

Name of Verifier(s)	Date of Review
VVB Name and Address	Control Union Certifications Germany GmbH Bornitzstrasse 73-75 10365 Berlin Deutschland
Lead Auditor	Mr. Flavio Guiera
Audit Team Member(s)	Mrs. Priscila Ulbrich
Internal Verification Code	CUC2024ARBO001_V1
Standard Version	Plan Vivo Carbon Standard V4.0, 2013 Verification
Plan Vivo Certificates (PVC) issued (ex-ante)	187,242 tCO ₂ e
• Of which have been converted to ex-post	0
Buffer Certificates	21,251 tCO ₂ e (10% PV buffer) 4,032 tCO ₂ e (10% voluntary ArBolivia project)

Project Description

Represented by SICIREC Bolivia Ltda, the ArBolivia Project is part of the implementation and forest management of a carbon reforestation project with the aim of contributing to the mitigation of climate change and social risks in developing countries.

The ArBolivia Project together with local rural smallholders promotes rural and productive development through reforestation activities with mixed, mainly native tree species, sustainable forestry plantation management and the provision of environmental services. Specific silvicultural and forest management tasks are defined together with the farmer. The application of a poly-cyclic harvesting system aims to ensure a relatively high average carbon storing capacity in the plantations. The carbon calculations are based on a mono-cyclic harvesting system applying a conservative approach.

The project is being implemented in settler areas in the Cochabamba Tropics, Northern La Paz, and Western Beni, spread by three focal regions as follows: zone of Beni/La Paz covering municipalities of Reyes, Rurrenabaque, San Borja y San Buenaventura; Zone of Cochabamba covering municipalities of Chimoré, Puerto Villaroel y Shinahota.

The settlers' areas have been a destination for migrants coming from the "High Valley" and Altiplano regions of Bolivia since the 1930s. Smallholders own 95% of the land in the portfolio regions. The sizes of the properties vary, but they are on average 20 hectares per family in the Cochabamba Tropics, and 25 to 50 ha in the other regions. Only a few farmers have land less than 20 ha. The settlers are organized into syndicates of 20 to 60 farmer families. Approximately 5 syndicates form a "central", which in turn belong to a federation.

Traditional land-use practices associated with over-harvesting of native forests have led to widespread deforestation, which has led to a growing shortage of timber from commercial native species. This has spurred interest of smallholder farmers in the conservation and sustainable management of the primary and secondary forests and in planting trees on their farmland.

Areas reforested represent only small portions of the holdings of farmers which they designate voluntarily for this purpose in consideration of their food security and livelihood needs. Special programs like Integrated Land Use Planning, Agroforestry systems and silvopastoral systems accompany the project to guarantee food and income security for the farmers involved.

The implementation as well as the maintenance activities necessary to ensure tree development within plantations are carried out by the farmers. The activities, e.g. weeding or pruning, are planned together with the project staff during the farm visits. During the visit a personalized on-farm capacity building assessment is realized by the technician with the farmer to assure accomplishment according to certain minimal technical standards and schedule.

The list of species planted include:

Tectona grandis, Teca
Virola flexuosa, Gabun
Terminalia oblonga, Verdolago amarillo de ala
Terminalia amazonica, Verdolago negro de ala
Tapirira guianensis, Palo román
Stryphnodendron purpureum, Palo yugo
Schyzolobium amazonicum, Serebo
Guarea rusby, Trompillo de altura
Dipteryx odorata, Almendrillo
Centrolobium tomentosum, Tejeveque
Calophyllum basiliense, Palo María
Buchenavia oxycarpa, Verdolago negro or Pepa
Aspidosperma macrocarpon, Jichituriqui
Cedrelle

The total project area included in this verification assessment is 1,051.72 ha.

The GHG assertion provided by the ArBolivia Project and verified by Control Union Certifications Germany GmbH has resulted in the GHG emission reductions or removals of 212,525 tCO₂e equivalents (CO₂e) by the project during the reporting/monitoring period (01.01.2019 – 31.12.2022). A buffer withholding 25,283 tCO₂e was allocated based on the 20% risk buffer as specified in the methodology and leading to a PVC issuance of 187,242 tCO₂e.

Introduction

1. Objectives

The objectives of the verification are the following:

- Assess whether the project continues to comply with the requirements of the Plan Vivo Standard V4.0 and assess conformance of new areas included in the project with the Plan Vivo Standard criteria.
- Assess whether project activities have been carried out as indicated in the PDD and as reported in the annual reports 2019 – 2022
- Assess whether project activities generated the expected climate, livelihood and biodiversity benefits and whether this has been achieved in accordance with the project's Technical Specifications.

2. Scope

The project aims to evaluate the performance of the ArBolivia project to the Plan Vivo Standard V4.0 and verify additional areas and new project members proposed for inclusion into the total project area. Additional project members were included in this verification assessment considering the requirements of the Plan Vivo Standard V4.0. The new area added since the last verification

assessment in October 2018 encompasses a total of 712.5 ha. At the time of this verification, the total project area encompasses 1,051.72 ha.

3. Methodology

The verification assessment consisted of a desk review based on the delivered PDD, Annual reports and supporting documentation and of an on-site visit of the project area.

Desk review

During the assessment Control Union Certifications Germany GmbH reviewed the following elements of the project and verified compliance against the Plan Vivo Version 4.0 2013 Standard Requirements based on information provided by ArBolivia:

- Project Design Document (PDD);
- Annual Reports for Plan Vivo Certification of years 2019, 2020, 2021 Q1st & 2nd., 2021 Q3rd & 4th, 2022. ;
- Shape files of the project (verification based on existing satellite images);
- Shape files of the new members of the project (verification based on existing satellite images);
- Review of the Technical Specification document 2019;
- Review of the Methodology of Carbon Stock calculation and new prognostics data (carbon model 2023).

Site visit:

For sampling purposes the field visits and sample plots inspections comprised of all four project regions. Also a sample of different sites where ArBolivia Project is developing new agroforestry systems with Cocoa and coffee were visited, but those cultures are still taken out of the scope, given that there are insufficient data collected to support the inclusion of its carbon stocks in the project by now. Therefore, only tree plantations are deemed to generate PVs. Sample locations were selected based on a risk assessment and representativeness but also access, availability of interviewees and safety. Interviews were performed with project participants, project coordinators and relevant stakeholders.

During the site visit the following elements were verified through observation, interviews and reviews of documentation:

- Field verification of the Project Coordination and Management;
- Field verification of Shape files and land management plans;
- Field verification of the Participatory Design;
- Field verification on the implementation of Sustainability Monitoring Plan;
- Field verification of Risk management;
- Field verification of the Livelihood Impacts;
- Field verification of the PES agreements and benefit-sharing;
- Consultation with local stakeholders.

Deliverables:

- Verification plan
- Verification Report, including FARs and OBS from former verification assessments and the measures for their closure.

4. Level of Assurance

The GHG emission reductions and/or removals achieved during the monitoring period were evaluated to a reasonable level of assurance. During the verification a 5% materiality threshold was used.

List and description of documents reviewed

1. Desk review:

- Carbon sequestration through reforestation and improved land use in the Bolivian tropics by smallholders - ArBolivia Project – Plan Vivo Project Development Document (PDD) – (April 2011)
- Sistema de Monitoreo y Evaluación del Proyecto ArBolivia – Reporte General (June 2023)
- New Issuance Plan Vivo A/R Credits (Datos de las nuevas parcelas a certificar OCT-2023)
- Plan Vivo Technical Specification for Forestry Plantations for sustainable Wood Production (2011 - Revised version June 2019)
- CO2 Scientific Growthmodel
- Agreement with Farmer individual Member: Contrato Especifico para el establecimiento, Mantenimiento, aprovechamiento y comercializacion de plantaciones forestales)
- Plan de Monitoreo de Biodiversidad
- Lista Certificacion PV 2023
- Growth model based Permanent Sample Plots (Especies y datos de crecimiento)
- ArBolivia_Mixed_Species_technical_specification revised version 2019
- MANUAL SSMA 1era Edición - (21/11/2023)
- Manual_Establecimiento para plantaciones forestales rev 2023
- Manual_Selección de sitios rev 2023
- Protocolo_Establecimiento de Plantaciones Forestales rev v2023
- Protocolo_Seleccion de sitios rev 2023
- Summary biodiversity monitoring Oct 2023
- Tree plantation as solution for deforestation and recovery of biodiversity in Bolivian farms (Van Hall Larenstein University of Applied Sciences/Thesis) – Oct 2023
- List of employees of SICIREC – Lista de Personas
- ArBolivia Data Base: v3.0
- Comites forestales_Directorios rev_2023
- Definición del factor de forma de 3 especies forestales / Julio 2023
- 2019 ArBolivia AR approved
- 2020 ArBolivia AR approved
- 2021 Q1&2 ArBolivia AR approved
- 2021 Q3&4 ArBolivia approved
- 2022 ArBolivia AR approved

2. Supporting documents during field verification

ID	Date of publication	Title
1	Oct-2023	Lista de comité forestales y directórios
2	Nov-2023	-List of employees of SICIREC – Lista de Personas
3	Nov-2023	Contrato Marco para el establecimiento, Mantenimiento, aprovechamiento de plantaciones forestales: 15 Muestras
4	Nov-2023	Formularios 15-A/B/C y D. Parcelas Permanentes de Muestreo (PPM). 15 Muestras.

