chestnut cooperative, inputs were delivered to improve the cooperative's production conditions (Annex 66).
	% of boards of directors receiving training on alternative sustainable productive activities	AIDER	Semiannual	Infierno, Palma Real, Sonene y Kotsimba	Review of project activity reports		Infierno Native Community: Representatives of the community's tourism company, Baawaja Expeditions, participated in the "Workshop on the bases of the public competition Turismo Emprande", held virtually. This event was organized by the MINCETUR program, and was

Social impact monitoring matrix in the RNTAM and PNBAS - MDD REDD+ project area.							
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Component	Indicator	Responsible	Frequency	Locations of action and/or sampling	Methodology	January – December	Observations
							directed with special emphasis to the tourism company, to train them on the bases of the contest and to enable them to submit a proposal to the contest (Annex 69). Palma Real Native Community: In October 2021, a workshop was held with working groups according to the productive activities prioritized by the community members themselves: 1. handicrafts, 2. raising small animals and agroforestry, 3. aquaculture and 4. tourism. For this purpose, technical support was provided by representatives of SERNANP, DRA, DIREPRO and AIDER's tourism consultant. (Annex 60). Sonene Native Community: At the end of the year, within the framework of a work day in the community, AIDER conducted a training workshop on nurseries (SONENE CAPACITACIÓN VIVEROS). Subsequently, during the implementation of the pilot agroforestry plot, the community members were trained on the measurement and location of the perimeter points of the plot (Annex 59).
				COOPASER, AGROBOSQUE, ASCART, ADAPAB, PALSAMAD	Review of project activity reports		COOPASER: During this quarter, we continued to benefit COOPASER's member farmers, supporting them through technical assistance during the months of July and August (Annex 39). AGROBOSQUE: During the months of July and August, we continued to benefit member farmers, supporting 82 farmers and their families through technical assistance (Annex 39). The assigned technician carried out monitoring and follow-up activities to ensure the proper growth of cocoa trees and the maintenance of the roads along the boundaries of the plots, taking into account that we are in the dry season and fires are starting to wreak havoc on the plots (Annex 69). During the first quarter, cocoa seedlings were delivered and subsequent technical monitoring of the trees was carried out, covering an area

Social impact monitoring matrix in the RNTAM and PNBAS - MDD REDD+ project area.							
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Component	Indicator	Responsible	Frequency	Locations of action and/or sampling	Methodology	January – December	Observations
							of 7.8 hectares in the Santa Rita sector (Annex 69). ASCART: An agreement was signed with ASCART during the first quarter of the year to initiate activities to obtain certifications and/or maintain existing certifications.
	%of tourism companies committed to training families with tourism-related initiatives.	AIDER	Semiannual	Bajo y medio Tambopata	Review of project activity reports		Although tourism companies are carrying out their own activities, due to the COVID 19 pandemic, the tourism sector was paralyzed in March. It was not until late November that tourism activities resumed; however, it is expected to normalize as of next year.
	% of initiatives receiving improved income from the promotion of tourism activities within the project area	AIDER	Semiannual	Bajo y medio Tambopata, Infierno	Review of project activity reports		Throughout the years, the Infierno Native Community has been able to permanently manage the tourism process. This year, tourism has been restricted since March due to the COVID 19 pandemic, affecting the community's income and economic dynamics. In the last quarter, coordination has been made to resume actions for the following year. In the lower Tambopata area, there are several initiatives that provide tourist lodges, which have also been affected by the pandemic and are expected to resume activities by 2021.
Environmental	% of committees participating in climate change awareness workshops	AIDER	Semiannual	Infierno, Palma Real, Sonene y Kotsimba	Review of the reports of the workshops conducted by the project activities.		No activities have been reported during this period.
	% of boards of directors participating in REDD+ training workshops	AIDER	Semiannual	Infierno, Palma Real, Sonene y Kotsimba	Review of the reports of the workshops conducted by the project activities.		During the first quarter, the Webinar "Organic agriculture with EM technology" was broadcast on social networks, as well as the visit of the coordinator and manager of the REDD+ Tambopata Bahuaja project, Lis Cántaro and technical staff of the project to the reforestation area where SERNANP is working in the area of the Blue PVC, where the Vice Minister of the Environment and his team were expected to see the progress of reforestation in the area known as La Pampa (Annex 69).

Social impact monitoring matrix in the RNTAM and PNBAS - MDD REDD+ project area.							
Monitoring objective: to collect and generate information to permanently guide management actions and decision making by AIDER coordination, relevant to the fulfillment of the net positive effects proposed in the PDD.							
Component	Indicator	Responsible	Frequency	Locations of action and/or sampling	Methodology	January – December	Observations
				COOPASER, AGROBOSQUE, ASCART, ADAPAB, PALSAMAD	Review of the reports of the workshops conducted by the project activities.		COOPASER: Technical assistance provided to the cooperative's farmer members, with the REDD+ initiative, and implementation of FFS through training and assistance (Annex 39). AGROBOSQUE: During the first quarter, 1,370 forestry seedlings were delivered to members of the association to form part of the forestry component of the FFS. (Annex 69).
	% of assemblies aware of climate change and its consequences	AIDER	Semiannual	Infierno, Palma Real, Sonene y Kotsimba	Participatory workshop		No activities have been reported for this period.
				COOPASER, AGROBOSQUE, ASCART, ADAPAB, PALSAMAD	Participatory workshop		No activities have been reported during this period in the productive associations.
	% of boards of directors implement burn control in their communities	AIDER	Semiannual	Infierno, Palma Real, Sonene y Kotsimba	Meeting with the board of directors		No activities have been reported during this period in the productive associations.
				COOPASER, AGROBOSQUE, ASCART, ADAPAB, PALSAMAD	Meeting with the board of directors		Due to the COVID-19 pandemic, there has been no training for producers; however, within the association itself, communication actions are being carried out on burn prevention and control.
	% of families committed to sustainable Brazil nut management	AIDER	Annual	Palma Real, Sonene, Loero, Jorge Chávez, Nueva América, Las Mercedes, etc.	Participatory workshop		Chestnut harvesting is a traditional activity in the native communities of the Ese Eja people and the families that are dedicated to this activity have the community's endorsement for their use. Infierno Native Community: Chestnut trees are harvested by families, the most representative of which are the Durand, Flores, Panduro, Dejavisio, Masías, Marichi, Poge, Troncoso, Duri, Sehue, Tomas and Martha Mishaja families (Annex 61). Palma Real Native Community: They have a committee of chestnut growers, which is in charge of collecting information on annual harvest production. They have 25 estradas, which convenes 25 work groups, generally made up of community members with family ties (Annex 60).

Social impact monitoring matrix in the RNTAM and PNBAS - MDD REDD+ project area.							
Monitoring objective: to collect and generate information to permanently guide management actions and decision making by AIDER coordination, relevant to the fulfillment of the net positive effects proposed in the PDD.							
Component	Indicator	Responsible	Frequency	Locations of action and/or sampling	Methodology	January – December	Observations
							Sonene Native Community: 33 families have Brazil nut trees in different quantities. The community has a Brazil nut committee that organizes storage and marketing activities with CANDOR LATAM through AFIMAD (Annex 59).
				ASCART	Participatory workshop		ASCART: ASCART currently has 43 active members with a chestnut concession contract (31 members under the management contract; 12 members outside of the management contract).
Community	% of boards of directors promote the development of sustainable productive activities in their communities within the framework of gender equity	AIDER	Annual	Infierno, Palma Real, Sonene y Kotsimba	Meeting with the board of directors and review of production activities report		Palma Real Native Community: In 2021, the artisanal activity was formalized through the creation of the Shi'Oi Artisan Women's Association, made up of 40 women and 02 men (Annex 40). Sonene Native Community: In 2021, the Masheke Women Artisans Association was also formed, made up of 15 women (Annex 59).
				COOPASER, AGROBOSQUE, ASCART, ADAPAB, PALSAMAD	Meeting with the board of directors and review of production activities report		Women are part of this cooperative. They give their opinion and vote, they feel part of the development of their community, they are leaders of change. Information that can be verified in the members' list.
	% of committees are made up of men and women	AIDER	Annual	Infierno, Palma Real, Sonene y Kotsimba	Meeting with the committees		The organizational structure of the native communities Infierno, Sonene and Palma Real includes committees and/or work teams that are organized according to the activities they perform: productive, health, education, surveillance, etc. (chestnut committee, artisan committee, surveillance, JASS, APAFA, sports, etc.) with the participation of women and men depending on the activities.
				COOPASER, AGROBOSQUE, ASCART, ADAPAB, PALSAMAD	Meeting with the committees		There are no records of women as committee members, however, there are women on the boards of directors of the associations.
	% of women officially recognized as leaders in	AIDER	Annual	Infierno, Palma Real, Sonene y Kotsimba	Participation in workshops and review		Mrs. Hilda María Cordero Vacasahua, continues to assume the position of president of the native community of Infierno, being the first community

Social impact monitoring matrix in the RNTAM and PNBAS - MDD REDD+ project area.							
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Component	Indicator	Responsible	Frequency	Locations of action and/or sampling	Methodology	January – December	Observations
	their communities				of project activity reports		member to assume this position in the history of the community. Alicia Saavedra and Matilde Huajojuajo assumed the position of president of the artisan associations created in the communities of Palma Real and Sonene, respectively. (Annex 59, 60, 61).
				COOPASER, AGROBOSQUE, ASCART, ADAPAB, PALSAMAD	Participation in workshops and review of project activity reports		COOPASER: Mrs. Lina Palomino is the secretary of the board of directors of the COOPASER cooperative. AGROBOSQUE: Mrs. Leandra Mamani Mamani assumes the position of second member, which makes her a woman with authority in front of the general assembly. ASCART: Mrs. Heidi Pereira Meléndez assumes the position of president of the association, as well as Mrs. Matilde Cruz Zuvieta is part of the board of directors.
	% of women are aware of the importance of women's contribution in the context of climate change	AIDER	Annual	Infierno, Palma Real, Sonene y Kotsimba	Participatory workshops		No activities have been reported for this period.
				COOPASER, AGROBOSQUE, ASCART, ADAPAB, PALSAMAD	Participatory workshops		No activities have been reported for this period.
	% of women participate in benefit-sharing decisions	AIDER	Annual	COOPASER, AGROBOSQUE, ASCART, ADAPAB, PALSAMAD	Workshops with the assembly		No activities have been reported for this period.
	% of women in roles that were previously recognized only for men.	AIDER	Annual	Infierno, Palma Real, Sonene y Kotsimba	Workshop with the women of the community		Mrs. Hilda María Cordero Vacasahua, continues to serve as president of the native community of Infierno, the first community member to assume this position in the history of the community. Likewise, two community members are officially recognized as volunteer community park rangers of Tambopata National Reserve (Annex 54).
				COOPASER, AGROBOSQUE, ASCART, ADAPAB, PALSAMAD	Workshops in which women producers from the		No activities have been reported for this period.

Social impact monitoring matrix in the RNTAM and PNBAS - MDD REDD+ project area.							
Monitoring objective: to collect and generate information to permanently guide management actions and decision making by AIDER coordination, relevant to the fulfillment of the net positive effects proposed in the PDD.							
Component	Indicator	Responsible	Frequency	Locations of action and/or sampling	Methodology	January – December	Observations
					cooperative participate.		
Social	% of population with access to basic services	AIDER	Annual	Infierno, Palma Real, Sonene y Kotsimba	Surveys, meetings		Infierno Native Community: It has a drinking water system for water consumption, benefiting about 120 families (90% of the population). It has Basic Sanitation Units with biodigesters for the disposal of excreta built. Palma Real Native Community. They have implemented water pumping panels that have had better results for the community's water supply, and through the efforts of the board of directors, they have received donations from public institutions such as the municipality of Tambopata, among others (Annex 60). The Nativa Sonene community has a non-conventional system: an artesian water system that is only pumped according to the population's needs.
	% of communities with sufficient water for all	AIDER	Annual	Infierno, Palma Real, Sonene y Kotsimba	Surveys, meetings		The native communities of Infierno are the only ones with 24-hour service. The native communities Palma Real and Sonene, managed and obtained the recognition of their respective JASS, with the support of the Provincial Municipality of Tambopata.
	% of communities have water suitable for human consumption	AIDER	Annual	Infierno, Palma Real, Sonene y Kotsimba	Surveys, meetings		The native community of Infierno: water is chlorinated for human consumption using chlorination equipment managed by the Junta Administradora del Servicio de Saneamiento JASS.
	Reduction of diseases and parasites caused by water consumption	AIDER	Annual	Infierno, Palma Real, Sonene y Kotsimba	Surveys, meetings		No activities have been reported for this period.
	% de la población con acceso a la educación básica	AIDER	Annual	Infierno, Palma Real, Sonene y Kotsimba	Surveys, meetings		The levels are maintained because there has not been a project that contributes to improving access to the education system (Annex 59, 60). As part of the environmental education work in the communities, AIDER in coordination with the UGEL Tambopata facilitates the printing of the Community Calendar material for Sonene.

Social impact monitoring matrix in the RNTAM and PNBAS - MDD REDD+ project area.							
Monitoring objective: to collect and generate information to permanently guide management actions and decision making by AIDER coordination, relevant to the fulfillment of the net positive effects proposed in the PDD.							
Component	Indicator	Responsible	Frequency	Locations of action and/or sampling	Methodology	January – December	Observations
	% of the population improves their health	AIDER	Annual	Infierno, Palma Real, Sonene y Kotsimba	Surveys, meetings		This indicator is under evaluation, since the project does not have a major impact, medical post. In the COVID 19 pandemic scenario, the need for improvements and lack of the health facility has been identified in the face of scenarios that require primary care to the population.
	% of families have improved their homes	AIDER	Annual	Infierno, Palma Real, Sonene y Kotsimba	Surveys, meetings		This indicator is being evaluated. It should be done every 5 years, according to the income and results of the project.

