

VERIFICATION REPORT FOR THE REFORESTING DEGRADED LANDS IN CHILE THROUGH THE USE OF MYCORRHIZAL INOCULATION PROJECT

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Summary:

This report describes the verification audit of the Reforesting Degraded Lands in Chile through the use of Mycorrhizal Inoculation Project ("the project"), a Reforestation project located within several provinces of central Chile that was conducted by SCS. The purpose of the verification audit was to assess the conformance of the project with the verification criteria. The verification audit was performed through a combination of document review, interviews with relevant personnel and on-site inspections. A total of nine findings were raised during the verification. The project complies with all the validation and verification criteria, and the assessment team has no restrictions or uncertainties with respect to the compliance of the project with the verification criteria, therefore the audit team has verified the Project's compliance with the VCS Program requirements as set out in the VCS Rules.

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1 INTRODUCTION

1.1 Objective

In accordance with Section 5.1.1 the VCS Standard, SCS Global Services (SCS) carried out an ex-post independent assessment of the GHG Emission Reductions or Removals that have occurred as a result of the project during the monitoring period, conducted in accordance with the VCS rules. In accordance with Section 2.1.2 of the VCS Validation & Verification Manual, V3.1, the objectives of the verification engagement were to evaluate the submitted monitoring report and assess the following:

- The extent to which methods and procedures, including monitoring procedures, have been implemented in accordance with the validated project description. This includes ensuring conformance with the monitoring plan as written in the Validation Report.
- The extent to which GHG Emission Reductions or Removals reported in the submitted monitoring report are materially accurate.

The other objective of the verification engagement was to assess the non-permanence risk analysis.

1.2 Scope and Criteria

In accordance with Section 4.3.4 of ISO 14064-3:2006, the scope was defined as follows:

- The project;
- The physical infrastructure, activities, technologies and processes of the project;
- The GHG sources, sinks and/or reservoirs that are applicable to the project;
- The types of GHGs that are applicable to the project; and
- The monitoring period, as discussed in Section 5 of this report.

In accordance with Section 5.3.1 of the VCS Standard, the criteria for verification was the VCS Version 3, including the following documents:

- VCS Program Guide
- VCS Standard
- VCS AFOLU Requirements
- VCS Non-Permanence Risk Tool
- Clean Development Mechanism (CDM) afforestation/reforestation methodology AR-ACM0003 "Afforestation and reforestation of degraded land" - Version 1.0

Unless otherwise indicated, the assessment was performed against the most recent version of the relevant VCS guidance document.

In addition, the assessment was performed against the requirements of the validated project description.

1.3 Level of Assurance

In accordance with Section 5.3.1 of the VCS Standard, the level of assurance of this report is reasonable.

1.4 Summary Description of the Project

The project is located in Chilean provinces of Cholchagua, Curico, Cardenal Caro, and Bio Bio, and is a grouped project aimed at restoring degraded grassland into pine and eucalypt forests with small and medium-scale landowners. They utilize a unique mycorrhizal inoculation technique which helps with the establishment of the plants. For the 2012 to 2017 monitoring period, the project area increased from 3,006.9 hectares (ha) to 6,013.2 ha.

2 VERIFICATION PROCESS

2.1 Method and Criteria

The verification was performed through a combination of document review, interviews with relevant personnel and on-site inspections, as discussed in Sections 2.2 through 2.4 of this report. At all times, the monitoring report and non-permanence risk analysis were assessed for conformance to the criteria described in Section 1.2 of this report. As discussed in Section 2.5, findings were issued to ensure conformance to all requirements.

The audit team created a sampling plan following a proprietary sampling plan workbook developed by SCS. Per Section 4.4.3 of ISO 14064-3:2006, the audit team identified possible risks of errors, omissions and misrepresentations with respect to the verification criteria. For each identified risk, the audit team assessed the likelihood of the material discrepancy occurring, the likelihood of the material discrepancy not being prevented or detected by the controls of the project personnel, and the likelihood of the material discrepancy not being detected by the audit team. Sampling and data testing activities were planned to address any risk where the likelihood of a material discrepancy not being detected by the audit team was judged to be unacceptably high. The audit team then created a verification plan that took the sampling plan into account.

2.2 Document Review

The monitoring report "Mikro-Tek 2017 Monitoring Report V2.2 - CLEAN" (dated 26 July 2018) was carefully reviewed for conformance to the verification criteria. The following additional documentation, provided by Project Personnel in support of the documents, was also reviewed by the audit team:

Document Type	File Name	Ref #
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Carbon Calculation Workbook	Mikro-Tek 2017 Inventory Calculation and Results - 26July2018	/1/
Soil Organic Carbon Calculations	MicroTek SOC Accumulation Calculation	/2/
Inventory Data	Mikro-Tek 2017 Inventory Data	/3/
Inventory Standard Operating Procedure (English)	Mikro-Tek SOPs English	/4/
Inventory Standard Operating Procedure (Spanish)	Mikro-Tek SOPs Espanol	/5/
Inventory Datasheet Template	MikroTek DataSheet	/6/
New Project Instance Summary Sheet	2017 New Grouped Project Instances Summary	/7/
GIS Files of Project Boundaries	MikroTek_PA_2017[...]	/8/
Financial Analysis	Mikro-Tek Chile Cash Flow Analysis 2018	/9/
Country Risk Analysis	Chile_WB_WGI	/10/
Calculation of Historical Fire Risk by Region	fire_risk_calculation	/11/
Summary Sheet of Plantation Species by Region	conaf_superficie_de_las_plantaciones_forestales_por_especie_en_las_ex plotaciones_forestales	/12/
Supporting Historical Fire Data	conaf_annual_area_of_forest_fires_by_region	/13/