5	Nov-2023	Formularios 15- C : 1/2. Parcelas Permanentes de Muestreo (PPM) – Registro de medición: 15 Muestras.
6	Nov-2023	Reporte General de Monitoreo de Plantaciones: 15 muestras
7	14/06/2023	ArBolivia Project - Report -January-December 2022
8	Nov.2023	Formularios 8- Establecimiento de Sistemas Agroforestales. 15 muestras
9	Jan -2019 – Oct-2023	Recibos de Pago por servicios de manetenimiento y tala de la PFC
10	Nov.2023	ArBolivia Data Base: v3.0
11	Jan -2019 – Oct-2023	Recibos de Pago por servicios de manetenimiento y tala de la PFC
12	12 may 2023	Inf_taller_induccion_parte1_v20230512-1
13	31 jul 2023	Memoria_taller_induccion_parte2_v20230731-2
		<ul style="list-style-type: none"> - Planillas de campo – (15 muestras) ○ Formulario 1. CONCERTACIÓN ○ Formulario 2. DATOS GENERALES (Selección, POP & PIF) ○ Formulario 3. CROQUIS (Selección, POP & PIF) ○ Formulario 4. UNIDADES DE USO DE SUELO, (Selección & POP) ○ Formulario 5. VEGETACION DE LA UNIDAD (Selección, POP & PIF) ○ Formulario 6. SUELOS DE LA UNIDAD (Selección, POP & PIF) ○ Formulario 7. ESTABLECIMIENTO DE PLANTACIONES FORESTALES ○ Formulario 8. ESTABLECIMIENTO DE SISTEMAS AGROFORESTALES ○ Formulario 10. MANTENIMIENTO DE PLANTACIONES FORESTALES ○ Formularios 15-A/B/C y D. Parcelas Permanentes de Muestreo (PPM) ○ Formularios 15- C : 1/2. Parcelas Permanentes de Muestreo (PPM) – Registro de medición

Itinerary of field visit (including list of sites visited and individuals/groups interviewed)

1. Assessment during the field visit

Date	Location	Time spent	Auditor
27-Nov-2023	Rurrenabaque , San Borja (Beni)	8 hours	Flavio Guiera Priscila Ulbrich
<ul style="list-style-type: none"> - Opening Meeting - Planification of field visit - Stakeholders Consultation (UOBT rurrenabaque/ FECAR) - Field Visit to Communities: Uncallamaya, Piedra Blanca. 			
28-Nov-2023	Rurrenabaque (Beni) - San Buenaventura (La Paz)	8 hours	Flavio Guiera Priscila Ulbrich
<ul style="list-style-type: none"> - Field visit to Communities: Carmen Soledad, Capaina, El Dorado, Mayge, Bella Altura - Interview with technical staff 			
29-Nov-2023	Rurrenabaque (Beni)	6 hours	Flavio Guiera Priscila Ulbrich
<ul style="list-style-type: none"> - Interview with Technical Staff - Stakeholders Consultation (Universidad Autonoma Gabriel Rene Moreno) 			
30-Nov-2023	San Carlos /Buena Vista (Ichilo-Santa Cruz)	8 hours	Flavio Guiera Priscila Ulbrich
<ul style="list-style-type: none"> - Field visit to project members Communities: Huaytu, Villa Amboro, 2 de agosto, Aguas Blancas Paraiso 			
1-Dec-2023	Yapacani (Santa cruz) /Entre Rios (Cochabamba)	8 hours	Flavio Guiera Priscila Ulbrich
<ul style="list-style-type: none"> - Field visit to Nursery San carlos, Communities: Chuchial, Independencia - Documents checking - Closing meeting 			

2. Interviews during field visit

Date	Person	Time spent	auditor
27 Nov to 01 DEC 2023	Jorge Goitia – Excecutive Manager ArBolivia	40 hours	Flavio Guiera Priscila Ulbrich
27 Nov to 01 DEC 2023	Jose Angel Bailly Arias – Monitoring Coordinator ArBolivia.	40 hours	Flavio Guiera Priscila Ulbrich

27 Nov2023	Ismael –Executive officer of Unidad Forestal Municipal de Rurrenabaque	2 hours	Flavio Guiera Priscila Ulbrich
27 Nov to 01 DEC 2023	Moises Andres Acarapi – Social Responsibility Technician ArBolivia	20 hours	Flavio Guiera Priscila Ulbrich
19 Oct-2018	Ricardo Espada – Regional supervisor Rurrenabaque ArBolivia -	20 hours	Flavio Guiera Priscila Ulbrich
27 Nov2023	Alexander Navi - Plantation Management Technician ArBolivia	6 hours	Flavio Guiera Priscila Ulbrich
27-28 Nov2023	Freddy Mamani Quiñones - Plantation Management Technician ArBolivia	16 hours	Flavio Guiera Priscila Ulbrich
27 Nov2023	Eloy Aparicio – Cocoa Specialist	1 hour	Flavio Guiera Priscila Ulbrich
27 Nov2023	Eric – AFS Technician ArBolivia	1 hour	Flavio Guiera Priscila Ulbrich
28 Nov2023	Pilar Mamani Huanca Apaza – Monitoring Plan	1 hour	Flavio Guiera Priscila Ulbrich
28-Nov-2023	Alberto Aguilar – President of Comité Forestal Almendrillo	2 hours	Flavio Guiera
27-Nov-202	Refel Luna – Federación de Comunidades Agropecuarias de Rurrenabaque FECAR	1 h 30 min	Priscila Ulbrich
27-Nov-202	Modesto Piza - Comunidad Piedra Blanca Settler, project member	30 min	Flavio Guiera
27-Nov-202	Ruben Camacho - Settler, project member	1 hour	Flavio Guiera
28-Nov-2023	Gil Miro Capaina - Comunidad: Tacana - Settler, project member	30 min	Priscila Ulbrich
28-Nov-2023	Norma Rodrigues, Comunidad: Mayge, Settler, project member	1 hour	Flavio Guiera
28-Nov-2023	Eulagio Rodrigues Comunidad: Mayge Settler, project member	30 min	Priscila Ulbrich
28-Nov-2023	Alfredo Agamon, Private holder , project member	30 min	Flavio Guiera Priscila Ulbrich
28-Nov-2023	Felix Mamio Guamona – Comunidad Tacana - Settler, project member	30 min	Flavio Guiera Priscila Ulbrich

30-Nov.2023	Samuel Vilca . Comuniad Aguas Blancas Paraiso Settler, project member	1 hour	Priscila Ulbrich
30-Nov.2023	Limber Vilca (Balbina – wife) Comuniad Aguas Blancas Paraiso Settler, project member	30 min	Flavio Guiera
30-Nov.2023	Pablo Mamani Huanca – Comunidad Villa Amboro, Settler, project member	2 hours	Flavio Guiera Priscila Ulbrich
30-Nov.2023	Pedro Victor Galindo y Nemecia Vera Alba, Comunidad: Villa Amboró, Settler, project member	30 min	Flavio Guiera Priscila Ulbrich
30-Nov.2023	Luciano Chura. Comunidad: 2 de agosto, Settler, project member	1 h	Flavio Guiera Priscila Ulbrich
30-Nov - 01-DEC-2023	Freddy Juchasara Pillco - Regional supervisor San Carlos ArBolivia.	16 hours	Flavio Guiera Priscila Ulbrich
01-DEC-2023	German Salinas - Resp. Unidad de Promoción	3 hours	Flavio Guiera

Conclusion

Control Union Certifications Germany GmbH has assessed the performance of the ArBolivia project along the requirements of the Plan Vivo Standard Version 4.0, 2013. Based on the verification process conducted, it is concluded that the achieved carbon reductions and other proposed benefits are materially correct and a fair representation of the ArBolivia project activities. Control Union Certifications Germany GmbH hereby confirms the ArBolivia project is accurate, consistent, and complies with all criteria in the Plan Vivo Standard Version 4.0, 2013 and the validated PDD.