2022

Present the results of the community impact monitoring which should include:

- Among the community groups that have benefited are 355 producer families.
- Establishment of cocoa plots under FFS, planting at least 12 hectares, and approximately 11,000 seedlings have been delivered during the first quarter.
- Community and organizational groups have been strengthened through their presence at local and national fairs.
- During the year, approximately 1,000 producers located in the buffer zone have received technical assistance.
- Surveillance brigades have been carried out with volunteer park rangers and community vigilantes, cooperating with official park rangers and RNTAM and PNBAS specialists.
- Several national fairs have been held with the participation of different members of associations and native communities.
- Thanks to the monitoring carried out by the community and official park rangers, the monitoring reports include new practices in drone flying, filling out forms, using professional cameras, training to strengthen their skills (86 park rangers were trained), and other activities that contribute to environmental conservation (Annex 66).
- Forest firefighters have been equipped so that they can carry out their job of protecting the forest and its surroundings in favor of the environment (Annex 70).

Social impact monitoring matrix in the RNTAM and PNBAS - MDD REDD+ project area.
Monitoring objective: to collect and generate information to permanently guide management actions and decision making by AIDER coordination, relevant to the fulfillment of the net positive effects proposed in the PDD.

Component	Indicator	Responsible	Frequency	Locations of action and/or sampling	Methodology	January – December	Observations
Governance	% of boards of directors improve and strengthen their relations among their representatives and with local authorities.	AIDER	Semiannual	Palma Real, Infierno, Sonene y Kotsimba	Management committees, meeting reports and agreements.	X	During this period, meetings have been held with the MTA, the Regional Government, RENIEC and the Congress of the Republic (Annex 75). Regional, RENIEC and the Congress of the Republic (Annex 75).
				COOPASER, AGROBOSQUE, ASCART, ADAPAB, PALSAMAD	Report of meetings and agreements.	X	During this period there were meetings with the CDG on the master plan and issues related to the legal physical regulation of the land (Annex 72). A commitment agreement was signed with SERNANP under the Allies for Conservation brand (Annex 57).
	% of boards of directors participating in organizational strengthening workshops.	AIDER	Semiannual	Palma Real, Infierno, Sonene. Kotsimba	Review of the reports of the activities carried out	X	The Shi'Oi association has been developing TRC, management, communication and leadership training (Annex 52). They are working with the CCNN work plan. (Annex 74).
				COOPASER, AGROBOSQUE, ASCART, ADAPAB, PALSAMAD	Review of reports of workshops and project activities.	X	During this period, training has been provided to 321 producers in the ZA (Annex 54).
	% of workshops on the development and implementation of the Life Plan.	AIDER	Semiannual	Infierno, Palma Real, Sonene y Kotsimba	Workshop for the elaboration and implementation of the Life Plan.		The communities have a life plan, except for Kotsimba, which has decided to postpone it due to communal issues (Annex 77).
	% of boards of directors trained in document archiving methodology.	AIDER	Semiannual	Infierno, Palma Real, Sonene y Kotsimba	Review of the training course reports of the project activities.		During this period, the artisan associations received training to strengthen business management (Annex 52).

Social impact monitoring matrix in the RNTAM and PNBAS - MDD REDD+ project area.

Monitoring objective: to collect and generate information to permanently guide management actions and decision making by AIDER coordination, relevant to the fulfillment of the net positive effects proposed in the PDD.

Component	Indicator	Responsible	Frequency	Locations of action and/or sampling	Methodology	January – December	Observations
				COOPASER, AGROBOSQUE, ASCART, ADAPAB, PALSAMAD	Review of training course reports of project activities.		Support was provided to producers in the documentation of organic production (Annex 58).
	% of boards of directors are duly registered in public registries.	AIDER	Semiannual	Infierno, Palma Real, Sonene y Kotsimba	Meeting with the board of directors		During this period, the Shi'Oi association was registered (Annex 52). The new boards of directors of the NCCNs were registered (Annex).
				COOPASER, AGROBOSQUE, ASCART, ADAPAB, PALSAMAD	Board meeting		The boards of directors of the associations have not been updated.
	% of boards of directors make decisions in a participatory and democratic manner.	AIDER	Semiannual	Infierno, Palma Real, Sonene y Kotsimba	Meeting with the board of directors		
				COOPASER, AGROBOSQUE, ASCART, ADAPAB, PALSAMAD	Participatory workshop with the assembly		
	% of boards of directors receive business training.	AIDER	Semiannual	COOPASER, AGROBOSQUE, ASCART, ADAPAB, PALSAMAD	Participatory workshop with the assembly		During this period they have received training on organizational structure, economic situation and management (Annex 78).
	% of boards of directors incorporate women in their governance team.	AIDER	Semiannual	Infierno, Palma Real, Sonene y Kotsimba	Participatory assembly workshop		The associations have been strengthened by having women members in their bases (Annex 76).
				COOPASER, AGROBOSQUE, ASCART, ADAPAB, PALSAMAD	Meeting with boards of directors, review of project reports		During this period the president of AGROBOSQUE participated in a national fair (Annex 86).
	% of assemblies make democratic decisions about	AIDER	Semiannual	Infierno, Palma Real, Sonene y Kotsimba	Workshop with the board of directors		The Kotsimba community decided to postpone updating

Social impact monitoring matrix in the RNTAM and PNBAS - MDD REDD+ project area.

Monitoring objective: to collect and generate information to permanently guide management actions and decision making by AIDER coordination, relevant to the fulfillment of the net positive effects proposed in the PDD.

Component	Indicator	Responsible	Frequency	Locations of action and/or sampling	Methodology	January – December	Observations
	the development of their life plans.						the life plan due to communal issues (Annex 95).
	% of assemblies are strengthened organizationally.	AIDER	Semiannual	Infierno, Palma Real, Sonene y Kotsimba	Participatory workshop		During this period, tools have been provided to strengthen the associations (Annex 75).
				COOPASER, AGROBOSQUE, ASCART, ADAPAB, PALSAMAD	Participatory workshop		During this period, informative material and organizational strengthening training has been provided to the associations (Annex 78, 79, 81).
	% of assemblies democratically decide on the incursion into new productive activities.	AIDER	Semiannual	Infierno, Palma Real, Sonene y Kotsimba	Participatory workshop		The Shi'O'i association has begun to carry out TRC as new economic income (Annex 52).
				COOPASER, AGROBOSQUE, ASCART, ADAPAB, PALSAMAD	Participatory workshop		The systematization of the SAF plots generates better production results (Annex 51). During this period, 355 families benefited from the cocoa project (Annex 52).
	% of boards of directors update their communities' bylaws.	AIDER	Semiannual	Infierno, Palma Real, Sonene y Kotsimba	Board meeting and document review		The statutes of the communities remain in force and unchanged.
				COOPASER, AGROBOSQUE, ASCART, ADAPAB, PALSAMAD	Board meeting and document review		The statutes of the associations remain in force and unchanged.
	% of boards of directors promote the elaboration or revision of the life plan of their community	AIDER	Semiannual	Infierno, Palma Real, Sonene y Kotsimba	Meeting with the board of directors and review of your document		The Native communities have kept their life plan in effect, except for Kotsimba, which decided to postpone it due to communal issues (Annex 73).
	% of committees are created to improve the management of productive activities in the community	AIDER	Semiannual	Infierno, Palma Real, Sonene y Kotsimba	Review of community documents		

Social impact monitoring matrix in the RNTAM and PNBAS - MDD REDD+ project area.							
Monitoring objective: to collect and generate information to permanently guide management actions and decision making by AIDER coordination, relevant to the fulfillment of the net positive effects proposed in the PDD.							
Component	Indicator	Responsible	Frequency	Locations of action and/or sampling	Methodology	January – December	Observations
	% of boards of directors participate in coordination meetings in the RNTAM Management Committee and the PNBAS Management Committee.	AIDER	Semiannual	Infierno, Palma Real, Sonene y Kotsimba	RNTAMB Management Committee Meeting		During this period, support was provided for the master plan management process with 04 meetings in Puno (Annex 50).
				COOPASER, AGROBOSQUE, ASCART, ADAPAB, PALSAMAD	RNTAMB Management Committee meeting		
Economic	% of committees receive training in resource management	AIDER	Semiannual	Infierno, Palma Real, Sonene y Kotsimba	Participation in training workshops and review of reports on project activities.		The Shi'Oï craftswomen's association has been developing rural community tourism (Annex 52).
				COOPASER, AGROBOSQUE, ASCART, ADAPAB, PALSAMAD	Participation in training workshops and review of reports on project activities.		During this period, 17,360 cacao seedlings were grafted for farmers (Annex 52). Sustainable production activities were implemented (Annex 87). Internships were held to learn about the chocolate production process (Annex 86).
	% of committees participate in workshops on product processing	AIDER	Semiannual	Infierno, Palma Real, Sonene y Kotsimba	Review of project reports		
				COOPASER, AGROBOSQUE, ASCART, ADAPAB, PALSAMAD	Review of project reports		Work was done with PALSAMAD on aguaje harvesting (Annex 80). Improvements are being implemented in the production and manufacturing process (Annex 84).
	% of committees participate in market search workshops	AIDER	Semiannual	Infierno, Palma Real, Sonene y Kotsimba	Review of project reports		The Shi'Oï artisan association is developing the TRC. The associations participate in national fairs offering handicraft products (Annex 52).

Social impact monitoring matrix in the RNTAM and PNBAS - MDD REDD+ project area.

Monitoring objective: to collect and generate information to permanently guide management actions and decision making by AIDER coordination, relevant to the fulfillment of the net positive effects proposed in the PDD.

Component	Indicator	Responsible	Frequency	Locations of action and/or sampling	Methodology	January – December	Observations
				COOPASER, AGROBOSQUE, ASCART, ADAPAB, PALSAMAD	Review of project reports		During this period there have been discussions on product promotion (Annex 79).
	% of family farmers have benefited from new sustainable productive activities.	AIDER	Semiannual	Infierno, Palma Real, Sonene y Kotsimba	Review of project reports		The implementation of TRC represents a new sustainable productive activity (Annex 52).
				COOPASER, AGROBOSQUE, ASCART, ADAPAB, PALSAMAD	Review of project activity reports and visit to plots of land		During this period, 355 families benefited from the cocoa project. A total of 58.9 hectares have been established under the SAF model and replanted in plots (Annex 52). Training has been provided to farmers in the ZA (Annex 54). TRC is being implemented in SAF (Annex 55).
	% of family producers are trained in production chain processes	AIDER	Semiannual	COOPASER, AGROBOSQUE, ASCART, ADAPAB, PALSAMAD	Meeting with boards of directors, review of workshop report on project activities		During this period farmers acquired knowledge about soil nutrients and fertility (Annex 52).
	% of producer families receive new income from sustainable production activities.	AIDER	Semiannual	Infierno, Palma Real, Sonene y Kotsimba	Workshop with boards of directors		The Shi'Oi artisan association is developing CRT (Annex 52). They are also participating in national fairs.
				COOPASER, AGROBOSQUE, ASCART, ADAPAB, PALSAMAD	Workshop with boards of directors		During this period, 355 families benefited from the cocoa project. A total of 58.9 hectares have been established under the SAF model and replanting in plots (Annex 52). The TRC is being implemented in SAF (Annex 55).
	% of boards of directors receive training on new technologies	AIDER	Semiannual	Infierno, Palma Real, Sonene y Kotsimba	Workshops		

Social impact monitoring matrix in the RNTAM and PNBAS - MDD REDD+ project area.

Monitoring objective: to collect and generate information to permanently guide management actions and decision making by AIDER coordination, relevant to the fulfillment of the net positive effects proposed in the PDD.

Component	Indicator	Responsible	Frequency	Locations of action and/or sampling	Methodology	January – December	Observations
				COOPASER, AGROBOSQUE, ASCART, ADAPAB, PALSAMAD	Workshops		During this period, articles were delivered for the development of management skills (Annex 83). The regenerative livestock pilot project was started under the silvopastoral system (Annex 53). A kit for palm tree climbers was delivered during this period (Annex 89).
	% of chestnut-growing families trained to add value to their raw materials	AIDER	Semiannual	ASCART	Review of project activity reports		During this period, sales contracts, work plans, machine maintenance and participation in fairs have been established (Annex 85). Experiential tourism is being implemented along the nut route (Annex 89).
	% of boards of directors receive training on alternative sustainable production activities	AIDER	Semiannual	Infierno, Palma Real, Sonene y Kotsimba	Review of project activity reports		
				COOPASER, AGROBOSQUE, ASCART, ADAPAB, PALSAMAD	Review of project activity reports		Training was provided on organic certification and fair trade (Annex 58).
	% of tourism enterprises engaged in training families with tourism-related initiatives	AIDER	Semiannual	Bajo y medio Tambopata	Review of project activity reports		During this period, the enterprises of Lake Sandoval have completed internships to implement CRT (Annex 89).
	% of initiatives receive improved income from the promotion of tourism activity within the project area	AIDER	Semiannual	Bajo y medio Tambopata, Infierno	Review of project activity reports		Tourism activities were reopened during this period (Annex 89).

Social impact monitoring matrix in the RNTAM and PNBAS - MDD REDD+ project area.

Monitoring objective: to collect and generate information to permanently guide management actions and decision making by AIDER coordination, relevant to the fulfillment of the net positive effects proposed in the PDD.