CAR: CUC-CAR-01	Reference : 4.5	Category : MINOR
Date found: 01/12/2023	Deadline for correction: 30/05/2024	
Description of indicator: Participants are being provided with a forum to periodically discuss the design and running of the project with other participants and raise any issuance or grievances with the project coordinator (4.12).		
Description of non-conformity: In 2023 a general meeting with all participating farmers was held once. However, the agenda setting for further meetings was interrupted by the forest fires from September to November 23. To stick to the project design, the project proponent should have re-scheduled these meetings for 2024. A CAR was raised with regards to the re-scheduling of the annual meetings in 2024. A new meeting schedule needs to be presented to show that the project adheres to the initial project design.		
Evidence received, and analysis of corrections and corrective actions provided for NC closure: The meetings for 2024 were re-scheduled by the Project developer per community as per evidence received (list of conducted and planned meetings). The first meeting was conducted on 23.05.2024 in the community of Carmen Saguay (Buena Vista). For the other communities meetings were conducted in May, June and July and planned in September, October and November 2024. The scheduling of meetings is picked up again as described in the project design. The validator found the evidence sufficient to close the CAR.		
Documents reviewed -reuniones asambleas de comités 2024.xlsx		
Status: Closed		

NC: CUC-FAR-01	Reference : 2.3	Category : MINOR
Date found: 08/10/2016	Deadline for correction: 5 years from closing meeting 7/ October / 2021	
Description of indicator: Project interventions must not lead to any negative environmental impacts, e.g. soil erosion or reduction of water quality.		
Description of non-conformity: Despite the fact that ArBolivia Project has managed the waste in an appropriate manner for the sources found at field level, the project manager did not present a written policy or documented procedures which describe all sources of waste and waste products, followed by instructions and measures for the appropriate collection, transport, storage, handling and disposal.		

Evidence received, and analysis of corrections and corrective actions provided for NC closure:

Performance Verification – Field Audit 24/10/2018:

It is observed that the farmers are more conscious regarding the waste problem and are happy about the diminishing of waste spread at the field. ArBolivia Project is still working on the waste management procedures and policies, as well as the training and education for project members in order to reduce waste production and how to deal with those considered toxic or hazardous for people and environment. Within the region where the project is established no licensed companies are available to manage hazardous waste properly, which therefore creates a challenge for the Project Developer to correctly treat and dispose this kind of material. Generally non toxic or hazardous waste is incinerated at the field.

Evidence observed still insufficient to close the FAR, so **it remains OPEN**.

Documents Reviewed:

- Mitigación del cambio climático y medidas de adaptación: Aplicación de mejores prácticas de uso de la tierra por los pequeños agricultores en la amazonía boliviana (Enero-2019)-
- Plan Vivo Annual Report 2017

Desk Verification 07/10/2021:

Due to the Pandemic SARS COVID 19 , the activities of training and education process were restricted and the implementation of effective measures for the process of correction of the FAR was jeopardized.

The deadline for the correction of this FAR is extended for the next Verification field Audit or no longer than 24/10/2023.

Documents Reviewed:

- Mitigación del cambio climático y medidas de adaptación: Aplicación de mejores prácticas de uso de la tierra por los pequeños agricultores en la amazonía boliviana (Enero-2019)-
- 2020 ArBolivia AR approved
- 2021 Q1&2 ArBolivia AR approved

Performance Verification Field Audit 01/12/2023:

ArBolivia has developed and implemented an extensive plan of waste management based on a structured manual for environmental, health and safety in the forestry activities. This subject was duly discussed in the induction training with the new staff and some Project Members, stressing the importance of a strict control concerning the waste generated by the Project activities and also those produced domestically by the farmers.

The search for alternative and more environmentally friendly seedling production is noted in the nursery with the tests using degradable pots and those which can be re-used instead of disposable.

The evidence provided and the field visit ensure that the Project Developer has implemented measures to address the failure to achieve closure and to avoid its recurrence.

Documents reviewed:

- MANUAL Seguridad Salud y Medio Ambiente SICIREC 2023)
- Inf_taller_induccion_parte1_v20230512-1
- Memoria_taller_induccion_parte2_v20230731-2

Status: Closed

NC: CUC-FAR-02	Reference : 5.3	Category : MINOR
Date found: 24/10/2018	Deadline for correction: 5 years from closing meeting (23 October 2023)	
Description of indicator: Technical specifications must be updated at least every 5 years where they are still being used to sign new PES Agreements, by reviewing both available data from project monitoring results, e.g. species growth data, and new available data from outside the project		
Description of non-conformity: Project developer did not review the documents such as “Manuales de campo socioeconómico y biodiversidad”, “Sistema de monitoreo y evaluación del proyecto ArBolivia”, in agreement with the findings of annual reports and updated information that are being implemented at field level like calliper use for measurements, buffer zones protocol, health and safety at thinning, waste management and species growth model, for example.		
Evidence received, and analysis of corrections and corrective actions provided for NC closure: The Project Developer presented the technical specifications reviewed in 2019 and supporting documentation which has been revised to follow the actual project activities specifications applied in practice. The actual project activities have been assessed through field level observation which was also confirmed by the project members during the interviews. Field work for impact monitoring has been done by 1 national and 2 international students reviewing the monitoring methodologies, including the use of instruments like calliper, extension and improvement of methodologies on biodiversity monitoring, species growth models, PSP methodologies, health and safety in the forestry, as well several other points of critical analysis. For the review of safety protocols for thinning and harvesting in the woodlots an expert was hired in early 2023. The Project Developer has provided sufficient evidence of measures implemented to correct the CUC-FAR-02 and to avoid its reoccurrence.		
Documents reviewed <ul style="list-style-type: none">- ArBolivia_Mixed_Species_technical_specification revised version 2019- MANUAL SSMA 1era Edición - (21/11/2023)- Manual_Establecimiento para plantaciones forestales rev 2023- Manual_Selección de sitios rev 2023- Protocolo_Establecimiento de Plantaciones Forestales rev v2023- Protocolo_Seleccion de sitios rev 2023- Manual_PPM_Julio 2023- Protocolo_PPM_v Julio 2023- Protocolo resolución de conflictos en plantaciones forestales - Invasión de ganado - Julio 2023- Protocolo resolución de conflictos en quema de plantaciones forestales y/o sistemas agroforestales – Julio 2023.- Summary biodiversity monitoring 2023- Tree plantation as solution for deforestation and recovery of biodiversity in Bolivian farms (Van Hall Larenstein University of Applied Sciences/Thesis)- Planillas de campo –<ul style="list-style-type: none">o Formulario 1. CONCERTACIÓN		

- Formulario 2. DATOS GENERALES (Selección, POP & PIF)
- Formulario 3. CROQUIS (Selección, POP & PIF)
- Formulario 4. UNIDADES DE USO DE SUELO, (Selección & POP)
- Formulario 5. VEGETACION DE LA UNIDAD (Selección, POP & PIF)
- Formulario 6. SUELOS DE LA UNIDAD (Selección, POP & PIF)
- Formulario 7. ESTABLECIMIENTO DE PLANTACIONES FORESTALES
- Formulario 8. ESTABLECIMIENTO DE SISTEMAS AGROFORESTALES
- Formulario 10. MANTENIMIENTO DE PLANTACIONES FORESTALES
- Formularios 15-A/B/C y D. Parcelas Permanentes de Muestreo (PPM)
- Formularios 15- C : 1/2. Parcelas Permanentes de Muestreo (PPM) – Registro de medición

Status: Closed

OBS: CUC-OBS-03	Reference : 5.18	Category : OBSERVATION
Date found: 08/10/2016	Deadline for correction: N/A	
Description of indicator: An approved approach must be used to quantify initial carbon stocks and emissions sources, and estimate how they are most likely to change over the project period, as part of the baseline scenario.		
Description of Observation: ArBolivia has correctly applied the given carbon pools for each parameter of calculation (UNFCCC/ AM-ARS0001 vs.5.) both for root-to-shoot ratio and wood density, as part of the calculations to determine carbon stocks concerning each of the baseline scenarios as described in the PDD. Based on the monitoring results within the Permanent Sample Plots-PSPs, the Project Developer was able to gather and demonstrate to the CUC auditor sufficient data to establish growth models for each of the planted species. These accurate data are being used to update values as appropriate of the baseline scenarios for each intervention projected in the Program Developer’s Plan of Activities (PoA). Despite the developments to quantify carbon stocks, ArBolivia Project carbon pool is still based on values of Root-to-Shoot and Wood Density from default values sourced by UNFCC/ AM-ARS0001 vs.5. Given that the Plan of Activities is already in the phase of thinning intervention of some of the planted species, it should be an opportunity to apply the calculation approach for Root:Shoot and Wood-density. OBSERVATION: Project manager should implement analysis of samples of first soil horizons to improve conversion factors (e.g. Root:Shoot) of planted sites concerning its species and management. Also, the Project manager should implement analysis of wood density once thinning is taking place, to complement the bibliographic data.		
Evidence received and analysis of improvements provided for OBS address: *On 16 th Jan, 2017 - ArBolivia Project sent documents with evidences for closing CARs raised during the verification audit (08 th Oct-2016). Concerning CUC-OBS-03 the answer was: “SICIREC Bolivia va a incluir estos sugerencias en el plan de monitoreo y esperamos de poder implementar este en el segundo semestre de 2017, con el apoyo de la facultad de ciencias forestales de la Universidad Autonoma René Gabriel Moreno (UAGRM) de Santa Cruz. SICIREC		