Component	Indicator	Responsible	Frequency	Locations of action and/or sampling	Methodology	January – December	Observations
Environmental	% of committees participating in climate change awareness workshops	AIDER	Semiannual	Infierno, Palma Real, Sonene y Kotsimba	Participation in workshops and review of project reports		During this period it is planned to carry out a diagnosis of the ZA, recognizing the mining problems and their consequences (Annex 51).
	% of boards of directors participate in REDD+ training workshops	AIDER	Semiannual	Infierno, Palma Real, Sonene y Kotsimba	Review of workshop reports from the project activities.		During this period, VERRA's auditor visited the CCNNs (Annex 96).
				COOPASER, AGROBOSQUE, ASCART, ADAPAB, PALSAMAD	Review of reports of workshops conducted by project activities		During this period visits were made with the VERRA auditor to the Sandoval PVC (Annex 96).
	% of assemblies aware of climate change and its consequences	AIDER	Semiannual	Infierno, Palma Real, Sonene y Kotsimba	Participatory workshop		
				COOPASER, AGROBOSQUE, ASCART, ADAPAB, PALSAMAD	Participatory workshop		During this period, the residents of Sandoval participated in an internship on NRNR conservation (Annex 89). An investigation and follow-up on the issue of illegal mining in the ZA has been conducted (Annex 80).
	% of boards of directors implement burn control in their communities	AIDER	Semiannual	Infierno, Palma Real, Sonene y Kotsimba	Meeting with the Board of Directors		
				COOPASER, AGROBOSQUE, ASCART, ADAPAB, PALSAMAD	Meeting with the Board of Directors		During this period, new fire control methods have been used: SAF model and replanting of plots (Annex 52).
	% families committed to sustainable nutrient management	AIDER	Annual	Palma Real, Sonene, Loero, Jorge Chávez, Nueva América, Las Mercedes, etc.	Participatory workshop		

Social impact monitoring matrix in the RNTAM and PNBAS - MDD REDD+ project area.

Monitoring objective: to collect and generate information to permanently guide management actions and decision making by AIDER coordination, relevant to the fulfillment of the net positive effects proposed in the PDD.

Component	Indicator	Responsible	Frequency	Locations of action and/or sampling	Methodology	January – December	Observations
				ASCART	Participatory workshop		Coordinations have been made to take their products to the national and international markets (Annex 79).
Community	% of boards of directors promote the development of sustainable productive activities in their communities, within the framework of gender equity.	AIDER	Annual	Infierno, Palma Real, Sonene y Kotsimba	Board meeting and review of productive activities report		The Shi'Oi association of women artisans has been developing TRC (Annex 52). Organizational management training for CCNN associations (Annex 95).
				COOPASER, AGROBOSQUE, ASCART, ADAPAB, PALSAMAD	Meeting with the board of directors and review of productive activities report		Participatory monitoring sheets have been prepared for SAF plots (Annex 61). During this period, the AGROBOSQUE representative participated in a national fair (Annex 86).
	% of committees are made up of both men and women	AIDER	Annual	Infierno, Palma Real, Sonene y Kotsimba	Meeting with the committees		The Native communities and their associations have women leaders (Annex 52).
				COOPASER, AGROBOSQUE, ASCART, ADAPAB, PALSAMAD	Meeting with committees		The boards of directors are made up of both men and women (Annex 86).
	% of women officially recognized as leaders in their communities	AIDER	Annual	Infierno, Palma Real, Sonene y Kotsimba	Participation in workshops and review of reports of project activities		During this period, a handicraft house was built for the Masheke and Shi'Oi associations with women presidents (Annex 52).
				COOPASER, AGROBOSQUE, ASCART, ADAPAB, PALSAMAD	Participation in workshops and review of project activity reports		AGROBOSQUE has a female representative (Annex 86).
	% of women are aware of the importance of women's contribution in the context of climate change	AIDER	Annual	Infierno, Palma Real, Sonene y Kotsimba	Talleres participativos		Las artesanas hacen uso de insumos encontrados en el bosque, desde semillas y fibras para la elaboración de artesanía.

Social impact monitoring matrix in the RNTAM and PNBAS - MDD REDD+ project area.							
Monitoring objective: to collect and generate information to permanently guide management actions and decision making by AIDER coordination, relevant to the fulfillment of the net positive effects proposed in the PDD.							
Component	Indicator	Responsible	Frequency	Locations of action and/or sampling	Methodology	January – December	Observations
				COOPASER, AGROBOSQUE, ASCART, ADAPAB, PALSAMAD	Participatory workshops		
	% of women participate in benefit-sharing decisions	AIDER	Annual	COOPASER, AGROBOSQUE, ASCART, ADAPAB, PALSAMAD	Workshops with the assembly		
	% of women exercise roles previously recognized as only for men	AIDER	Annual	Infierno, Palma Real, Sonene y Kotsimba	Workshops with the women of the community		During this period, the members of the organizations have traveled outside the region (Annex 76).
				COOPASER, AGROBOSQUE, ASCART, ADAPAB, PALSAMAD	Workshops with the participation of women producers from the cooperative		AGROBOSQUE's president has participated in national fairs (Annex 86).
Social	% of population with access to basic services	AIDER	Annual	Infierno, Palma Real, Sonene y Kotsimba	Surveys, meetings		Work has begun on the installation of a water supply system (Annex 75).
	% of communities with sufficient water for all	AIDER	Annual	Infierno, Palma Real, Sonene y Kotsimba	Surveys, meetings		Steps have been taken to install a water supply system (Annex 75).
	% of communities with water suitable for human consumption	AIDER	Annual	Infierno, Palma Real, Sonene y Kotsimba	Surveys, meetings		During this period, a socioeconomic diagnosis of the ZA has been carried out in order to know the reality of the populations (Annex 51).
	Decrease in diseases and parasites caused by water consumption	AIDER	Annual	Infierno, Palma Real, Sonene y Kotsimba	Surveys, meetings		
	% of the population with access to basic education	AIDER	Annual	Infierno, Palma Real, Sonene y Kotsimba	Surveys, meetings		During this period, a socioeconomic diagnosis of the ZA has been prepared to learn about the reality of the populations (Annex 51).
	% of population with improved health	AIDER	Annual	Infierno,	Surveys, meetings		

Social impact monitoring matrix in the RNTAM and PNBAS - MDD REDD+ project area.							
Monitoring objective: to collect and generate information to permanently guide management actions and decision making by AIDER coordination, relevant to the fulfillment of the net positive effects proposed in the PDD.							
Component	Indicator	Responsible	Frequency	Locations of action and/or sampling	Methodology	January – December	Observations
				Palma Real, Sonene y Kotsimba			
	% of families have improved their homes	AIDER	Annual	Infierno, Palma Real, Sonene y Kotsimba	Surveys, meetings		During this period, a socioeconomic diagnosis of the ZA has been prepared to learn about the reality of the populations (Annex 51)

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Social impact monitoring matrix in the RNTAM and PNBAS - MDD REDD+ project area.							
Objective of monitoring: to gather and generate information that will allow AIDER's coordination to permanently guide management actions and decision making, relevant to the fulfillment of the net positive effects proposed in the PDD.							
Component	Indicator	Responsible	Frequency	Locations of action and/or sampling	Methodology	January – December	Observations
Governance	% of boards of directors improve and strengthen relations among their representatives and with local authorities.	AIDER	Semiannual	Palma Real, Infierno, Sonene y Kotsimba	Management committees, report of meetings and agreements.		CN. Palma Real, social programs, MINAN, FIP-BID, and the PNCB were visited (Annex 70). CN. Sonene, RENIEC facilitated the updating and collection of data from the community's population. The councilors of the Tambopata municipality made a visit to collect concerns about basic services, social programs, etc. (Annex 70).
				COOPASER, AGROBOSQUE, ASCART, ADAPAB, PALSAMAD	Report of meetings and agreements.		The collaboration agreement between AGROBOSQUE and AIDER has been renewed (Annex 71).
	% of boards of directors participate in organizational strengthening workshops.	AIDER	Semiannual	Palma Real, Infierno, Sonene. Kotsimba	Review of reports of activities carried out.		As a method of organizational strengthening for the communities, two aluminum cans were delivered to the NCs. Palma Real and Sonene (Annex 70).
				COOPASER, AGROBOSQUE, ASCART, ADAPAB, PALSAMAD	Review of reports of workshops and project activities.		Training was provided on strengthening tourism management, operating costs, operational planning and associative development (Annex 71).
	% of workshops on the development and implementation of the Life Plan.	AIDER	Semiannual	Infierno, Palma Real, Sonene y Kotsimba	Workshop for the elaboration and implementation of the Life Plan.		The native communities have their life plans in effect, except for Kotsimba, which has yet to update its plan.
	% of boards of directors receive training in document archiving methodology.	AIDER	Semiannual	Infierno, Palma Real, Sonene y Kotsimba	Review of training course reports of project activities.		Sonene native community prepared the business idea supplementary sheet for the FIP-IDB. It also contributed to compliance with the PNCB agreements (Annex 70). The artisan association received training in tourism management and the artisan value chain (Annex 71).

Social impact monitoring matrix in the RNTAM and PNBAS - MDD REDD+ project area.							
Objective of monitoring: to gather and generate information that will allow AIDER's coordination to permanently guide management actions and decision making, relevant to the fulfillment of the net positive effects proposed in the PDD.							
Component	Indicator	Responsible	Frequency	Locations of action and/or sampling	Methodology	January – December	Observations
				COOPASER, AGROBOSQUE, ASCART, ADAPAB, PALSAMAD	Review of training course reports of project activities.		No document archiving activities have been reported during this period.
	% of boards of directors are duly registered in public registries.	AIDER	Semiannual	Infierno, Palma Real, Sonene y Kotsimba	Meeting with the board of directors		Palma Real native community, the Bokao association formalized its creation with DIREPRO (Annex 70). During 2023, the Native communities of Sonene and Palma Real had their boards of directors in effect and duly registered with SUNARP.
				COOPASER, AGROBOSQUE, ASCART, ADAPAB, PALSAMAD	Board meeting		By 2023, the productive associations have all the necessary documents for their operations; to date, fair trade and organic certification initiatives are being promoted; however, no updating processes have been registered
	% of boards of directors make decisions in a participatory and democratic manner.	AIDER	Semiannual	Infierno, Palma Real, Sonene y Kotsimba	Meeting with the board of directors		During this period, the native communities have held assemblies with the participation of the members registered in their registry book for democratic decision making.
				COOPASER, AGROBOSQUE, ASCART, ADAPAB, PALSAMAD	Participatory workshop with the assembly		Productive associations hold assemblies with active members and make democratic decisions.
	% of boards of directors receive business training.	AIDER	Semiannual	COOPASER, AGROBOSQUE, ASCART, ADAPAB, PALSAMAD	Participatory workshop with the assembly		ADAPAB, in the process of obtaining AMYPE accreditation, prepared an environmental management tool, a descriptive report, and processed the compatibility opinion with SERNANP (Annex 78).
	% of boards of directors incorporate women in their governance team.	AIDER	Semiannual	Infierno, Palma Real, Sonene y Kotsimba	Workshop with the board of directors		Palma Real Community, the Shi'O'i craftswomen's association whose board of directors is made up of a majority of women. Sonene native community, the board of directors' position of treasurer was assumed by a woman. Likewise, the Masheke

Social impact monitoring matrix in the RNTAM and PNBAS - MDD REDD+ project area.							
Objective of monitoring: to gather and generate information that will allow AIDER's coordination to permanently guide management actions and decision making, relevant to the fulfillment of the net positive effects proposed in the PDD.							
Component	Indicator	Responsible	Frequency	Locations of action and/or sampling	Methodology	January – December	Observations
							women's artisan association is made up exclusively of women.
				COOPASER, AGROBOSQUE, ASCART, ADAPAB, PALSAMAD	Workshop with the board of directors		AGROBOSQUE, whose current manager is Mrs. Doris Fuentes Holanda.
	% of assemblies make democratic decisions about the development of their life plans.	AIDER	Semiannual	Infierno, Palma Real, Sonene y Kotsimba	Participatory workshop		The life plan of the native communities is in effect 2021-2025, except for Kotsimba, which has not yet resumed activities to update it.
	% of assemblies are strengthened organizationally.	AIDER	Semiannual	Infierno, Palma Real, Sonene y Kotsimba	Participatory workshop		CN. Sonene, during this period the Masheke association won a competitive fund to improve their capacities and provide them with the necessary equipment to develop handicrafts thanks to AGROIDEAS (Annex 49). The Masheke and Shi'Oi craftswomen's association inaugurated their cultural house, a space for interaction and a workshop for making handicrafts (Annex 49).
				COOPASER, AGROBOSQUE, ASCART, ADAPAB, PALSAMAD	Participatory workshop		No strengthening activities have been carried out during this period.
	% of assemblies democratically decide on the incursion into new productive activities.	AIDER	Semiannual	Infierno, Palma Real, Sonene y Kotsimba	Participatory workshop		Palma Real Native community, the Shi'Oi artisan association has started activities with TRC as a new productive activity (Annex 48).
				COOPASER, AGROBOSQUE, ASCART, ADAPAB, PALSAMAD	Participatory workshop		
	% of boards of directors update their communities' bylaws.	AIDER	Semiannual	Infierno, Palma Real, Sonene y Kotsimba	Meeting with the board of directors and review of your document		Not reported during this period.

Social impact monitoring matrix in the RNTAM and PNBAS - MDD REDD+ project area.							
Objective of monitoring: to gather and generate information that will allow AIDER's coordination to permanently guide management actions and decision making, relevant to the fulfillment of the net positive effects proposed in the PDD.							
Component	Indicator	Responsible	Frequency	Locations of action and/or sampling	Methodology	January – December	Observations
				COOPASER, AGROBOSQUE, ASCART, ADAPAB, PALSAMAD	Board meeting and document review		Not reported during this period.
	% of boards of directors promote the elaboration or revision of their community's life plan.	AIDER	Semiannual	Infierno, Palma Real, Sonene y Kotsimba	Meeting with the board of directors and review of your document		Not reported during this period.
	% of committees are created to improve the management of community productive activities.	AIDER	Semiannual	Infierno, Palma Real, Sonene y Kotsimba	Review of community documents		Not reported during this period.
	% of boards of directors participate in coordination meetings in the RNTAM Management Committee and the PNBAS Management Committee.	AIDER	Semiannual	Infierno, Palma Real, Sonene y Kotsimba	Meeting with the RNTAM Management Committee		During this period Palma Real native community participated in the RNTAM management roundtable in Puerto Maldonado (Annex 67).
				COOPASER, AGROBOSQUE, ASCART, ADAPAB, PALSAMAD	Meeting with RNTAM Management Committee		Not reported during this period.
Economic	% of committees receive training in resource management	AIDER	Semiannual	Infierno, Palma Real, Sonene y Kotsimba	Participation in training workshops and review of project activity reports.		Palma Real native community, the Shi'Oi association has received training in customer service and the production of bio-jewelry (Annex 48).
				COOPASER, AGROBOSQUE, ASCART, ADAPAB, PALSAMAD	Participation in training workshops and review of reports on project activities.		Training on organic cocoa production, biofertilizers and other topics has been provided to the production associations (Annex 50).
	% of committees participate in workshops on product processing	AIDER	Semiannual	Infierno, Palma Real, Sonene y Kotsimba	Review of project reports		The Shi'Oi and Masheke de Palma Real and Sonene associations received training in the production of bio-jewelry and the collection of new seeds (Annex 48).