Bolivia tiene un convenio con la carrera forestal de la UAGRM, la UAGRM tiene un laboratorio funcionando. En reunión sostenido con el director de la Carrera Forestal (Dr. Eduardo Sandoval) y Gerencia general y gerencia tecnica de SICIREC el 21 de diciembre, se ha acordado que a partir de medianos de 2017 se estaria realizando este trabajo con uno o mas tesisas.” - De acuerdo, se va a fortalecer la implementación del plan de monitoreo, lo cual en realidad define estos apsectos, mediante capacitación de los responsables a cargo del trabajo de campo.” (original Spanish document)

“SICIREC Bolivia will include these findings (OBS) in its Monitoring Plan and hopefully this can be implemented during the second semester of 2017 with the help of „Facultad de Ciencias Forestales de la Universidad Autonoma René Gabriel Moreno (UAGRM) de Santa Cruz“. SICIREC Bolivia has an agreement with the Forestry department of the UAGRM, which has a permanently functioning laboratory. In a meeting held on 21st of December between the Forestry Department (Dr. Eduardo Sandoval) and SICIREC’s general manager and technical manager, it has been agreed that starting in mid-2017, this work would be done with one or more thesis students. Accordingly, the implementation of the monitoring plan will be strengthened, which actually defines these apsects, through training of those responsible for field work”. (free ENG translation)

OBS was verified during the performance verification audit 24th-Oct,2018.

No further actions by the Project Developer could be evidenced to address the closure of this Observation. So it is still remain as an Oservation, once the effects of the absence of improvements do not affect directly the quality of the data provided for calculations.

Documents reviewed

Reply for the CARs and OBS – 17th-Jan,2017

Sistema de Monitoreo y Evaluación del Proyecto ArBolivia – Reporte General (24th Oct,2018)

OBS was verified during the performance verification audit 27th-Nov,2023.

Project Developer has carried out research specifically to present a soil analysis for the adaptability and nutrition of the plantations, aimed to increase the carbon benefits.

As stated by the representative of Universidad Autonoma Gabriel Rene Moreno, SICIREC is developing a partnership for the technological analysis of the timber produced by the project members, with the purpose to address the products to a more suitable use and add value to the benefits generated by ArBolivia project.

Documents reviewed

-INFORME TÉCNICO FINAL Nro. 1 - Código: ITS. Nro.1.10.10.23. SISIREC - ANALISIS DE SUELO – 25/11/2023)

OBS: CUC-OBS-04	Reference : 5.2	Category : OBSERVATION
Date found: 24/10/2018	Deadline for correction: N/A	
Description of indicator: Sources of data used to quantify ecosystem services, including all assumptions and default factors, must be specified and as up-to-date as possible, with a justification for why they are appropriate.		
Description of non-conformity: ArBolivia Project has implemented a new method of taking measures of trees in the Permanent Sample Plots, with the use of callipers. Although it has been considered a more productive		

device, it was identified that only 1 measure was taken at the DBH. It is also identified that species like Teak show a considerable distortion in a cross measurement, due to the irregular form of the stem. Project Manager should implement standard operational procedures and appropriate forms to take data and for the use of callipers in the monitoring of trees' growth. The fieldcheck of trees measured during the latest round of PPS' monitoring did not show significant mismatches between data, but it's an important point of attention for the accuracy of monitoring plan.

Evidence received, and analysis of improvements provided for OBS address:

ArBolivia Project has replaced the caliper by the diametric tape for all measurements and collecting data of trees growth from permanent sample plots. Measurements crosschecked (tallysheets x sampling trees in the PPM's field inspection) revealed that the inventories are accurate and well recorded. Also a new version of the "Field Manual for the establishment of PSPs" and a "Protocol for the establishment of PSPs" were established. In this way, it must be considered that the Project Developer has taken actions to avoid the occurrence of non-conformities related to this criteria and the Observation subject.

Documents reviewed

- 2022 ArBolivia AR approved
- Annex 1 - New Recruitment data (Excel Sheet)
- Annex 2 - Monitoring data (Excel Sheet)
- Manual_PPM_Julio 2023
- Protocolo_PPM_v Julio 2023

Table 1. Summary of major and minor Corrective Actions

Theme	Major CARs	Minor CARs	Observations	Status
Project's Eligibility	0	0	0	N/A
Ecosystem Benefits	0	0	0	N/A
Project Coordination and Management	0	0	0	N/A
Participatory design	CUC-CAR-01 – A new meeting schedule for 2024 needs to be presented to show that the project adheres to the initial project design.	0	0	N/A
Quantifying and Monitoring Ecosystem Services	0	0	0	N/A
Risk Management	0	0	0	N/A
Livelihoods Impacts	0	0	0	N/A
PES Agreement	0	0	0	N/A

During this verification, one CAR was raised related to participatory design which has been closed. FARs and OBS raised during the last verification assessment in 2018 have been evaluated during this verification and all found to be closed. Detailed information on the evidence provided and the verifier's conclusion can be found in the section above.

Table 2 - Report Conformance (Delete Yes/No as appropriate)

Theme	Conformance of Draft Report	Conformance of Final Report
Project's Eligibility	Yes	Yes
Ecosystem Benefits	Yes	Yes
Project Coordination and Management	Yes	Yes
Participatory design	No	Yes
Quantifying and Monitoring Ecosystem Services	Yes	Yes
Risk Management	Yes	Yes
Livelihoods impacts	Yes	Yes
PES Agreement	Yes	Yes

Detailed Verification Report

PROJECT'S ELIGIBILITY			
Requirement: Project directly engage and benefit community groups			
Verification Question: 1 and 2			
<p>1.1 Project interventions are still taking on land where smallholders and/or community groups have clear land tenure (1.1)</p> <p>1.2 Land that is not owned by or subject to use rights has included in the project area because (1.2):</p> <ul style="list-style-type: none"> It represents less than a third of the project areas at all times No part of the area was acquired by a third party from smallholders or community groups for the purpose of inclusion in the project Its inclusion will have clear benefits to the project by creating landscape level ecosystem benefits such as biodiversity corridors. There is an executed agreement between owners/mangers of such land and participants regarding the management of the area consistent with these requirements 			
A. Findings (describe)	<p>1.1) Every member of ArBolivia Project has clear and stable land tenure in which the long-term commitment for the period of PES Agreement is stated (Protocolo_EStablecimiento de Plantaciones Forestales rev v2023).</p> <p>To become a member of the project, the smallholder is led through an extensive analysis of requirements for participation farmers. (Manual_Selección de sitios rev 2023).</p> <p>During this verification, the project participants' contracts, legal representatives and good standing legal documentation was verified. Documentation is recorded in hard and soft copies. (Carpeta del Miembro – 14 samples. Nombre y Apellido, Comunidad- n° de lote, Codigo Waypont Lote).</p> <p>1.2) All land is owned or subject to user rights of project members.</p>		
B. Conformance	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
C. Corrective Actions (describe)	None		
D. (Insert Project Coordinator's Name) Response	N/A		
E. Status	N/A		

ECOSYSTEM BENEFITS
Requirement: Project generates ecosystem service benefits and maintains or enhances biodiversity.

Verification Questions: 1, 3 and 5

- 2.1 Project interventions are maintaining or enhancing biodiversity (2.2)
 2.2 Project interventions have not led to any negative environmental impacts (2.3)
 2.3 Any trees being planted to generate ecosystem services are native or naturalised species and are not invasive (2.4)

A. Findings (describe)	<p>2.1) ArBolivia implements a site selection protocol for each of the site members. In this procedure, potential threats to biodiversity are detected at field level and the design of intervention is planned to mitigate negative impacts and enhance or rehabilitate biodiversity. The relevant protocols and procedures revised in 2023 were checked during this verification and confirmed during project participants interviews.</p> <p>2.2) The project has as one of its goals to enrich local biodiversity and to protect remaining native spots with the establishment of agrosilviculture methods. ArBolivia implements a survey to each potential site member considering the protection of remaining natural ecosystems and applying HCV identification approach. Plantations are designed to include buffer zones and curtains between natural forests and cropping lands. Furthermore, ArBolivia supports conservation activities at “Reserva Municipal El Curichi” – 1,261ha in Ichilo Province. The design of the plantations fosters the connection between habitats and exhibits a mosaic of ages, species and silviculture. Corridors of fauna and flora are abundant all-over the project and were witnessed during the on-site visit.</p> <p>With regards to farm practices, the following was observed and confirmed during interviews:</p> <p>No Genetically Modified Organisms (GMOs) are planted by the project members. There are no heavy machines used or other practices with a heavy soil impact applied or planned as part of the project. No ploughing is recorded on slopes with a gradient greater than 10%. With regards to agrochemicals, no chemical fertilizers or pesticides are used. Project members are motivated by the project manager in the use of organic fertilizers produced by their farming activities.</p> <p>During the verification, some damages caused by leaf-cutting ants in a limited area were detected. The project manager declared that in the case of a massive attack which could put the site at risk, the use of chemicals pesticides might be considered, but considering FSC’s highly hazardous pesticides policy. No biological control agents are being used by the project.</p> <p>ArBolivia has fostered the recovering and protection of permanent and relevant temporary water courses on project members’ properties. In general, those areas are well buffered and no disturbance, such as felling, machine traffic, erosions were detected in these areas. Also, there are no records of significant negative impacts to groundwater in or around the plantations.</p> <p>Besides the on-site verification where project participants were questioned about their practices, the assessment also included a check of project manuals and protocols as well as external literature (“Manual_Establecimiento para plantaciones forestales rev 2023”, “Manual_Selección de sitios rev 2023”, “Protocolo_Establecimiento de Plantaciones Forestales rev v2023”, “Protocolo_Seleccion de sitios rev</p>
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	<p>2023”, “Commercial Reforestation as a Tool to Build Socio-Ecological - Resilience in Smallholder Farms in the Bolivian Lowlands: A Transition Away from Slash and Burn (Thesis)”, “Summary biodiversity monitoring 2023”, “Annual Reports from 2019 – 2022”).</p> <p>2.3) Native trees species are preferred to exotic ones. An exhaustive evaluation is done about habitat requirements for tree species before they are planted in agreement with the project members. Solely teak (Tecnona grandis) is planted as exotic tree species. Its potential environmental impact and suitable cultivation practices were extensively evaluated and its suitability ensured for the regions where it is established. As verified at field level, no invasive behaviour from this species in the boundaries of the project or inside of native ecosystems is found.</p>		
B. Conformance	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
C. Corrective Actions (describe)	None		
D. (Insert Project Coordinator's Name) Response	N/A		
E. Status	N/A		

PROJECT COORDINATION AND MANAGEMENT

Requirement: Project is managed with transparency and accountability, engagement of relevant stakeholders and in compliance with the law of the Host Country.

Verification Questions: 1, 2 and 6

3.1	The project coordinator still has the capacity to support participants in the design of the project interventions, select appropriate participants for inclusion in the project, and develop effective participatory relationships including providing on-going support to sustain the project (3.4)
3.2	The project coordinator still has the legal and administrative capacity to enter into PES Agreements with participants and to manage the disbursement of payments for ecosystem services (3.5)
3.3	A transparent mechanism and procedures for the receipt, holding and disbursement of PES funds is applied, with funds intended for PES earmarked and managed through an account established for this sole purpose, separate to the project coordinator's operational finances. (3.9)
3.4	The project coordinator has accurately described the progress, achievements and problems encountered by the project in the Annual Reports. The Annual Reports transparently report sales figures and demonstrate resource allocation in the interest of target groups (3.10; 3.11)
A. Findings (describe)	<p>3.1) As confirmed in stakeholder interviews, the Project Coordinator (SICIREC Bolivia Ltda.) is mentioned by local authorities, institutions and associations as one of the most capable organizations to support communities and smallholders on a PES project (UOBT – Rurrenabaque,</p>

	<p>Universidad Autonoma, Gabriel Rene Moreno). Managerial staff is frequently invited to participate as speakers on seminars, workshops and meetings from stakeholders in Bolivia.</p> <p>Project implementation and technical support are provided by internal staff which has developed procedures and guidance for the staff and for project members. The verifier witnessed the collaboration between the project management and the project participants. The field team of ArBolivia is performing monitoring activities together with the project members. Furthermore, the Sustainability Monitoring Plan is developed with participation of the settlers through workshops, meeting and events were any relevant question, suggestion, information or grievance can be collected and addressed by the project manager. Relevant meeting protocols and procedures were checked by the verifier. Project members stated that staff is very capable and diligent on the administration and technical support provided to support the intervention activities.</p> <p>ArBolivias' PDD and Annual Reports provide a description and feedback from stakeholders of the sustainability impacts of a project. The project developer has listed all measures proposed and implemented for the mitigation/leverages related to these impacts. As such, the verifier is assured that the project coordinator still has the capacity to support participants and develop relationships during the implementation of the project.</p> <p>3.2) The Project Coordinator is considered to be compliant by national authorities with the national and local laws. SICIREC is part of every contract (PES agreement) and provides receipts of payment for the services and other benefits generated by the project. Project members stated that the payments are always up to date and complying with the terms of the PES agreement.</p> <p>3.3) ArBolivia is one of the SICIREC's projects and is managed as a single account for the purpose of PES receipt, holding and disbursements. The administrative department keeps records of every single account movement. The PDD has a detailed flow description of investments and funds administration.</p> <p>Through the forestry committees, the representatives of farmers are informed every year during the annual meeting about the revenues obtained by the project - from carbon sales, donations to the investments made - to provide full transparency over the project's financial flows. Evidence checked included financial and annual reports, meeting protocols as well as receipts. The verifier is assured that a transparent mechanism for the receipt, holding and disbursement of PES funds is applied.</p> <p>3.4) The verification of the annual monitoring reports 2019 – 2022 have resulted in a positive conclusion. The financial data is accurately and adequately displayed within the reports and reflected the evidence evaluated during verification.</p>
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	The financial account of the project coordinator is regularly audited and an effective chain of custody of credits was developed from the landowner to the point of sale. Records of all transactions are kept in hard and soft copies and are backed up at least monthly in the server. They were easily available during the verification, as well as the records of all documents submitted by participants, PES agreements, monitoring results and all PES disbursed to participants ("Recibos de Pago por servicios de manetenimiento y tala de la PFC (jan 2022-dec 2023)").		
B. Conformance	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
C. Corrective Actions (describe)	None		
D. (Insert Project Coordinator's Name) Response	N/A		
E. Status	N/A		

PARTICIPATORY DESIGN AND DEVELOPMENT OF PLAN VIVO

Requirement: the project has demonstrated community ownership: communities participate meaningfully through the design and implementation of plan vivos that address local needs and priorities.

Verification Questions: 1, 2 and 6

- 4.1 A voluntary and participatory planning that address local needs and inform the development of technical specification is taking place (4.1; 4.6; 7.1.). Barriers to participation are being identified and measures taken to encourage participation (4.3)
- 4.2 Smallholders or communities are not being excluded from participation in the project on the basis of gender, age, income or social status, ethnicity or religion, or any other discriminatory basis (4.2)
- 4.3 The project is not undermining the livelihood needs and priorities or reduce the food security of the participants (4.7; 7.1; 7.5)
- 4.4 There exist a system for accurately recording and verifying location, boundary and size of each plan vivo (4.8). Participants have access to their *plan vivos* in an appropriate language and format (4.9)
- 4.5 Participants are being provided with a forum to periodically discuss the design and running of the project with other participants and raise any issuance or grievances with the project coordinator (4.12). A robust grievance redressal system is in place (4.14)