Social impact monitoring matrix in the RNTAM and PNBAS - MDD REDD+ project area.

Objective of monitoring: to gather and generate information that will allow AIDER's coordination to permanently guide management actions and decision making, relevant to the fulfillment of the net positive effects proposed in the PDD.

Component	Indicator	Responsible	Frequency	Locations of action and/or sampling	Methodology	January – December	Observations
				COOPASER, AGROBOSQUE, ASCART, ADAPAB, PALSAMAD	Review of project reports		During this period, PALSAMAD obtained an oil filter for extracting aguaje pulp and bottling it (Annex 74).
	% of committees participate in workshops on market research.	AIDER	Semiannual	Infierno, Palma Real, Sonene y Kotsimba	Review of project reports		The incursion into community-based rural tourism in the Shi'Oí de Palma Real association represents the beginning of an activity that contributes to the sustainable development of the population (Annex 48).
				COOPASER, AGROBOSQUE, ASCART, ADAPAB, PALSAMAD	Review of project reports		To improve the value chain and route to market in ASCART, the information provided through social networks is being improved (Annex 73). PALSAMAD participated in the Allies for Interculturality and Conservation fair (Annex 74). AGROBOSQUE, dissemination of information content and improvement of the association's facilities (Annex 75).
	% of family producers have benefited from new sustainable production activities.	AIDER	Semiannual	Infierno, Palma Real, Sonene y Kotsimba	Review of project reports		Palma Real, the community technicians are working on the construction of a nursery in the community (Annex 50).
				COOPASER, AGROBOSQUE, ASCART, ADAPAB, PALSAMAD	Review of project activity reports and field visits		During this period, technical assistance has been provided to farmers in the ZA (Annex 52). Implementation of SAF pilot plots for TRC (Annex 53).
	% of family producers are trained in production chain processes	AIDER	Semiannual	COOPASER, AGROBOSQUE, ASCART, ADAPAB, PALSAMAD	Meeting with boards of directors, review of workshop report on the project activities		During this period, COOPASER members were trained in the Fairtrade system and the Fair Trade 2023 Development Plan was prepared (Annex 55).
	% of producer families receive new income	AIDER	Semiannual	Infierno, Palma Real, Sonene y Kotsimba	Workshop with boards of directors		

Social impact monitoring matrix in the RNTAM and PNBAS - MDD REDD+ project area.							
Objective of monitoring: to gather and generate information that will allow AIDER's coordination to permanently guide management actions and decision making, relevant to the fulfillment of the net positive effects proposed in the PDD.							
Component	Indicator	Responsible	Frequency	Locations of action and/or sampling	Methodology	January – December	Observations
	from sustainable production activities.			COOPASER, AGROBOSQUE, ASCART, ADAPAB, PALSAMAD	Workshop with boards of directors		During this period the associations have been trained in: biofertilizer production, cacao, pest control, water quality, formalization process, and soil samples (Annex 53).
	% of boards of directors receive training on new technologies	AIDER	Semiannual	Infierno, Palma Real, Sonene y Kotsimba	Workshops		No similar activities have been carried out during this period.
				COOPASER, AGROBOSQUE, ASCART, ADAPAB, PALSAMAD	Workshops		The AGROBOSQUE association received support for the sanitary registration of cocoa products, facilitating distribution channels (Annex 55). ADAPAB acquired a transformer and a transformix to improve the preparation of balanced feed for Amazonian fish (Annex 78).
	% of chestnut-growing families have been trained to add value to their raw materials	AIDER	Semiannual	ASCART	Review of project activity reports		Internal control and documentation verification activities have been carried out (Annex 55).
	% of boards of directors receive training on alternative sustainable productive activities	AIDER	Semiannual	Infierno, Palma Real, Sonene y Kotsimba	Review of project activity reports		Kotsimba native community conducted internships in aguaje processing at PALSAMAD and ADAPAB (Annex 50).
				COOPASER, AGROBOSQUE, ASCART, ADAPAB, PALSAMAD	Review of project activity reports		During this period, training was provided to the associations (Annex 73).
	% of tourism enterprises engaged in training families with tourism-related initiatives	AIDER	Semiannual	Bajo y medio Tambopata	Review of project activity reports		AOATAM's contribution to community tourism was recognized at the national level and a situational diagnosis was prepared (Annex 78).
	% of initiatives receive improved income from the promotion of tourism activity within the project area	AIDER	Semiannual	Bajo y medio Tambopata, Infierno	Review of project activity reports		In order to contribute to the promotion of tourism activities, informative material was prepared for local enterprises associated with AOATAM (Annex 77).

Social impact monitoring matrix in the RNTAM and PNBAS - MDD REDD+ project area.							
Objective of monitoring: to gather and generate information that will allow AIDER's coordination to permanently guide management actions and decision making, relevant to the fulfillment of the net positive effects proposed in the PDD.							
Component	Indicator	Responsible	Frequency	Locations of action and/or sampling	Methodology	January – December	Observations
Environment	% of committees participating in climate change awareness workshops	AIDER	Semiannual	Infierno, Palma Real, Sonene y Kotsimba	Participation in workshops and review of project reports		No activities were carried out during this period.
	% of boards of directors participate in REDD+ training workshops	AIDER	Semiannual	Infierno, Palma Real, Sonene y Kotsimba	Review of workshop reports from project activities		No activities were carried out during this period.
				COOPASER, AGROBOSQUE, ASCART, ADAPAB, PALSAMAD	Review of workshop reports from project activities		No activities were carried out during this period.
	% of assemblies aware of climate change and its consequences	AIDER	Semiannual	Infierno, Palma Real, Sonene y Kotsimba	Participatory workshop		No activities were carried out during this period.
				COOPASER, AGROBOSQUE, ASCART, ADAPAB, PALSAMAD	Participatory workshop		During this period the producers have recorded species in their territory through participatory monitoring sheets, however, they have realized that external factors are affecting the climate and the habitat of the species (Annex 57).
	% of boards of directors implement burn control in their communities	AIDER	Semiannual	Infierno, Palma Real, Sonene y Kotsimba	Board meeting		No activities were carried out during this period.
				COOPASER, AGROBOSQUE, ASCART, ADAPAB, PALSAMAD	Board meeting		No activities were carried out during this period.
	% of families committed to sustainable nut management	AIDER	Annual	Palma Real, Sonene, Loero, Jorge Chávez, Nueva América, Las Mercedes, etc.	Participatory workshop		A pilot silvopastoral system was implemented during this period (Annex 53). Training was provided to the yuqueros on how to take soil samples (Annex 76).
				ASCART	Participatory workshop		No activities were carried out during this period.
Community	% of boards of directors promote the development of	AIDER	Annual	Infierno, Palma Real, Sonene y Kotsimba	Board meeting and review of		The native communities of Palma Real and Sonene have formed associations made up

Social impact monitoring matrix in the RNTAM and PNBAS - MDD REDD+ project area.							
Objective of monitoring: to gather and generate information that will allow AIDER's coordination to permanently guide management actions and decision making, relevant to the fulfillment of the net positive effects proposed in the PDD.							
Component	Indicator	Responsible	Frequency	Locations of action and/or sampling	Methodology	January – December	Observations
	sustainable productive activities in their communities, within the framework of gender equity.				productive activities report		of women, producing handicrafts in a sustainable manner.
				COOPASER, AGROBOSQUE, ASCART, ADAPAB, PALSAMAD	Meeting with the Board of Directors and review of production activities report		
	% of committees are made up of men and women	AIDER	Annual	Infierno, Palma Real, Sonene y Kotsimba	Committee meeting		The organizational structure of the native communities Infierno, Sonene, Palma Real includes committees and/or work teams that are organized according to the activities they carry out: productive, health, education, surveillance, etc. (chestnut committee, artisan committee, surveillance, JASS, APAFA, sports, etc.) with the participation of women and men depending on the activities.
				COOPASER, AGROBOSQUE, ASCART, ADAPAB, PALSAMAD	Meeting with the committees		Women are part of this cooperative. They have a say and vote, they feel they are part of the development of their community, they are leaders of change. Information that can be verified in the members' list.
	% of women officially recognized as leaders in their communities	AIDER	Annual	Infierno, Palma Real, Sonene y Kotsimba	Participation in workshops and review of reports of project activities.		Teófila Saavedra and Matilde Huajojuajo assumed the positions of presidents of the artisan associations created in the communities of Palma Real and Sonene, respectively.
				COOPASER, AGROBOSQUE, ASCART, ADAPAB, PALSAMAD	Participation in workshops and review of project activity reports.		
	% of women are aware of the importance of women's contribution in % the context of climate change	AIDER	Annual	Infierno, Palma Real, Sonene y Kotsimba	Participatory workshops		No activities have been reported for this period.
				COOPASER, AGROBOSQUE,	Participatory workshops		No activities have been reported for this period.

Social impact monitoring matrix in the RNTAM and PNBAS - MDD REDD+ project area.							
Objective of monitoring: to gather and generate information that will allow AIDER's coordination to permanently guide management actions and decision making, relevant to the fulfillment of the net positive effects proposed in the PDD.							
Component	Indicator	Responsible	Frequency	Locations of action and/or sampling	Methodology	January – December	Observations
				ASCART, ADAPAB, PALSAMAD			
	% de mujeres participa en las decisiones para la distribución de beneficios	AIDER	Annual	COOPASER, AGROBOSQUE, ASCART, ADAPAB, PALSAMAD	Workshops with the assembly		No activities have been reported for this period.
	% of women participate in benefit-sharing decisions	AIDER	Annual	Infierno, Palma Real, Sonene y Kotsimba	Workshops with the women of the community		No activities have been reported for this period.
				COOPASER, AGROBOSQUE, ASCART, ADAPAB, PALSAMAD	Workshops with the participation of women producers of the cooperative		No activities have been reported for this period.
Social	% of women exercise roles that were previously recognized as only for men	AIDER	Annual	Infierno, Palma Real, Sonene y Kotsimba	Surveys, meetings		Infierno Native Community: It has a drinking water system for water consumption, benefiting about 120 families (90% of the population). It has Basic Sanitation Units with biodigesters for the disposal of excreta built. Palma Real Native Community. Water pumping panels have been implemented, which has had better results for water supply in the community. The Sonene Native Community has a non-conventional system: an artesian water system that is only pumped according to the needs of the population.
	% of communities with sufficient water for all	AIDER	Annual	Infierno, Palma Real, Sonene y Kotsimba	Surveys, meetings		The native community of Infierno is the only one with 24-hour service. The native communities of Palma Real and Sonene, managed and obtained recognition of their respective JASS, with support from the Tambopata Provincial Municipality.
	% of communities with water suitable for human consumption	AIDER	Annual	Infierno, Palma Real, Sonene y Kotsimba	Surveys, meetings		Not reported.

Social impact monitoring matrix in the RNTAM and PNBAS - MDD REDD+ project area.

Objective of monitoring: to gather and generate information that will allow AIDER's coordination to permanently guide management actions and decision making, relevant to the fulfillment of the net positive effects proposed in the PDD.

Component	Indicator	Responsible	Frequency	Locations of action and/or sampling	Methodology	January – December	Observations
	Decrease in diseases and parasites caused by water consumption	AIDER	Annual	Infierno, Palma Real, Sonene y Kotsimba	Surveys, meetings		Not reported.
	% of population with access to basic education	AIDER	Annual	Infierno, Palma Real, Sonene y Kotsimba	Surveys, meetings		Not reported.
	% of population with improved health	AIDER	Annual	Infierno, Palma Real, Sonene y Kotsimba	Surveys, meetings		Not reported.
	% of families have improved their homes	AIDER	Annual	Infierno, Palma Real, Sonene y Kotsimba	Surveys, meetings		This indicator is being evaluated. It should be done every 5 years, according to the income and results of the project.

4.3.2 Monitoring Plan Dissemination (CCB, CM4.3)

AIDER Communications, through the website and Facebook platform, disseminates and updates all the information on the activities carried out in the NPA and its Buffer Zone. This information (events, meetings, field visits and others), which is also awareness and knowledge dissemination, is publicly accessible and is part of the activities of Biological Monitoring, Research Promotion and Ecosystem Services. Regarding the latter, particularly due to the Covid context, webinar events were scheduled (Annex 59, 60).

Dissemination will continue to use the “bottom-up” strategy, seeking first and foremost to raise awareness among stakeholders in the field. Through AIDER’s and SERNANP’s digital platforms, all project activities (events, meetings, field visits and others) will be disseminated through websites and Facebook accounts, and the content of publicly accessible information will be updated frequently. This information will include dissemination of knowledge and awareness regarding important issues for community groups and that are covered in the activities carried out by the project through the activities of Biological Monitoring, Promotion of Research and Ecosystem Services.

4.4 Optional Criterion: Exceptional Community Benefits

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

2021

During the year 2021, the artisan activity in the native communities of Sonene and Palma Real was formalized with the creation of the legal status in the SUNARP of the “Asociación de Artesanas Masheke de la Comunidad Nativa Sonene” and the “Asociación de Mujeres Artesanas C.N. Palma Real Shi’Oi (Paucarcillo)”. In the short term, this action will benefit the artisans in their application for public and private funds to help improve and strengthen their activities in the use of forest resources for the production of basketry and bio-jewelry (Annex 59, 60).

A proposal was also designed to develop a tourism product using agroforestry systems that will benefit farmers in the Tambopata National Reserve's Buffer Zone. The characteristics of this activity are aligned with the development of Rural Community Tourism, a form of tourism that will improve the quality of life of the farmers who implement agroforestry systems in their agricultural plots (Annex 45).

2022

With the implementation of this project, native communities, population centers and associations will benefit from the implementation of productive activities with technical assistance, which will benefit the families because they will be able to generate economic income from the sale of their products; through the establishment of conservation agreements and participatory community monitoring, as well as the strengthening and consolidation of social organizations, the project seeks to redefine the relationship between the communities and the forest and its resources. In this way, it is hoped that the populations will gradually improve their quality of life in accordance with their own decisions..

It is believed that by implementing productive activities with the Associations and Communities settled in the project area, based on the income produced by the REDD mechanism, the generation of gradual economic income for the families and the nucleation of the population around activities that are perceived as economically and environmentally sustainable, will reduce internal migration, resulting in an improvement in their quality of life through access to better education and health care (two sectors that the State preferably attends to in populations of regular size and formal recognition), will reduce internal migration, resulting in the improvement of their quality of life, through access to better education and health care (two sectors that the State preferentially serves in populations of regular size and formal recognition), improvement of their housing (by becoming permanent housing) and better food. It is important to strengthen the modus vivendi of the communities, through cross-cutting projects that should strengthen organizational capacities of Native Associations and Communities, allowing families to reflect on the need to bring together income generation and the achievement of decent living conditions, without neglecting the latter aspect.

By avoiding the loss of critical biodiversity, we hope to halt the current trend of deterioration in the quality of life of rural populations and their dependence on products obtained from the market, particularly in the city of Puerto Maldonado (medicines, meat and other foodstuffs).

In sum, the net benefit of the project involves: the contribution to the material well-being of the populations through the generation of income through sustainable activities, capacity building and a change in the population's attitudes towards the use of the forest, as well as the preservation of the ecosystem values critical for human well-being. Other benefits derived indirectly from the project activity may be the aforementioned improvements in health, education, housing, etc.

With the development of this project, the native communities, population centers and associations will benefit from the implementation of productive activities with technical assistance, which will benefit the families because they will be able to generate economic income from the sale of their products; through the establishment of conservation agreements and participatory community monitoring, as well as the strengthening and consolidation of social organizations, the project seeks to redefine the relationship of the populations with the forest and its resources. In this way, it is hoped that the populations will gradually improve their quality of life in accordance with their own decisions.

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By avoiding the loss of critical biodiversity, it is expected to halt the current trend of deterioration in the quality of life of rural populations and their dependence on products obtained from the market, particularly in the city of Puerto Maldonado (medicines, meat and other foods).

In sum, the net benefit of the project involves: the contribution to the material well-being of the populations through the generation of income through sustainable activities, capacity building and a change in the population's attitudes towards the use of the forest, as well as the preservation of the ecosystem values critical for human well-being. Other benefits derived indirectly from the project activity may be the aforementioned improvements in health, education, housing, etc.

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

2021

Community Group	Artisan Women's Association Palma Real - Shi'Oi (Paucarcillo) Native communities
Net positive impacts	Women assumed important leadership positions in the association and developed organizational management skills. As part of social inclusion, the women artisans included the participation of 03 male community members as part of the association.
Benefits Access	The artisanal activity has been formalized; this will provide opportunities to participate in public or private fund competitions that will improve the production and marketing of their products, thereby improving their economic income.
Negatives impacts	The project will not affect other marginalized and/or vulnerable small producers/community members..

Community group	Masheke Artisans Association of the Native Community of Sonene
Net positive impacts	Women assumed important leadership positions in the association and developed organizational management skills.
Access to benefits	The handicraft activity was formalized; this will provide opportunities to participate in public or private fund competitions that will improve the production and marketing of their products, thus improving their income.
Negative impacts	The project will not affect other marginalized and/or vulnerable small producers/community members.

2022

<i>Community group</i>	Association of Women Artisans C.N. Palma Real - Shi'O'i (Pauarcillo)
<i>Net positive impacts</i>	The territorial security actions will be maintained to maintain the forest resources that allow the sustainable use of fiber species, plants and seeds for the handicraft activity. Organizational strengthening of the association will be promoted.
<i>Access to benefits</i>	The latent threat of alluvial mining in nearby areas of the RNTAM could affect the communal forests where plant species are harvested for artisanal activities.
<i>Negative impacts</i>	The impact of the project is positive; the activities that will be affected will be illegal activities.

Community group	Masheke Artisans Association of the Sonene Native Community.
Net positive impacts	The territorial security actions will be maintained to maintain the forest resources that allow the sustainable use of fiber species, plants and seeds for the handicraft activity. Organizational strengthening of the association will be promoted.
Access to benefits	The plant species used for handicraft activities are sustainably harvested in the communal forest and in ancestral territories that include areas of the PNBAS and the Bolivian forest. There is no risk. Organizational strengthening of the association will also be promoted.
Negative impacts	The impact of the project is positive; the activities that will be affected will be illegal activities.

Community group	Fishermen's Association of the Palma Real "Bokao" Native Community.
Net positive impacts	Territorial security actions will be maintained to maintain water courses, oxbow lakes and lagoons that allow the sustainable use of hydrobiological species. Organizational strengthening of the association will be promoted.

Access to benefits	The latent threat of alluvial mining in nearby areas of the RNTAM could affect water quality for artisanal fishing activities in the community's and the RNTAM's watercourses, oxbow lakes and lagoons.
Negative impacts	The impact of the project is positive; the activities that will be affected will be illegal activities.

Community group	Artisanal Fishermen's Association of the Sonene Native Community.
Net positive impacts	Territorial security actions will be maintained to maintain the water courses, oxbow lakes and lagoons that allow the sustainable use of hydrobiological species. Organizational strengthening of the association will be promoted.
Access to benefits	Artisanal fishing activities are used sustainably, mainly in rivers and streams located in forest areas of the PNBAS. There is no risk. Organizational strengthening of the association will also be promoted.
Negative impacts	The impact of the project is positive; the activities that will be affected will be illegal activities.

2023

Community group	Association of Women Artisans C.N. Palma Real - Shi'Oi (Paucarcillo)
Net positive impacts	The territorial security actions will be maintained to maintain the forest resources that allow the sustainable use of fiber species, plants and seeds for the handicraft activity. Organizational strengthening of the association will be promoted.
Access to benefits	The latent threat of alluvial mining in nearby areas of the RNTAM could affect the communal forests where plant species are harvested for artisanal activities.
Negative impacts	The impact of the project is positive; the activities that will be affected will be illegal activities.

Community group	Masheke Artisans Association of the Sonene Native Community.
Net positive impacts	The territorial security actions will be maintained to maintain the forest resources that allow the sustainable use of fiber species, plants and seeds for the handicraft activity. Organizational strengthening of the association will be promoted.
Access to benefits	The plant species used for handicraft activities are sustainably harvested in the communal forest and in ancestral territories that include areas of the PNBAS and the Bolivian forest. There is no risk. Organizational strengthening of the association will also be promoted.
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Access to benefits	Artisanal fishing activities are used sustainably, mainly in rivers and streams located in forest areas of the PNBAS. There is no risk. Organizational strengthening of the association will also be promoted.

Negative impacts

The impact of the project is positive; the activities that will be affected will be illegal activities.

4.4.3 Net Impacts on Women (CCB, GL2.5)

2021

The women of the communities continue to assume the traditional roles involved in the development of domestic work in the house and raising children. For the women of the Ese'Eja people, the handicraft activity that is carried out as a daily practice, reflects the relationship that exists with the ancestral territory and the sustainable use of forest resources for the elaboration of bio-jewelry and basketry; the latter declared by the Ministry of Culture, as Cultural Heritage of the Nation (2018). Additionally, handicrafts reinforce cultural identity and contribute to the construction of gender identity.

In 2021, the women artisans of the native communities of Palma Real and Sonene, make the decision to form the following associations: "Asociación de Artesanas Masheke de la Comunidad Nativa Sonene" and the "Asociación de Mujeres Artesanas C.N. Palma Real Shi'Oi (Paucarcillo)". (Annex 59, 60).

There is active participation of women in decision-making at community meetings and assemblies, which has allowed some women to assume leadership positions during the terms of the boards of directors; for example, in the native community of Infierno, Mrs. Hilda María Cordero Vacasahua continued her position as president of the community; likewise, the positions of secretary, treasurer, member 1, member 2 assumed by women were continued (Annex 61). The boards of directors of the Masheke and Shi'Oi artisan associations are mostly made up of women.

Regarding the productive associations and cooperatives, Mrs. Lina Palomino was part of the board of directors in the position of secretary of COOPASER. In the case of the AGROBOSQUE Cooperative; Mrs. Lilia Carape Álvarez assumed the position of member of the supervisory board, Mrs. Leandra Mamani Mamani was part of the board of directors as second member and Mrs. Yessica Ccarita Mamani was the member of the electoral committee. Regarding ASCART, Mrs. Heidy Pereyra Meléndez was part of the board of directors, occupying the position of president and Mrs. Jenny Juscamayta assumed the role of ASCART's administrator.

2022

Women will continue to play important roles in the communities and associations. There has been an outstanding participation of women as an integral part of the boards of directors, assuming positions such as president (native communities and associations) or manager (cooperatives). The formalization of productive activities will continue to strengthen the empowerment of women, as has happened in the case of the native communities of Palma Real and Sonene, which have managed to formalize the ancestral handicraft activity of the Ese'Eja people through the formation of artisan associations. In addition, the women artisans of Palma Real, unlike the artisans of Sonene, have included the participation of men as partners, and have also implemented rural community tourism activities, where the association receives net income from the visits they receive (Annex 72).

The project will strengthen the process of women's participation in community and associative decision-making. Likewise, in the case of the women artisans, it will promote and strengthen the marketing process of the products they make, which generates income for their families.

2023

Women will continue to play important roles in the communities and associations. There has been an outstanding participation of women as an integral part of the boards of directors, assuming positions such as president (native communities and associations) or manager (cooperatives). The formalization of productive activities will continue to strengthen women's empowerment, as has happened in the case of the native communities of Palma Real and Sonene, which work with the ancestral handicraft activity of the Ese'Eja people through the creation of artisan associations. In addition, the women artisans of Palma Real, unlike the artisans of Sonene, have included the participation of men as partners, and have also implemented rural community tourism activities, where the association receives net income from the visits they receive (Annex 49).

The project will strengthen the process of women's participation in community and associative decision-making. Likewise, in the case of the women artisans, it will promote and strengthen the marketing process of the products they make, which generates income for their families.

4.4.4 Benefit Sharing Mechanisms (CCB, GL2.6)

The form of governance in the native communities and productive associations follows the decisions established in the communal and organizational assemblies; where men and women, with voting rights, lead through management, common interests, fully consensual and approved. Likewise, the statute legally governs the management and administration of tangible and financial resources.

The communal assemblies do not differentiate between those who are engaged in a certain productive activity or belong to any committee/association, since the assemblies represent the community as a whole. This same situation applies to the implementation of the project, which calls for the participation of community members for coordination activities, information, implementation of meetings and workshops.

Likewise, within the framework of project implementation, spaces for dialogue will be encouraged to transmit information that will help improve the knowledge, understanding and participation of the community groups involved.

4.4.5 Governance and Implementation Structures (CCB, GL2.8)

The governance structure is headed by a board of directors that is responsible for the direction and management of communal interests; additionally and due to the need to strengthen productive activities that generate economic benefits, committees are created; a form of associativity limited to the communal space, which can then reach the figure of association through a process of formalization and legal representation, legal that allows them to participate in public and private tenders for direct funding.

It is worth mentioning that the Shi'Oi and Masheke artisan associations of the native communities of Palma Real and Sonene, respectively, are being represented by women, in addition to receiving training to strengthen their organizational capacities and production methods (Annex 49).

The community, in communal assemblies, receives the proposal and decides to create associations that provide an opportunity for community members to participate in specific activities that benefit families in the community. Participation is voluntary and open to those who carry out the activity.

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

Capacity building was implemented in a limited manner due to the Covid19 context. Through coordination, community meetings, participatory workshops and field work, men and women from the community groups were able to learn about the intervention processes of the

activities and put them into practice with technical support, which is expected to promote self-management and empowerment.

It is worth mentioning that the boards of directors of the native communities of Palma Real and Sonene prepared their respective work plans for the year 2021. Likewise, during this year, the formalization of the Sanitation Services Administration Boards (JASS) was initiated in both communities (Annex 59, 60).

As part of the CA executed by AIDER, an agroforestry pilot plot was implemented in the Sonene native community (Annex 59).

Throughout the initial implementation of the project, community members were invited to participate in coordination activities, information, implementation of meetings and workshops.