A. Findings (describe)	4.1) ArBolivia Project has designed its project in conjunction with the participating farmer organisations. The objective is to validate the efficacy of the proposed activities by obtaining feedback from the farmers. Based on feasibility studies, farmer meetings and pilot projects the final project was designed. Permanent quality control is realized within the project management plan, based on the feedback given by the forestry committees and farmer organizations. The details for quality control and permanent feedback mechanisms are described in a management plan and its supporting operational procedures.
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	<p>Annual reports specifically define the quantity and quality of benefits shared with participants and other positive impacts brought into the boundaries of project interventions. ArBolivia provides sufficient technical assistance to the project participants for the development of Plan Vivos taking in account their land and livelihoods, family profile and site conditions.</p> <p>With regards to the inclusion of new project members, the following was witnessed: potential candidates interested in signing up for the project are visited and given a presentation to get more involved in the project. Representatives of the forestry committees generally help on this approach. The feasibility of inclusion is verified with an evaluation of the project documentation and a site-visit by the social mobilizer, to collect basic data on the property in question, including GPS data, and interview data on previous land-use from the owner. If the potential member matches with all the requirements the land receives a proposal of an Integrated Farm Plan. The project technician in conjunction with the producer set up the final details for the purpose of approval by the ABT (Autoridad de Bosques y Territorios) as a means of providing legal recognition of the farm areas that are included in the project scope. The project coordinator aligns with the new members on the project interventions, consistent with the projects' technical specifications but also the characteristics of the site and history of the land. During the verification, sufficient information was provided on the operational procedures and formal documentation such as contracts and agreements for implementation to confirm the above described procedure.</p> <p>ArBolivia has developed a scored risk assessment for their project members to develop management measures to minimize high risks or eliminate barriers which could discourage participation. The recent forest fires occurred due the drought in 2023 are challenging for the permanence of members. SICIREC is a responsible and respected organization that leads in environmental services, enhancing the quality of life and subsistence for many farmers. Despite the exhaustive work to motivate and foster the rehabilitation of plantations burned in total or partially, the farmers affected by the losses of agrosilvicultural cultivation are upset and some have expressed a desire to terminate their participation.</p> <p>SICIREC is developing strategies to provide immediate support for food safety to the affected members. During 2024 the losses and potential adaptation and mitigation measures will be evaluated.</p> <p>The verifier is assured that the project coordinator has established a voluntary and participatory planning considering local needs and barriers.</p> <p>4.2) During the field assessment and interviews with stakeholders and employees, the verifier did not detect any kind of involvement or complicity in discrimination based on gender, race, religion, sexual orientation or any other basis. No discrimination of women or marginalised groups was detected. Equal opportunities are given for local people to work in the project. Also, the verifier did not detect</p>
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	<p>persons under 15 years of age working for the project. ArBoliva's hiring policy requires the minimum age of 18.</p> <p>4.3) No plan vivos were detected where implementation could undermine the livelihood needs and priorities or reduce the food security of participants. There is a strict evaluation of farmers' profile and their livelihoods in place. Also, during the field visit and interviews, no negative impacts for project members or other stakeholder and non-participants that could deserve mitigatory measures or a re-evaluation with a participatory mechanism were detected. The project has demonstrated several positive impacts for livelihood of participants and other stakeholders. ArBolivia has assigned a representative that works in close liaison with the participant representatives, Forest Committees and further interest groups potentially affected by the project activities ("Agreement with farmer federations: Contrato Marco para el establecimiento, Mantenimiento, aprovechamiento de plantaciones forestales", "Agreement with Farmer individual Member: Contrato Especifico para el establecimiento, Mantenimiento, aprovechamiento y comercializacion de plantaciones forestales", "Comites forestales_Directorios rev_2023").</p> <p>In 2023, the region of Rurrenabaque faced severe droughts that resulted in large-scale fires between October and November. Despite efforts to suppress and combat the flames, some plantations were devastated. To this date, SICIREC has been unable to precisely measure the resulting losses. It is estimated that approximately 150 hectares have been consumed by the fire, impacting around 130 landowners. SICIREC has appointed a specialized technician to explore viable alternatives and to provide solutions that not only ensure the recovery of the project but also secure the subsistence and food safety for the affected communities. Furthermore, SICIREC has hired a consultant specializing in the cultivation of cocoa and coffee. The consultant will bring expertise to optimize the integrated management of crops, aiming to ensure the diversification of plantations and improve income generation ("Plan de contingencia contra Incendios (14- PLAN DE CONTINGENCIA - MANUAL Seguridad Salud y Medio Ambiente SICIREC 2023)", "ArBolivia Data Base: V3.0").</p> <p>4.4) A GIS system in place where every participant is registered with respective information including name of farmer, geographical boundaries, planted area, species, year of establishment and GPS points. Participants have access to their plan vivo in the local language (Spanish) and in appropriate format (hard copies) for their accurate and clear knowledge of rules, activities and interventions to be implemented ("ArBolivia Data Base: V3.0", "Lista Certificacion PV 2023", "Manual_Selección de sitios rev 2023", "Protocolo_Seleccion de sitios rev 2023", "Planillas de campo").</p> <p>4.5) ArBoliva has established local "Forest Committees" which are representatives of each community or region. The governance structure is described in an internal regulation that describes the role</p>
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	<p>of the committees, as well as their constituent parts and operations. The committees serve as the formal mechanism for engagement of smallholders in discussion of the project goals and implementation. These committees are established within a pre-existing grassroots political mechanism, defined by smallholder communities as “sindicato” (union). The project coordinator liaises with these committees to facilitate participation in the project.</p> <p>According to the internal rules, the committee’s assemblies should have been organized in 2020, 2021 and 2022, in which ArBolivia would be presenting the financial and a technical report to each of the forestry committees. However, due to COVID19 pandemic, this has not been possible. In 2022 ArBolivia started again with meetings with the board members of the committee, but no annual meetings have yet been held with all participating farmers in a committee. During the board meetings with the farmers, the board members raised the need for support in the harvesting, post-harvesting and marketing activities of coffee and cocoa.</p> <p>In 2023 a general meeting with all participating farmers was held once. However, the agenda setting for further meetings was interrupted by the forest fires from September to November 23. To stick to the project design, the project proponent should have re-scheduled these meetings for 2024. A CAR was raised with regards to the re-scheduling of the annual meetings in 2024 (see CUC-CAR-01).</p> <p>As witnessed by the verifier, a formal and robust grievance mechanism is in place in accordance with the standards’ requirements. All the cases are recorded and followed the procedures established for the input, analysis and feedback in timely manner (“Inf_taller_induccion_parte1_v20230512-1”, “Memoria_taller_induccion_parte2_v20230731-2”, “Comites forestales_Directorios rev_2023”, “PROTOCOLO INVASION DE GANADO A PFC-SAF – Julio 2023”, “PROTOCOLO QUEMAS PFC - SAF-2 Julio 2023”, “Inf_taller_induccion_parte1_v20230512-1”, “Memoria_taller_induccion_parte2_v20230731-2”).</p>		
B. Conformance	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	N/A <input type="checkbox"/>
C. Corrective Actions (describe)	A new meeting schedule for 2024 needs to be presented to show that the project adheres to the initial project design.		
D. SICIREC Response	The meetings for 2024 were re-scheduled per community. The list of conducted meetings (in May, June and July) as well as planned meetings (September, October, November) was submitted. The scheduling of meetings is picked up again as per project plan.		
E. Status	Closed		

QUANTIFYING AND MONITORING ECOSYSTEM SERVICES

Requirement: project generates real and additional ecosystem service benefits that are demonstrated with credible quantification and monitoring

Verification Questions: 2, 3 and 4

- 5.1 Sources of data used to quantify ecosystem services, including all assumptions and default factors, have been specified and updated when possible, with a justification why they are appropriate **(5.1; 5.2)**
- 5.2 The project coordinator has been conducting ground-truthing activities in order to collect real data and field measurements from the project sites that have been or will be used to update the project's PDD and technical specifications, including the quantification of climate benefits **(5.3)**
- 5.3 A clear and consistent Standard Operating Procedure (SOP), or equivalent, for remote sensing analysis has been elaborated by the project coordinator.
- 5.4 Ecosystem services forming the basis of the Plan Vivo project are still additional **(5.4)**.
- 5.5 To avoid double counting of ecosystem services, the project interventions are not being used for any other project or initiative **(5.14)**
- 5.6 A monitoring plan has been correctly implemented and a system for checking its robustness is in place, where **(5.9; 7.2.; 7.3)**:
- Corrective actions and contingency plans are described when performance targets have not been met
 - The validity and assumptions of the technical specifications have been correctly tested
 - Communities have been actively participating in monitoring activities
 - Monitoring has been regularly shared and discussed it with the participants

**A. Findings
(describe)**

5.1) The verifier is assured that all sources of data used are appropriate and in line with the validated project design. The technical specifications are accurate and up to date for each of the project interventions. Ex-ante carbon calculations are calculated according to the long-term average carbon stock approach over a 40-year crediting period. The bibliography is mentioned on the TS document.

5.2) Samples are taken every 2 years to follow the species growth. The measurement methodology has been improved by replacing the calliper with a metric tape. A cross-check of the measured data during the field assessment revealed that the inventories are accurate and well recorded. The collected data supports the equations of growing trends. Based on these evaluations, the ArBolivia project has applied new estimation factors for the quantification of ecosystem services. The results are conservative for the methods of data gathering and manipulation. Also a new version of the "Field Manual for the establishment of PSPs" and a "Protocol for the establishment of PSPs" were established.

SICIREC presented the technical specifications revised in 2019. For 2024 is planned to update the referential documentation (Project Develop Design) for the adaptation and adequation to the new version of PV Standards (5.0). The Project developer presented the technical specifications reviewed in 2019 to address the issues raised in CUC-FAR-02/.