5 BIODIVERSITY

5.1 Net Positive Biodiversity Impacts

5.1.1 Biodiversity Changes (VCS, 3.19; CCB, B2.1)

Biodiversity change	<i>Leopardus pardalis</i> (Ocelote)
Monitored change	<i>Observed in agroforestry plots.</i>
Justification for change	<i>Recovered areas with agroforestry systems that serve as habitat or biological corridor to ANP.</i>

Biodiversity change	<i>Puma yagouaroundi</i> (Yaguarundi)
Monitored change	<i>Observed in agroforestry plots.</i>
Justification for change	<i>Recovered areas with agroforestry systems that serve as habitat or biological corridor to ANP.</i>

Biodiversity change	<i>Atelocynus microtis</i> (Perro de orejas cortas)
Monitored change	<i>Observed in agroforestry plots.</i>
Justification for change	<i>Recovered areas with agroforestry systems that serve as habitat or biological corridor to ANP.</i>

Biodiversity change	<i>Eira barbara</i> (Manco)
Monitored change	<i>Observed in agroforestry plots.</i>
Justification for change	<i>Recovered areas with agroforestry systems that serve as habitat or biological corridor to ANP.</i>

Biodiversity change	<i>Procyon cancrivorus</i> (Mapache)
Monitored change	<i>Observed in agroforestry plots.</i>

Justification for change	<i>Recovered areas with agroforestry systems that serve as habitat or biological corridors to NPAs, opportunistic predators that can find food in these areas.</i>
Biodiversity change	<i>Nasua Nasua (Coati)</i>
Monitored change	<i>Observed in agroforestry plots.</i>
Justification for change	<i>Recovered areas with agroforestry systems that serve as habitat or biological corridors to NPAs, opportunistic predators that can find food in these areas.</i>
Biodiversity change	<i>Coendou bicolor (Erizo)</i>
Monitored change	<i>Observed in agroforestry plots.</i>
Justification for change	<i>Recovered areas with agroforestry systems that serve as habitat or biological corridor to NPAs.</i>
Biodiversity change	<i>Cuniculus paca (Picuro)</i>
Monitored change	<i>Observed in agroforestry plots.</i>
Justification for change	<i>Recovered areas with agroforestry systems that serve as habitat or biological corridor to NPAs.</i>
Biodiversity change	<i>Dasyprocta punctata (Añuje)</i>
Monitored change	<i>Observed in agroforestry plots.</i>
Justification for change	<i>Recovered areas with agroforestry systems that serve as habitat or biological corridor to NPAs.</i>
Biodiversity change	<i>Dasyopus novemcinctus (Armadillo)</i>
Monitored change	<i>Observed in agroforestry plots.</i>
Justification for change	<i>Recovered areas with agroforestry systems that serve as habitat or biological corridor to ANP.</i>

Biodiversity change	<i>Didelphis marsupialis</i> (Intuto)
Monitored change	<i>Observed in agroforestry plots.</i>
Justification for change	<i>Recovered areas with agroforestry systems that serve as habitat or biological corridor to ANP, opportunistic species that can easily adapt to the available resources.</i>

Biodiversity change	<i>Sylvilagus brasiliensis</i> (Conejo)
Monitored change	<i>Observed in agroforestry plots.</i>
Justification for change	<i>Recovered areas with agroforestry systems that serve as habitat or biological corridor to NPAs.</i>

Biodiversity change	<i>Sciurus spadiceus</i> (Ardilla roja)
Monitored change	<i>Observed in agroforestry plots.</i>
Justification for change	<i>Recovered areas with agroforestry systems that serve as habitat or biological corridor to NPAs.</i>

Biodiversity change	<i>Mazama americana</i> (Venado colorado)
Monitored change	<i>Observed in agroforestry plots.</i>
Justification for change	<i>Recovered areas with agroforestry systems that serve as habitat or biological corridor to NPAs.</i>

Biodiversity change	<i>Mazama nemorivaga</i> (Venado gris)
Monitored change	<i>Observed in agroforestry plots.</i>
Justification for change	<i>Recovered areas with agroforestry systems that serve as habitat or biological corridor to NPAs.</i>

Biodiversity change	<i>Pecari tajacu</i> (Sajino)
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Monitored change	<i>Observed in agroforestry plots.</i>
Justification for change	<i>Recovered areas with agroforestry systems that serve as habitat or biological corridor to NPAs.</i>
Biodiversity change	<i>Tapirus terrestris (Tapir)</i>
Monitored change	<i>Observed in agroforestry plots.</i>
Justification for change	<i>Recovered areas with agroforestry systems that serve as habitat or biological corridor to NPAs.</i>
Biodiversity change	<i>Tamandua tetradactyla (Oso hormiguero)</i>
Monitored change	<i>Observed in agroforestry plots.</i>
Justification for change	<i>Recovered areas with agroforestry systems that serve as habitat or biological corridor to NPAs.</i>
Biodiversity change	<i>Leontocebus weddellii (Pichico)</i>
Monitored change	<i>Observed in agroforestry plots.</i>
Justification for change	<i>Recovered areas with agroforestry systems that serve as habitat or biological corridor to NPAs. This species needs forest cover to move.</i>
Biodiversity change	<i>Saimiri boliviensis (Frailecillo)</i>
Monitored change	<i>Observed in agroforestry plots.</i>
Justification for change	<i>Recovered areas with agroforestry systems that serve as habitat or biological corridor to NPAs. This species needs forest cover to move.</i>
Biodiversity change	<i>Murciélago</i>
Monitored change	<i>Observed in agroforestry plots.</i>

Justification for change

Recovered areas with agroforestry systems that serve as habitat or biological corridor to NPAs, seed dispersers.

In the years 2022 and 2023, 21 species of mammals have been recorded that have made use of the agroforestry plots as biological corridors, where they find food and shelter because of the vegetation cover present. This recording was only done through camera traps, but some producers also reported the presence of jaguars in the agroforestry plots.

5.1.2 Mitigation Actions (VCS, 3.19; CCB, B2.3)

The project area encompasses two Natural Protected Areas, which implies that any human intervention that may affect the species that inhabit these ecosystems is strictly prohibited, even though these actions may contribute to the maintenance or improvement of High Conservation Value attributes. Our approach in the project focuses on the implementation of actions that are compatible with this protection.

The measures we carry out focus on the use of camera traps to monitor and study the fauna without directly interfering with their habitat, in this way, we can obtain valuable information about the species present and their behavior without negatively altering their environment.

In addition, we promote research with emphasis on the prioritized environmental elements of each Natural Protected Area, the information collected by researchers allows us to obtain a deeper understanding of the ecosystems and the species that comprise them, which in turn contributes to better decision-making for their conservation.

Finally, we support surveillance and control actions in the Natural Protected Areas, working closely with the chiefs, specialists and park rangers responsible for the protection of these areas, providing information gathered through monitoring, anchor projects and priority research to strengthen conservation efforts and ensure compliance with established regulations and norms.

The work approach is based on the respect and conservation of the biodiversity present in the Natural Protected Areas, carrying out monitoring, research and surveillance support activities without interventions that could put at risk the attributes of High Conservation Value, all in coherence with the precautionary principle, which guides our actions to avoid any potential damage to these valuable ecosystems within the RNTAM and PNBAS.

5.1.3 Net Positive Biodiversity Impacts (VCS, 3.19; CCB, B2.2, GL1.4)

Species and habitat	<i>Demonstrate that the project has not adversely impacted habitats and areas needed for habitat connectivity for rare, threatened, or endangered species during the monitoring period.</i>
Areas needed for habitat connectivity	<i>Demonstrate that the project has not adversely impacted any areas needed for habitat connectivity during the monitoring period.</i>
...	...

5.1.4 High Conservation Values Protected (CCB, B2.4)

The project activity maintains the High Conservation Values in the project area, so that the objectives of the creation of the NPA are met. Through the 4 project strategies which are:

1. Conservation agreements: offering concrete and periodic benefits to the local population in exchange for real conservation commitments.
2. Promotion of productive activities: Allocation of financial resources, technical and commercial assistance for the promotion of sustainable productive initiatives (agroforestry, aquaculture, low impact gold production, sustainable forest management, processing and commercialization of Brazil nut and management and/or conservation of palm trees) among the families of the hamlets and communities settled in the Buffer Zone.
3. Surveillance and control: Improve existing control posts, build new control posts, provide technical support to community surveillance committees, and conduct workshops/training courses for park rangers.
4. Forestry governance: Carry out inter-institutional agreements and competencies that allow for better resource governance in the project area, as well as advise SERNANP, Management Committees, regional forestry authority and local governments in the fulfillment of their functions of promoting and supervising sustainable forest management.

Likewise, there are 3 cases in which the management of High Conservation Values is involved:

(a) Tourism: it is the objective of the PNA and the project to avoid the deterioration of the landscapes and species, which are the attractions and the reason why the project area has tourist affluence. The project contributes to implementing management documents for tourism activities, determining their impacts, and then monitoring changes and determining acceptable limits, adaptive management of this activity.

(b) Brazil nut harvesting: Since 2009 there has been a management plan that provides guidelines for proper management, determining the impacts of Brazil nut harvesting activities; monitoring points have been identified through sampling plots and there are cards to estimate hunting at harvest time, and in terms of research activities there is an agreement with the researchers leading the SUSTAIN project to know the status of the species, natural regeneration and phenology within the NPA and its buffer zone. These activities contribute to the maintenance of the ecosystems and fauna present in the NPA's chestnut groves.

(c) Pampas del Heath: a vigorous natural succession has been reported, perhaps accelerated by the management carried out by indigenous people from the native communities of Palma Real and, mainly, Sonene. Ecosystem quality indicators will be determined through area monitoring, species dispersion, among others, which will later allow us to propose a management system to ensure the integrity and permanence of the pampas.

5.1.5 Species Used (VCS, 3.19; CCB, B2.5, 2.6)

Introduced species	Classification	Justification for use	Adverse effects and mitigation
Citrus jambhiri Lush, Citrus máxima and Citrus sinensis (limón rugoso, toronja and naranja)	Non - native	It is already adapted to the Madre de Dios environment and is not invasive.	There were no adverse effects on the agroforestry plots or the region.
Manihot esculenta (Yuca)	Non - native	Species used in the Amazon as a source of income.	There were no adverse effects on the agroforestry plots or the region.
Colubrina glandulosa Perkins (Shaina)	Non - native	Already adapted to the Madre de Dios environment and is not invasive.	There were no adverse effects on the agroforestry plots or the region.

Musa paradisiaca (Plátano)	Non - native	Already adapted to the Madre de Dios environment and is not invasive.	There were no adverse effects on the agroforestry plots or the region.
Ananas ananas (Piña)	Non - native	Already adapted to the Madre de Dios environment and is not invasive.	There were no adverse effects on the agroforestry plots or the region.
Cajanus cajan (Frejol de palo)	Non - native	Already adapted to the Madre de Dios environment and is not invasive.	There were no adverse effects on the agroforestry plots or the region.
Inga edulis (Guaba/Pacay)	Native	Present in the region used as shade on agricultural land.	There were no adverse effects on the agroforestry plots or the region.
Theobroma cacao L (Cacao chuncho)	Native	Used to improve cocoa production.	There were no adverse effects on the agroforestry plots or the region.
Erythrina sp (Amasisa)	Native	Used to fix nitrogen in soils.	There were no adverse effects on the agroforestry plots or the region.
<i>Theobroma grandiflorum</i> (Copoazu)	Non native	Used as an alternative income product to monoculture agriculture and cattle ranching.	There were no adverse effects on the agroforestry plots or the region.
<i>Bertholletia excelsa</i> (Chestnut)	Native	Species naturally present in the region.	There were no adverse effects on the agroforestry plots or the region.
<i>Swietenia macrophylla</i> (Caoba)	Native	Native species of high commercial value	There were no adverse effects on the agroforestry plots or the region.

<i>Cedrela odorata</i> (Cedro)	Native	Native species of high commercial value	There were no adverse effects on the agroforestry plots or the region.
<i>Cedrelinga catenaeformis</i> (Tornillo)	Native	Native species of high commercial value	There were no adverse effects on the agroforestry plots or the region.
<i>Schizolobium amazonicum</i> (Pashaco blanco)	Native	Native species of high commercial value	No hubo efectos adversos en las parcelas agroforestales ni en la región.
<i>Ocotea sp.</i> (Moena)	Native	Native species of high commercial value	There were no adverse effects on the agroforestry plots or the region.
<i>Nectandra rediculata</i> (Laurel)	Native	Native species of high commercial value	There were no adverse effects on the agroforestry plots or the region.
<i>Pueraria phaseoloides</i> (Kudzu)	Non-Native	Hedging species adapted to the region that was already in use in the sector before the project was installed.	There were no adverse effects on the agroforestry plots or the region.
<i>Styrolobium deeringianum</i> (Mucuna)	Non - native	Species adapted to the region that was already in use in the sector before the installation of the project.	There were no adverse effects on the agroforestry plots or the region.

5.1.6 Invasive Species (VCS, 3.19; CCB, B2.5)

Invasive species such as Kudzu will be used for the project, which was previously used because the soils needed organic matter, but the project has been implemented for several years, so only forest species will be used.

5.1.7 GMO Exclusion (CCB, B2.7)

The objective of the REDD+ project is to reduce deforestation and forest degradation, not involving forests or other plantations as a means to generate verifiable GHG removals. Furthermore, the activities proposed by the project are based on local biodiversity management (timber and non-timber forest management) and on already validated production systems (agroforestry and aquaculture), not considering in any case the use of Genetically Modified Organisms. It would be counterproductive to violate the Moratorium Law (Law No. 29811) enacted on December 9, 2011, which establishes a moratorium on the entry and production of Living Modified Organisms in the national territory for a period of 10 years.

5.1.8 Inputs Justification (VCS, 3.19; CCB, B2.8)

Name	Cropfield fulvic biostimulant composed of Fulvic Acids, Algae Extract, Nitrogen, Phosphorus, Potassium and Magnesium.
Justification of use	Ecological biostimulant with chelating action that enhances the effect of the applications, gives the ability to form chelates with other nutrients, increasing their availability to the plant, stimulates root growth and development resulting in better vegetative development. It provides carbon that generates energy for biological development, especially nitrogen fixers, increasing the availability of absorbed nutrients both at root and foliar level.
Adverse effect	Cropfield Fulvic is not phytotoxic for the crops in which it is recommended, as long as the recommended doses are used.

Name	Root King: Plant growth regulator for agricultural use.
Justification of use	It contains auxins and cytokinins with auxin dominance that act on cell division, growth and differentiation stimulating the sprouting of root meristems, the growth

	and development of root mass and length, thus allowing the activation of the metabolism that stimulates a vigorous development of primary and secondary roots in plants.
Adverse effect	Root King is not phytotoxic to the crops in which it is recommended, as long as the recommended doses are used.

Name	EM - 1: It is a biological inoculant for plants based on microorganisms with symbiotic action, to promote plant growth and prevent the presence of pests and diseases.
Justification of use	It promotes leaf development and optimal flowering and fruiting of cocoa and any species we are working with in the project, including forest species. It also increases the photosynthetic capacity of the plant. It optimizes plant growth and prevents the presence of pests and diseases. Improves the physical, chemical and biological conditions of the soil and reduces salinity problems in soils.
Adverse effect	It has no adverse effects on plants, soils or animals.

Name	EM-COMPOST is a biological inoculant based on microorganisms with symbiotic action.
Justification of use	The preparation of biol with this compound accelerates the decomposition of organic matter, improves the physical, chemical and biological conditions of the soil, reduces salinity problems in soils, reduces nematode and pathogen populations in soils, increases the nutritional and biological quality of the compost and reduces bad odors and the presence of flies in farms, preventing diseases in animals.
Adverse effect	It has no adverse effects on plants, soils or animals.

Name	Agricultural Dolomite: It is a natural ECOLOGICAL mineral product that has the function of CORRECTING the Ph of acid soils due to the presence of Ca, as well as incorporating an adequate Mg content to enhance the
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	function of “Photosynthesis” of plants, being an essential component of “Chlorophyll”.
Justification of use	The main use we give it in the project is to reduce soil acidity and provides magnesium to the soil. It increases the yield of organic fertilizers, facilitates the decomposition of fresh organic residues and their transformation into stable humus, improves the activity of soil microorganisms by facilitating drainage and air diffusion in the soil, eliminates the toxicity of aluminum and manganese, reduces or eliminates the action of some heavy metals, facilitates the transformation of organic phosphorus and sulfur (not assimilable) into assimilable mineral phosphorus and sulfur, considering the relationship between cost and effectiveness as a soil amendment or providing calcium and magnesium as crop nutrients, agricultural dolomite is the most economical product.
Adverse effect	It has no adverse effects on plants, soils or animals.

Name	Island guano is a product of the feeding of seabirds with hydrobiological species. That after the digestive process, dejectan in the islands and points of the Peruvian coast. In 5 to 6 years it becomes the best natural organic fertilizer in the world.
Justification of use	The guano from the islands is a carrier of a rich beneficial microbial flora (beneficial fungi and bacteria) forming millions of biological laboratories that, by the action of the birds' gastric juices and enzymes, transform complex substances into simpler forms that, when introduced into the cultivated land, improve its physical, chemical and biological capabilities. When fertilizing with guano from the islands, the nitrogen, phosphorus and other nutrients present are immediately available to be absorbed by the plant roots, which favors the growth, development and production of any crop, avoiding their degradation. In this way, it helps to achieve a higher yield per hectare with very good results in cocoa, banana, copoazú and

	even forest species, allowing small producers to obtain organic certification and enter more competitive markets.
Adverse effect	It has no adverse effects on plants, soils or animals.

Name	Kieserite - Magnesium Sulfate Monohydrate
Justification of use	Fertilizer for direct application to the soil, as a suitable source to correct magnesium and sulfur deficiencies in all crops.
Adverse effect	It has no adverse effects on plants, soils or animals.

Name	Phosphate rock
Justification of use	Aids trees and plants in the process of energy transfer, root development and photosynthesis, prevents stunted growth and leaf discoloration, helps trees achieve maximum flower and fruit development, Phosphate Rock not only provides phosphorus in the short term, but also helps maintain soil health and crop growth in the long term.
Adverse effect	It has no adverse effects on plants, soils or animals.

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)
Deforestation for agriculture and cattle ranching.	Sustainable economic activities: In the buffer zone of the Tambopata National Reserve, the project "Reducing deforestation and promoting sustainable development in Madre de Dios" has been implemented. The project has

	installed 1304.85 hectares of agroforestry systems with fine aroma cacao, recovering areas that had been seriously degraded by agriculture and migratory cattle ranching to transform them into biological microcorridors that attract the surrounding fauna to serve as seed dispersers for the recovery of forest species in the area. At the same time, the 274 farmers that are part of the project have created their own agricultural cooperative (COOPERATIVA AGRARIA DE SERVICIOS MÚLTIPLES - COOPASER) which signed a conservation agreement with SERNANP because these lands recovered with agroforestry systems serve as a barrier against the constant threat of being invaded by people who carry out illegal activities such as mining, logging, among others, thus preventing these threats from entering the Tambopata National Reserve.
Illegal activities such as mining and illegal logging within the Natural Protected Area.	Strengthening the control and surveillance system: SERNANP has been supported with the hiring of park rangers and the maintenance and implementation of surveillance and control posts (PVC) within the Tambopata National Reserve and Bahuaja Sonene National Park for better patrolling and containment of illegal activities that may occur within the NPAs.

5.2.2 Net Offsite Biodiversity Benefits (VCS, 3.19; CCB, B3.3)

During the development of the project reducing deforestation and promoting sustainable development in Madre de Dios, have been implemented 1304. 85 hectares of agroforestry systems have been implemented to recover soils that were used for two unfriendly activities such as cattle ranching and extensive agriculture/monoculture, and these areas recovered under the SAF with fine aroma cocoa have created microclimates, thus protecting the soil from direct sunlight, This also allows small species (mammals/rodents) and birds to remain in the area, using it as a habitat, thus expanding the scope of use of the surrounding fauna and using the plots with PFS as biological microcorridors, being of great relevance for its proximity to the Tambopata National Reserve, the 1304. 85 hectares of agroforestry plots installed from km 01 to km 93 on the Puerto Maldonado - Cusco road and from km 01 - 80 on the Puerto Maldonado - Iberia road serve as a living barrier against the latent threat of invasion by illegal miners, preventing them from entering the Tambopata National Reserve.

Organic cocoa production contributes to climate change adaptation by preventing desertification, protecting small water bodies, regulating the climate and providing food to farmers, in this sense farmers have been empowered through specific trainings in each sector of the project developing their capacities for the sustainable management of their agroforestry plots, during 2019 12 training modules have been conducted in different sectors of the project area with the following topics:

- Elaboration of inputs for organic production.
- Fair trade criteria
- Organizational strengthening and neurofacilitators for management and cooperative workers.
- Soil analysis and cost structure in agriculture.
- Importance of forest species and background fertilization.
- Organic certification and fair trade environmental criteria.

In the NPAs, through patrolling by park rangers as part of the control and surveillance system, early warnings are made to reduce risks and threats so that SERNANP can take measures to avoid or mitigate the probable causes of these, such as climate change, illegal mining, hunting.

5.3 Biodiversity Impact Monitoring

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

The management contract that AIDER has with the Tambopata National Reserve (RNTAM) and Bahuaja Sonene National Park (PNBAS) has allowed the development of the Integrated Monitoring System (SMI), which is based on the needs identified in the master plan, in this document are all the indicators that are measured.

The SMI identified the following conservation elements that are being evaluated within the project:

- Jaguar: Jaguar density is measured every 4 years in the chestnut sector of the RNTAM and PNBAS. The methodology used is photo-trapping. The results of the first evaluation process are available for 2022 and 2023, where a total of 210 camera traps were installed, which identified a total of 16 jaguars, giving a density of 1.87 ± 0.56 individuals/100 km².
- Clay lick: Clay lick monitoring measures the richness and abundance of psittacine species that arrive at the clay wall; this evaluation is carried out twice a year from June to July and between October and November. Three clay licks are evaluated: the Heath clay lick in the PNBAS and the Chuncho and Colorado clay lick in the RNTAM. In the period 2022 and 2023 the following results were obtained: a total of 21 species of psittacines were recorded, with an average of 16 species per year, the most abundant species were *Amazona farinosa*, *Ara chloropterus* and *Brotogeris cyanoptera*.
- Chestnut: chestnut monitoring measures the basal area, regeneration and productivity of the chestnut, this evaluation is done every 4 years, the first evaluation was conducted in 2021, the following results were obtained Basal area a total of 273.74 m² in the RNTAM and 40.41m² in the PNBAS. For natural regeneration, a total of 89 Brazil nut seedlings were identified for the categories of brinzales, latizales and fustales. For Brazil nut production, a tree produces an average of 64.76 coconuts per year in the RNTAM and 32.15 coconuts per year for the PNBAS.

- Giant otters: Giant otter monitoring measures the number of individuals and family groups in the oxbow lakes and rivers; this evaluation is carried out annually during the dry season when the giant otters are less mobile. In the 2022 and 2023 period, the following results were obtained: in 2022, 23 individuals were observed in the RNTAM and 24 individuals were observed in the PNBAS; in 2023, 15 individuals were observed in the RNTAM and 24 individuals were observed in the PNBAS. In the 2022 assessment there were 8 individuals that were not identified in 2023, due to the fact that the Blue sector was not entered because of mining issues.

Table 20. Ecosystem-level conservation elements for the period 2022 and 2023

Threat/ Activity	Indicator	Methodology	2022	2023	Seasonality/Frequency	Responsible
Ecoregions	Degradation: N° tons of carbon released due to degradation	Satellite monitoring through remote sensing			Annual	AIDER / SERNANP
	No. of hectares deforested per year by ecoregion and/or forest type	Satellite monitoring through remote sensing	Agricultural activity/secondary forest: 0.12 Flooded alluvial: 0.49 Low terrace: 3.86 High terrace: 3.15 Mildly dissected terrace: 10.24 Strongly dissected terrace: 0.60 Rivers: 0.05 Deforestation: 1.34 Total: 19.85	Agricultural activity/secondary forest: 0.12 Flooded alluvial: 1.67 Low terrace: 29.16 Smooth dissected terrace: 10.12 Lagoons: 1.90 Rivers: 2.52 Deforestation: 1.74 Total: 47.53	Annual	AIDER /SERNANP
Heath pampas	Annual area: No. of hectares of pampas	Satellite monitoring through remote sensing	Methodology in validation		Annual	AIDER /SERNANP
	No. of hectares affected by burning per year	Satellite monitoring through remote sensing	0	56.07	Annual	AIDER /SERNANP
Collpas	Species richness	Direct records of numbers of psittacine species	Chuncho: 12 Heath: 12 Colorado: 10	Chuncho: 11 Heath: 12 Colorado: 14	Annual (2 times)	AIDER
	Abundance	Number of individuals present in the clay lick and on the clay wall	Chuncho: 403 Heath: 226 Colorado: 364	Chuncho: 451 Heath: 580 Colorado: 510		AIDER
Rivers	Water quality	In situ evaluation		no data available	Annual	ANA

			Heath River: complies with ECAs, except for total phosphorus, mercury and lead levels. Madre de Dios River: complies with ECAs, except for total phosphorus, total suspended solids, cadmium, mercury, and lead. Tambopata River: complies with ECAs, except for total phosphorus, total suspended solids, lead, mercury, zinc and thermotolerant coliforms. Malinowski River: complies with the ECAs, except for levels of total phosphorus, total suspended solids, cadmium, copper, lead, zinc and thermotolerant coliforms.			
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Tabla 21. Species-level conservation elements for the period 2022 and 2023

Threat/ Activity	Indicator	Methodology	2022	2023	Seasonality/Freq uency	Responsible
Jaguar (<i>Panthera onca</i>)	Density: N° of jaguars/100 km ²	Camera traps with a five-year frequency.	1.87 ± 0.56 individuals/100 km ²		4 years	AIDER
Giant otter (<i>Pteronura brasiliensis</i>)	N° of family groups recorded per year /per water body	Giant otter population census	Chuncho:1 Heath: 3 Madre de Dios: 2 Tambopata: 2 Azul: 1	Chuncho: 1 Heath: 3 Madre de Dios: 1 Tambopata: 2 Azul: no se evaluó	Annual	AIDER with support from FZS through agreement

Threat/ Activity	Indicator	Methodology	2022	2023	Seasonality/Freq uency	Responsible
	N° of individuals sighted per family group per year/water body per year per year /water body per year	Giant otter population census	Chuncho:4 Heath: 20 Madre de Dios: 7	Chuncho: 5 Heath: 19 Madre de Dios: 4		
Taricaya (<i>Podocnemis unifilis</i>)	N° of taricaya nests / beach / km of river per year	Taricaya nest census	31 nests	In process	Annual	To be defined
Chestnut	No. of Chestnut seedlings per ha	Permanent plots	1.19 seedlings/ha		Every 5 years	AIDER
	N° of chestnut coconuts per ha	Permanent plots	RNTAM: 64.79 PNBAS: 32.15			
	Basal area	Permanent plots	RNATM: 273.74 m ² PNBAS: 40.41 m ²			
	Number of beneficiary families	Registration in PVCs	RNATM: 322 PNBAS: 35	RNATM: 315 PNBAS: 74	Annual	SERNANP
	Income / family		RNATM: S/.6037 PNBAS: S/ 19628.57	RNATM: S/.2182 PNBAS: S/. 496.26		
	Annual production of Brazil nut reported in PVCs		RNATM: 3240 PNBAS:1145	RNATM: 3337 PNBAS:178		

Table 22. Threats monitored to conservation features for the period 2022 and 2023

Threat/ Activity	Indicator	Methodology	2022	2023	Seasonality/Frequency	Responsible
Agricultural activity	N° of hectares deforested annually due to agricultural and livestock activities	Satellite Monitoring through Remote Sensing	12.31	11.92	Annual	AIDER
	N° f hectares lost due to burning per year	Satellite monitoring through remote sensing	No information available	No information available		
	N° of heads of livestock per property within the RNTAM	Routine patrols / interviews with paddock owners	RNTAM: 175 ZA: 275	RNTAM: 895 ZA: 217		RNTAM
	N° of properties with livestock within the RMTAMB	Routine patrols / interviews with paddock owners	NRTAM: 5 ZA: 5	RNTAM:8 ZA: 4		
Logging	N° of illegal logging records in patrols per year	Patrols	30	26	Annual	SERNANP
	N° of interventions carried out per year	Intervention of illegal activities during patrols	1	3	Monthly	
	N° of board feet of illegally harvested timber per year	Record of N° of illegally cut board feet found during patrols and interventions.	27825	43105		

Threat/ Activity	Indicator	Methodology	2022	2023	Seasonality/Frequency	Responsible
Mining	N°. of hectares of forest lost due to mining activity in key areas per year	Remote sensing and GIS	3.86	35.53	Annual	AIDER
Wildlife - human conflict	N° of incidents of wildlife-human conflict	PCV reports	No data available	No data available	Annual	AIDER
	N° of wildlife animals (felines) killed in wildlife-human conflict incidents per year		No data available	No data available		
Tourism	Number of visitors per sector	Records in VCPs	Sandoval: 39236 La Torre: 5659 Malinowski: 10185	Sandoval: 29881 La Torre: 4560 Malinowski: 7434	Monthly	SERNANP RNTAM
	% success rate of sightings of key species (maquisapa, giant otter, jaguar, huangana)	Surveys to tour operators	Sandoval: 69% success in observing giant otters	Sandoval: 77% success in observing giant otters		

5.3.2 Biodiversity Monitoring Plan Dissemination (CCB, B4.3)

During the project period, different dissemination actions were carried out; the following is a list of the actions carried out during each year.