5.3) The verifier is assured that there are SOPs for the remote sensing monitoring. A software and platform are used to register the location and specifics of each site. A process description is in place

	<p>("Manual_Selección de sitios rev 2023", "Protocolo_Seleccion de sitios rev 2023").</p> <p>5.4) ArBolivia uses the CDM approach for Small Scale Carbon Aforestation/Reforestation. The monitoring is duly implemented to ensure additionality generated by the project activities and benefit sharing. Along its 16 years of implementation the project has materially produced the social and environmental benefits described in the original PDD, which is now being re-evaluated in its conception and priority. In Bolivia, the laws and regulations are not requiring compulsory reforestation or restoration for the farmers. Furthermore, interviews conducted during the field assessment revealed that barriers such as local traditions, lack of financial investments in forestry, a deficiency of technological knowledge and, therefore, financial incentives for agricultural and animal husbandry, persist. The verifier is assured that the project meets the additionality requirements of Plan Vivo.</p> <p>5.5) ArBolivia accounts exclusively for the Plan Vivo PES programme. There was no evidence that the project interventions are used to declare carbon credits in any other GHG programme or registry.</p> <p>5.6) During the verification, sufficient and consistent information with regards to the implementation of the monitoring plan was presented by the project manager. The ArBolivia Data Base is used to register data on production and biodiversity. ("Summary biodiversity monitoring 2023", "ArBolivia Data Base: v3.0"). The monitoring plan was revised and updated with strategies for the enhancement of benefit sharing mechanisms. The demand for an agroforestry system including coffee and cocoa are a result of this adaptive process and the consultations with the smallholders and their families. Furthermore the annual reports specifically describe the quantity and quality of benefits shared with participants and other positive impacts by the project interventions ("Manual_PPM_Julio 2023", "Protocolo_PPM_v Julio 2023", "Monitoring and Evaluation Plan - Part I").</p> <p>Furthermore, researchers from international universities and the local university (Universidad Autonoma, Gabriel Rene Moreno) are providing technological and scientific support for the planning of activities for the re-evaluation of the PDD for the next verification cycle</p>		
B. Conformance	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
C. Corrective Actions (describe)	N/A		
D. (Insert Project Coordinator's	N/A		

Name) Response	
E. Status	N/A

RISK MANAGEMENT			
Requirement: The project manages risks effectively throughout its design and implementation.			
Verification Questions: 2 and 4			
<p>6.1 Where leakage is likely to be significant, i.e. likely to reduce climate services by more than 5%, an approved approach has been used to monitor leakage and subtract actual leakage from climate services claimed, or as a minimum, a conservative estimation of likely leakage has been made and subsequently deducted from the climate services claimed (6.1; 6.2)</p> <p>6.2 The level of risk buffer that has determined using an approved approach is adequate and is a minimum of 10% of climate services expected (6.3)</p> <p>6.3 Does the project maintain a buffer account and is the cumulative total of credits deposited in the account equal to the total reported in the latest annual report? (6.3)</p>			
A. Findings (describe)	<p>6.1) ArBolivia has presented a general risks evaluation in its PDD and the results are consistent with the scale of the project. Management measures are developed for each of the risks evaluated, e.g. floods, forest fires, encroachment of cattle, change in ownership, premature cut of trees in the project and others. SICIREC has reviewed the risk assessment for ArBolivia Projec in its latest version of the PDD and it is still under the 5-year period requested for the risk assessment. Besides the forest fires in 2023, no other forms of leakage since the last verification was observed by the verifier.</p> <p>6.2) The project coordinator has defined that 20% of the verified PVCs will be dedicated to the buffer pool. From those, 10% are being retained by ArBolivia in order to compensate eventual risks of overestimation of growth and failures; further 10% are retained as required by the Plan Vivo Standard. This has been reflected in the calculations provided to the verifier.</p> <p>6.3) The project coordinator has defined that 20% of the verified PVCs will be dedicated to the buffer pool. During this monitoring period, the project has appropriately applied this 20% risk buffer. The information in the annual reports is consistent with the buffer requirements.</p>		
B. Conformance	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
C. Corrective Actions (describe)	N/A		
D. (Insert Project Coordinator's Name) Response	N/A		

E. Status	N/A
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PES AGREEMENT AND BENEFIT SHARING	
Requirement: project shares benefits equitably and transact ecosystem services benefits through clear PES Agreements with performance-based incentives.	
Verification Questions: 1, 2 and 6	
<p>7.1. Procedures for entering into a PES Agreement with participants are being applied correctly (8.2)</p> <p>7.2. Participants are entering into PES agreement voluntarily and according to the principle of free, prior, informed consent, in an appropriate language and format (8.3)</p> <p>7.3. PES Agreements are not removing, diminishing or threatening participant's land tenure (8.4)</p> <p>7.4. A fair and equitable benefit-sharing mechanism is in place and has been agreed with the participation of communities involved, identifying how PES funding will be distributed among participants (8.8; 8.9; 8.10)</p> <p>7.5. The project has committed to deliver at least 60% on average of the proceeds of the sales of Plan Vivo Certificates. Where less than 60% has been delivered, the project has justified why this was not possible (8.12)</p>	
A. Findings (describe)	<p>7.1) ArBolivia correctly implemented the procedures described in the PDD and in other procedures with regards to the engagement of farmers. Interviews with farmers and stakeholders revealed the knowledge of project activities and the content of PES agreements, including the plan vivos, the benefits shared, mechanisms for conflicts resolution, potential impacts, periods and further crucial information part of the PES agreement. The number of participants has increased year by year without affecting the quality of project interventions and management of PES agreements. The technical support team has grown considerably to meet the demand from new smallholders joining the project. The conflict resolution protocol was strengthened to prevent social impacts or grievances with other local activities, such as cattle ranching.</p> <p>Furthermore, the ArBolivia project has demonstrated its ability to meet payment obligations in PES agreements with communities by securing upfront funding commitments. This funding ensures an agreed minimum payment to participants and identifies buyers for the ecosystem services and products generated by the project, such as timber and carbon.</p> <p>7.2) Participants and stakeholders interviewed stated that they joined the ArBolivia project voluntarily, and all decisions were made collaboratively using a free, prior, and informed consent approach.</p> <p>7.3) There are no indications that PES agreements are removing, diminishing, or threatening participants' land tenure. Farmers, stakeholders, and the local authority (UOBT) assert that participants have consolidated their land tenure with the use of sustainable practices. Additionally, the long-term commitment of PES agreements has helped prevent rural exodus in many communities. ("Agreement</p>

	<p>with farmer federations: Contrato Marco para el establecimiento, Mantenimiento, aprovechamiento de plantaciones forestales”, “Formulario 10. MANTENIMIENTO DE PLANTACIONES FORESTALES”).</p> <p>7.4) The benefit-sharing of the project was established through a common agreement with participants and their representatives. It has been applied as agreed upon, and farmers support the mechanism, as confirmed by interviews and consultations with their representative organizations. All documentation related to the PES agreements, including contracts, performance-based requirements, and payments, is provided in hard copy to the participants in their language. Additionally, receipts for payments and resources provided are shared with all parties involved.</p> <p>In compliance with Bolivian law and regulation, no payments are made related to the CO₂e generated by the woodlots. Instead, farmers receive direct payments per hectare as agreed in the contract between SICIREC and the farmers. In addition to direct payments, farmers receive in-kind support through the provision of tools and equipment for coffee and cocoa harvesting and processing, fruit trees and the seedlings. All disbursements for project implementation, including services provided, equipment, and supplies, are thoroughly documented and clearly justified in terms of their purposes. There is a record demonstrating the feasibility for farmers and community members to receive de-pulpers and other equipment, as well as facilities for processing harvested wood, such as portable sawmills, chainsaws, and kiln dryers.</p> <p>In accordance with the provisions in the PDD, if the revenues linked to the generation of Plan Vivo certificates cannot cover the costs, the project manager (SICIREC Bolivia Ltda) is obliged to cover the deficit.</p> <p>7.5) The Project Coordinator has demonstrated that investments and direct payments to project members have exceeded the income received from Plan Vivo certificates over the past 5 years. This shows compliance with the requirement to not allocate more than 40% of funds for coordinating, monitoring, and administering the PES program. The verifier is assured that on average, more than 60% of revenues from the carbon sales went to the project participants.</p> <p>ArBolivia has documented meetings, stakeholder consultations, and other events where decisions about benefit-sharing are made. Annual reports detail updates on the PES program, including the benefit-sharing mechanism and payment results. The reports also cover ongoing community participation and advancements in benefit-sharing concerns.</p>		
B. Conformance	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
C. Corrective Actions (describe)	N/A		
D. (Insert Project Coordinator's	N/A		

Name) Response	
E. Status	N/A

The Verifier:



Signature: on behalf of Mr. Flavio Guiera

Date: 02/12/2024

Annex I: Audit Plan

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GHG Verification: Verification Plan

Name ArBolivia Project
Attn.: Mr. Anko Arthur Stilma
Address Casilla: 6511, Cochabamba
Country Bolivia

Client SICIREC BOLIVIA Ltda
No.:

Berlin, 24th November 2023

Objective	The focus of the verification is on the annual reports from 2018 – 2021, as well as eligibility of new areas added to the project.
Criteria (select applicable)	<input type="checkbox"/> Organizational GHG inventory (ISO 14064-1) <input checked="" type="checkbox"/> GHG project assertion (ISO 14064-2) <input checked="" type="checkbox"/> Plan Vivo Standard Vs 4.0
Scope summary	<p>Case-by-case evaluation:</p> <ul style="list-style-type: none"> • Conflict of Interest; • Scoping and planning of project verification activities; • Desk review and site visit to conduct project Verification activities: • Confirmation of eligibility criteria; • Confirmation of additionality including appropriate baseline; • Confirmation of project boundaries; • Identifying emissions sources, sinks and reservoirs for emissions factors, along with activity • data and assessing risk of material misstatements; • Reviewing methodologies and management systems including standard operating procedures; • Validating emission reduction/removal calculations including appropriate deductions for negative leakage and impermanence risk; • Validating that the project's physical site description and governance structure is as described in the project design document and technical specification(s) • Identifying objective evidence of conformance with each of the requirements in the Plan Vivo Standard by: <ul style="list-style-type: none"> - interviewing and interacting with the project coordinator (in-country manager) - Interviewing relevant stakeholders such as participating householders, community members and leaders, local government officials, government forestry agencies and extension services and other projects working in the same area, - Identifying and assessing available supplementary project documentation and tools (e.g. planning documentation, databases, templates, legal agreements etc).

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	<ul style="list-style-type: none">- Cross-checking results from interviews with project documentation to ensure that documentation reflects ground realities and staff awareness of project goals and procedures.- Fully understand the project context and the views of other local stakeholders and experts regarding the project's likely impact and benefits <ul style="list-style-type: none">• Preparing a verification report and verification statement and submitting them to PVF.	
Date of on-site visit	27-11-23 until 02-12-23	
Level of assurance	<input type="checkbox"/> Limited <input checked="" type="checkbox"/> Reasonable (only possible for assumptions, limitations and methods but not for the content of projections)	
Materiality	<input type="checkbox"/> Materiality is not required by the GHG Program, thus determined to be less than 5% <input type="checkbox"/> Materiality is required by the GHG Program to be less than 5% <input checked="" type="checkbox"/> Materiality is required by the GHG Program to be more than 5%	
Other reference documents (If applicable)		
Language of the verification and reporting. (If different from the language of the Validator and /or Client)	Verification: Spanish Reporting: English	
Logistic arrangements (travel between sites, on-site facilities, etc) (If applicable)	Feld visit to all 3 regions (Beni/La Paz, Tropicis de Cochabamaba e Ichilo/Santa Cruz) Minimum 8 committees of project members, aiming to check the activities to minimum 21 participants plots. Stakeholders consultations with local authorities and local experts.	
Matters related to confidentiality (If applicable)	Confidentiality disclosure, Conflict of interest agreement and information security protocol are signed by all verification team.	
Verification team		
Function	Name	Role/responsibility
Lead Validator	Flavio Guiera	Lead Auditor
Validator 1		
Validator 2		
Accompanying person/Expert	Priscila Ulbrich	Trainee auditor

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Dear Sir/Madam,

Hereby we would like to inform you about the planned schedule of your verification.

The verification will consist of an opening meeting, during which the scope will be confirmed and the Lead Validator will explain the methods to be employed during the verification, a review of the documents such as complaints files, administration, traceability documents, etc. Such documents must be readily available to the Lead Validator. Also, the persons responsible for processes that may be validated must be available to the Lead Validator. The verification shall be finalised with a closing meeting, during which the findings are explained. The Lead Validator may at any time choose to deviate from this verification plan. Only those processes, activities and units mentioned in the application form will be validated.

Please also note that unavailability of key persons or documents may cause the verification to take longer. Any extra time spent on a verification may result in an additional invoice for the client. The Control Union Certifications verification team must be given unrestricted access to all production, processing and administrative units and fields, all personnel and administration that the Lead validator deems necessary. If necessary, the Lead Validator will contact you to discuss specific arrangements for the verification regarding travel arrangements, accommodation, etc. If the objectivity of the verification is compromised, the Lead Validator has the right to abort the evaluation. Reasons can be for example the interference of accompanying persons. All costs arising from this case is to charge to the client.

We kindly ask you to carefully check the details, as the continuation of the verification will be in danger, if these details do not correspond with the present situation.

Please inform us directly if you would like to make any changes or amendments to the verification plan.

Flavio Guiera - Lead Validator
Phone: +55 41 992 020 103

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The objectives of the Verification

- To examine conformance with applicable verification criteria, including the principles and requirements of relevant standards or GHG programmes within the scope of verification;
- The establishment, justification and documentation of the GHG assertion of the organisation or project
- The planned GHG control mechanisms of the client to determine whether or not the GHG assertion regarding future GHG performance is based on reasonable assumptions and calculations, and also in compliance with the afore mentioned GHG program rules and standards.

Schedule of Verification:

Time	Activity	Client
27-11-2023 9:00 am - 10:00 am	Opening meeting/Introductions Scope of the ISO 14064-2 system and Plan Vivo verification and verification requirements	Management team and project team
27-11-2023 10:00 am - 12:00 pm	Interview with project team Planning visits and check of implementation of the GHG reduction and/or removal Documents review (maps, forms, agreements, records) Interview with local stakeholders (UOBT-RURRENAB.)	Project manager and project team Authority representative
	Lunch*	
27-11-2023 01:00 pm - 05:00 pm	Site visit - Rurrenabaque (BENI zone) Interview with project participants and local stakeholders (FECAR, CIPTA)	Project team, Project members and committee's leaders
28-11-2023 08:00 am - 05:00 pm	Site visit - Rurrenabaque (BENI zone) Interview with project participants and local stakeholders (FEPAY, CRTM)	Project team, Project members and committee's leaders
29-11-2023 08:00 am - 15:00 pm	Transfer from La Paz/Beni to Santa Cruz	
29-11-2023 16:00 am - 18:00 pm	Site visit - SANTA CRUZ Interview local stakeholders (ABT, Universidad Santa cruz)	Authority representative Local Experts
30-11-2023 08:00 am - 05:00 pm	Site visit - Chapare (Tropico CBB zone) Interview with project participants and local stakeholders (FCICH)	Project team, Project members and committee's leaders
01-11-2023 08:00 am - 15:00 pm	Site visit - Buena Vista (ICHILO / Santa Cruz zone) Interview with project participants and local stakeholders (FSCIPAY / TARARA / CSUTB)	Project team, Project members and committee's leaders
01-11-2023 15:00 pm - 18:00 pm	Open questions Results compiling/Presentation of re-verification result Closing meeting	Project manager and project team
02-11-2023 09:30 am	Departing flight	Verification team

*We request you to reserve half to one hour for lunch, and would appreciate if someone from your company can be present at lunch.

Assessment time for other standards

During this verification **40 hours** will be allocated for assessing of elements for the standard of PLAN VIVO Standard - Project Requirements V4.0

In case the proposed agenda is not viable or if you request the replacement of particular verification team members we request you to notify us in time.

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General

- * The concerned people should have all relevant documentation readily available.
- * For verification purposes the verification team needs to have access to all relevant documents with respect to the processes. In the Introduction meeting the right procedures will be established
- * We request you to have available (if possible) a private place for the verification team.
- * Within the presented time-table deviations may occur. We try to keep changes in the schedule within 1 hour.
- * Interviews will preferably take place on the working place itself.
- * In case the proposed agenda is not viable, we request you to notify us in time.

LIST of project Members to visit

Department	Municipality	Organization Farmers / Indigenous	Committee	# Farmers
Beni	Rurrenabaque	FECAR	12 de Junio	1
Beni	Rurrenabaque	CIPTA	Almendrillo	2
Beni	Rurrenabaque	CRTM	Tsimane	3
BEN	Rurrenabaque	FECAR	Las Texas	1
BEN	San Borja	FEPAY	Ambiente Sano	3
La Paz	San Buenaventura	FESPAI	Gabu	2
La Paz	San Buenaventura	FESPAI	Madidi	1
La Paz	San Buenaventura	CIPTA	Mara	2
Cochabamba	Chimore	FCICH	Tropico	2
Santa Cruz	Buena Vista	CSUTB	Distrito 3 Amboro	3
Santa Cruz	Buena Vista	CSUTB	Villa Amboró	1
Santa Cruz	Buena Vista	CSUTB	Santa Fé Amboró Eduardo Abaroa	1
Santa Cruz	San Carlos		Tarara	1
Santa Cruz	Yapacani	FSCIPAY	No committee	4
Santa Cruz	Yapacani	FSCIPAY	Amboro Ichilo	1
Santa Cruz	Yapacani	FSCIPAY	Palo maría	1
Santa Cruz	Yapacani	FSCIPAY	Zona Sur	1
			Total	30