For 2022 the following actions were carried out:

- 4 dissemination brochures are being prepared, which serve as material to distribute in different environmental education events, they covered the topics of Giant Otter monitoring infographics, demand for research within the RNTAM and PNBAS, REDD+ Strategies, Results of monitoring with SMART, which once completed will be published on the contract page link: <http://ca.aider.com.pe/>.
- During the Biofest activities, two informative talks “Diversity and Sustainable Development” oriented to explain about the giant otter, the event was aimed at students of Ecotourism (National Amazonian University of Madre de Dios) and Tourism Guide (Jorge Basadre Grohmann Institute), on May 23 and 24, 2022.
- IX Symposium on Biological Research and Monitoring in NPAs and Conservation Corridors, which was held from September 07 to 09, 2022, which was conducted virtually. Four topics were discussed: 1. Biological Monitoring and diversity, 2.
- Binational Tourism Forum Peru - Bolivia, which was held on September 9 in conjunction with the IX Symposium.
- Symposium: advances and perspectives in the forestry sector of Madre de Dios. This was held on November 9th at the National Amazonian University of Madre de Dios.
- Workshop “Today we are all jaguars”, was held on November 30, 2022 aimed at children of the Jorge Chavez and Nueva America.

For 2023, the following actions were carried out:

- We have been developing booklets and books, which will serve as dissemination material of the activities carried out within the ANP, where the following booklets were covered Tourism in the RNTAM, Andes Flux Tambopata Tower in collaboration with the Pontificia Universidad Católica del Perú and the biological stations. Two books are also being prepared, the Ranger's Guide and the Heath Pampas Book, which once completed will be published on the contract page link: <http://ca.aider.com.pe/>.
- Research Symposium, “Manu National Park: 50 years conserving nature and culture”. Which was held on July 25, 2023, at the National Amazonian University of Madre de Dios, with the participation of 8 speakers on biodiversity issues and more than 100 attendees.

- X Symposium of research and biological monitoring in Natural Protected Areas and Conservation Corridors in Madre de Dios. This symposium was held on September 14 and 15, 2023, in the amphitheater of the National Amazonian University of Madre de Dios. Three themes were discussed: 1) Biodiversity and research, 2) Climate change and conservation and 3) Mining and restoration.
- The first forum for the International Jaguar Day was held on November 29, 2023, with the objective of disseminating and raising awareness about the importance of the jaguar in the ecosystem.

5.4 Optional Criterion: Exceptional Biodiversity Benefits

The presence of the RNTAM and the PNBAS contribute to the reduction of illegal hunting and capture of endangered primates within their areas, one of the main objectives of the National Plan for the conservation of endangered primates in Peru.

The NPAs within their Master Plans respond to the objectives of conservation of endangered species, thus allowing the care of different species in their territories, one of the main reasons why they were created.

The categorized fauna species are listed in the project area according to their conservation status at the national level, cross-checked with CITES sources, Red List (IUCN), Suppression Decree 04-2014-MINAGRI and Red Book of Threatened Wildlife of Peru (SERFOR, 2018).

Common name	Scientific name	Class	ANP		Presence in the project	Master Plan	State of conservation				Observations
			RNTAM	PNBAS			IUCN (Red List)	CITES	DS 014-2014-Perú	Red Book of Peruvian Fauna	
Species conservation elements											
Jaguar	<i>Panthera onca</i>	Mammal	X		X	PM RNTAM 2019-2023	NT	I	NT		Excluded in the new master plan
Giant otter	<i>Pteronura brasiliensis</i>	Mammal	X	X	X		EN	I	EN	EN	
Bolivian Macaw	<i>Ara ararauna</i>	Birds	X		X		LC	II			
Scarlet Macaw	<i>Ara macao</i>	Birds	X		X		LC	I	NT	NT	
Peruvian Macaw	<i>Ara chloropterus</i>	Birds	X		X		LC	II	NT	NT	
Blue-headed macaw	<i>Primolius couloni</i>	Birds	X	X	X	SMI RNTAM Y PNBAS	VU	I		VU	
Marsh Deer	<i>Blastocerus dichotomus</i>	Mammal		X	X		VU	I	VU	VU	
Maned wolf	<i>Chrysocyon brachyurus</i>	Mammal		X	X		NT	II			
Especies de caza											

Red Brocket Deer	<i>Mazama americana</i>	Mammal	X		X		DD		DD	DD	
Sachavaca	<i>Tapirus terrestris</i>	Mammal	X		X	PM RNTAM 2019-2023	VU	II	NT	NT	
Pava	<i>Penelope jacquacu</i>	Mammal	X		X		LC				
Huangana	<i>Tayassu pecari</i>	Mammal	X		X	PM RNTAM 2019-2023/ SMI RNTAM Y PNBAS	VU	II	NT	NT	
Picuro	<i>Cuniculus paca</i>	Mammal			X		LC	III/w			
Sajino	<i>Pecari tajacu</i>	Mammal			X		LC	II			
Uso de huevos, peces, etc.											
Taricaya	<i>Podocnemis unifilis</i>	Reptile		X	X	PM PNBAS 2023-2028	VU	II		VU	
Paco	<i>Piaractus brachypomus</i>	Fish	X	X	X						
Doncella	<i>Pseudoplatystoma punctifer</i>	Fish	X		X	PM RNTAM 2019-2023/ PM PNBAS 2023-2028					
Boquichico	<i>Prochilodus nigricans</i>	Fish	X		X						
Sábalo	<i>Acestrocephalus falcatus</i>		X		X						

Zungaro	<i>Zungaro zungaro</i>	Fish		X	X						
Species of interest to the CA and ANP (jaguar prey and others)											
Maquisapa	<i>Ateles chamek</i>	Mammal	X	X	X	PM PNBAS 2015-2019	EN	II	EN		
Nutria	<i>Lontra longicaudis</i>	Mammal		X	X		NT	I			
Águila arpía	<i>Harpia harpyja</i>	Birds	X	X	X	SMI RNTAM Y PNBAS	NT	I		VU	
Achuñe	<i>Nasua nasua</i>	Mammal			X		LC				
Manco	<i>Eira barbara</i>	Mammal			X		LC	III/w			
Puma	<i>Puma concolor</i>	Mammal			X		LC	II	NT	NT	
Mapache	<i>Procyon cancrivorus</i>	Mammal			X		LC				
Chozna	<i>Potos flavus</i>	Mammal			X		LC	III/w			
Armadillo	<i>Dasypus novemcinctus</i>	Mammal			X		LC				
Oso bandera	<i>Myrmecophaga tridactyla</i>	Mammal			X		VU	II		VU	
Armadillo peludo	<i>Cabassous unicinctus</i>	Mammal			X		LC				
Tamandua	<i>Tamandua tetradactyla</i>	Mammal			X		LC				

Yungunturo	<i>Priodontes maximus</i>	Mammal		X		VU	I		VU	
P. de dos dedos	<i>Choloepus didactylus</i>	Mammal		X		LC				
Serafín	<i>Cyclopes didactylus</i>	Mammal		X		LC				
Coto	<i>Alouatta seniculus</i>	Mammal		X		NT	II		VU	
Martin negro	<i>Sapajus macrocephalus</i>	Mammal		X		LC	II			
Martin blanco	<i>Cebus cuscinus</i>	Mammal		X		NT	II			
P. de tres dedos	<i>Bradypus variegatus</i>	Mammal		X		LC	II			
Pichico	<i>Saguinus fuscicollis</i>	Mammal		X		LC	II			
Musmuqui	<i>Aotus nigriceps</i>	Mammal		X		LC	II			
Fraile	<i>Saimiri boliviensis</i>	Mammal		X		LC	II			
Tocon	<i>Plecturocebus toppini</i>	Mammal		X			II			
Ocelote	<i>Leopardus pardalis</i>	Mammal		X		LC	I			
Yaguaroundi	<i>Puma yagouaroundi</i>	Mammal		X		LC	II			

Huamburusho	<i>Leopardus wiedii</i>	Mammal			X		NT	I	DD	DD	
Bush dog	<i>Speothos venaticus</i>	Mammal			X		NT	I			
Short-eared dog	<i>Atelocynus microtis</i>	Mammal			X		NT			VU	
Venado cenizo	<i>Mazama nemorivaga</i>	Mammal			X		LC				
Ardilla roja	<i>Sciurus spadiceus</i>	Mammal			X		LC				
Ardilla gris	<i>Sciurus ignitus</i>	Mammal			X		LC		DD	DD	
Picuromama	<i>Dinomys branickii</i>	Mammal			X		LC			VU	
Añuje	<i>Dasyprocta punctata</i>	Mammal			X		LC				
Ronsoco	<i>Hydrochoerus hydrochaeris</i>	Mammal			X		LC				
Punchana	<i>Myoprocta-pratti</i>	Mammal			X		LC				
Erizo	<i>Coendou bicolor</i>	Mammal			X		LC				
Mono choro	<i>Lagothrix lagotricha</i>	Mammal			X		VU		EN	EN	
Motelo	<i>Chelonoidis denticulata</i>	Reptil			X		VU	II	VU		
Bioindicator birds											

Orinoco Goose	<i>Neochen jubata</i>	Birds		X		NT			VU	
Wood duck	<i>Cairina moschata</i>	Birds		X		LC	III/w			
Bell-bellied guan	<i>Pipile cumanensis</i>	Birds		X		LC		NT	NT	
Paujil	<i>Mitu tuberosum</i>	Birds		X		LC		NT	NT	
Jungle Condor	<i>Sarcoramphus papa</i>	Birds		X		LC	III			
Spizaetus eagle	<i>Spizaetus tyrannus</i>	Birds		X		LC	II			
Crested eagle	<i>Morphnus guianensis</i>	Birds		X		NT	II		VU	
Trompetero	<i>Psophia leucoptera</i>	Birds		X		NT				
Chirricle	<i>Pionites leucogaster</i>	Birds		X		VU	II			
Aurora pequeña	<i>Amazona ochrocephala</i>	Birds		X		LC	II			
Aurora arinosa	<i>Amazona farinosa</i>	Birds		X		NT	II			
Maracana	<i>Orthopsittaca manilatus</i>	Birds		X		LC	II			
Military Macaw	<i>Ara militaris</i>	Birds		X		VU	I		VU	

Chestnut-fronted macaw	<i>Ara severus</i>	Birds			X		LC	II			
Flora											
Tornillo	<i>Cedrelinga cateniformis</i>	Plants		X	X	PM PNBAS 2023-2028	LC				
Aguaje	<i>Mauritia flexuosa</i>	Plants	X		X						
Ungurahui	<i>Oenocarpus bataua</i>	Plants	X		X						
Tamishi	<i>Heteropsis linearis</i>	Plants	X		X						
Palmiche	<i>Geonoma deversa</i>	Plants	X		X						
Chestnut	<i>Bertholletia excelsa</i>	Plants	X	X	X	PM PNBAS 2023-2028/ SMI RNTAM Y PNBAS	VU				

(1) <https://www.serfor.gob.pe/wp-content/uploads/2016/09/DS-N004-Especies-amenazadas-de-fauna-silvestre.pdf>

(2) <https://www.serfor.gob.pe/wp-content/uploads/2018/10/LibroRojo.pdf>

(3) <https://www.minam.gob.pe/simposio-peruano-de-especies-cites/wpcontent/uploads/sites/157/2018/08/Listado-FAUNA-CITES-FINAL.pdf>

5.4.1 Trigger Species Population Trends (CCB, GL3.2, GL3.3)

Triggering species	<i>Otorongo (Panthera onca)</i>
Scenario with project	In the jaguar monitoring, 28 detections were made, identifying a total of 16 jaguars (9 males, 5 females and 2 unknown sexes), giving a density of 1.87 ± 0.56 individuals/100 km². As direct actions to care for the jaguar, the first forum for International Jaguar Day was held to raise awareness about the importance of the species in the ecosystem. We also participated in the workshop for the development of the Jaguar Coexistence Plan, which was aimed at community members and institutions.

Triggering species	<i>Giant Otter (Pteronura brasiliensis)</i>
Scenario with project	The population census of giant otters resulted in 2022 in a total of 46 individuals distributed in 9 family groups. And for 2023 a total of 39 individuals distributed in 7 family groups. In this case there was an increase in some places, specifically in Lago Tres Chimbadas, where in 2022 only two individuals were observed, while in 2023 a group of 7 individuals was observed, but the reduction is due to the fact that it was not possible to enter the Blue sector due to staff security.

Triggering species	<i>Blue-headed macaw (Primolius couloni)</i>
Scenario with project	<i>In the clay lick monitoring, the presence of the species Primolius couloni was observed in the Chuncho and Colorado clay lick; it was observed more frequently in the Chuncho clay lick, its presence is important because not much is known about the species and its presence has been diminished.</i>

Triggering species	<i>Chestnut (Bertholletia excelsa)</i>
Scenario with project	<i>Chestnut monitoring found 17 natural regeneration seedlings in 7 chestnut concession plots, representing an average of 1.19 seedlings per hectare.</i> <i>The basal area of Chestnut trees was 273.74 m² for the 14 plots installed in the Tambopata National Reserve, with minimum values of 11.69 m² and maximum values of 29.44 m².</i> <i>The average number of fruits per Brazil nut tree is 64.79.</i> <i>These data help us understand the dynamics of the chestnut.</i>