Net Present Value Analysis	NPV Analysis	/14/
701 Law Decree Elaboration (1974)	CONAF Law DL-701	/15/
Science Magazine Letter: "Call for conservation: Abandoned pasture"	Sills_2016	/16/
National forestry law 701 (1974)	DL-701_28-OCT-1974	/17/
Previous Monitoring Data/Calcs	MikroTek 2012 Monitoring Data and Results 2012.11.13	/18/
Supporting Information for Landowners	Mikro-Tek - Concept Paper English March 04	/19/
Presentation for Landowners	Partner Presentation April 29.14 (Spanish)	/20/
Field Inventory Sheets (1)	Planillas de Terreno 1-2	/21/
Field Inventory Sheets (2)	Planillas de Terreno 2-2	/22/
Overview Information Evidence	Small & Medium Scale CDM Dec 6 02	/23/
Project Implementation Evidence	Third Year Results Spanish (Sept 08)	/24/
Ownership and Participation Information	14 (a) Vera Business Collaboration Agreement	/25/
Ownership and Participation Information	14 (a) Vera Voluntary Participation Form	/26/

Parcel Map	Poder simple y predios que faltan	/27/
Parcel Map	14 (b) Vera - Veratria Rol #161-24	/28/
Parcel Map	14 (b) Vera - Veratria Rol #161-47	/29/
Ownership and Participation Information	14 (b) Vera - Veratria Rol 136-54 Business Collarobation Agreement	/30/
Ownership and Participation Information	14 (b) Vera - Veratria Rol 136-54 Voluntary Participation Form	/31/
Ownership and Participation Information	14 (b) Vera - Veratria Rols # 161-24 and 161-47 Business Collaboration Agreement	/32/
Ownership and Participation Information	14 (b) Vera - Veratria Rols # 161-24 and 161-47 Voluntary Participation Form	/33/
Ownership and Participation Information	14 (b) Vera - Veratria Rol 136-54 Voluntary Participation Form.pdf"	/34/
Ownership and Participation Information	14 (b) Vera - Veratria Rol 136-54 Business Collarobation Agreement.pdf"	/35/
Ownership and Participation Information	14 (b) Vera - Veratria Rols # 161-24 and 161-47 Business Collaboration Agreement	/36/
Ownership and Participation Information	14 (b) Vera - Veratria Rols # 161-24 and 161-47 Voluntary Participation Form	/37/
Ownership and Participation Information	15 (a) Guzman-Vera Las Palmas\15(a) Guz-Vera Las Palmas Bus Coll Agmt Rol #136-2	/38/
Ownership and Participation Information	15 (a) Guzman-Vera Las Palmas\15(a) Guz-Vera Las Palmas Bus Coll Agmt Rol #136-503	/39/

Ownership and Participation Information	15 (a) Guzman-Vera Las Palmas\15(a) Guz-Vera Las Palmas Voluntary Participation Rol#136-2	/40/
Ownership and Participation Information	15 (a) Guzman-Vera Las Palmas\15(a) Guz-Vera Las Palmas Voluntary Participation Rol#136-503	/41/
Ownership and Participation Information	15 (a) Guzman-Vera Las Palmas\15(a) Guzman-Vera Las Palmas Bus Coll Agmt (with maps) Rol #136-2	/42/
Parcel Maps	15a Rol#136-2 Map 1 1-4	/43/
Ownership and Participation Information	15 (b) Guzman-Vera Casas Viejas de Cerro Negro Business Collaboration Agreement Rol #136-7	/44/
Ownership and Participation Information	15 (b) Guzman-Vera Casas Viejas de Cerro Negro Business Collaboration Agreement Rol#550-11	/45/
Ownership and Participation Information	15 (b) Guzman-Vera Casas Viejas de Cerro Negro CONAF Repts. Rol #136-7	/46/
Ownership and Participation Information	15 (b) Guzman-Vera Casas Viejas de Cerro Negro Voluntary Participation Rol#550-11&136-7	/47/
Parcel Maps	15 (b) Guzman-Vera Casas Viejas Large Map #136-7	/48/
Ownership and Participation Information	15(c) Guz-Vera La Palmilla Bus Col Rol#136-502	/49/
Ownership and Participation Information	15(c) Guz-Vera La Palmilla CONAF Repts. Rol#136-502	/50/
Ownership and Participation Information	15(c) Guz-Vera La Palmilla Vol Part Rol#136-502	/51/
Ownership and Participation Information	16. Guzman, Patricio Business Collaboration, Rol. #136-501	/52/

Ownership and Participation Information	16. Guzman, Patricio Voluntary Participation Rol. #136-501	/53/
Ownership and Participation Information	17. Covarrubias (GeoCapital) Bus Collaboration Rol 16-60...	/54/
Ownership and Participation Information	17. Covarrubias (GeoCapital) CONAF Repts & Maps Rol 16-60...	/55/
Ownership and Participation Information	17. Covarrubias (GeoCapital) Transfer docs Rol 16-60...	/56/
Ownership and Participation Information	17. Covarrubias (GeoCapital) Voluntary Participation Form Rol 16-60...	/57/
Parcel Maps	17. Covarrubias Rol #16-60...	/58/
Parcel Maps	17. Covarrubias Rol # 16- 60 ...	/59/
Parcel Maps	17. Covarrubias - Resto Fundo Nerquihue Rol# 16-60 ...	/60/
Parcel Maps	18. Geocapital Vol Part Rol #168-29	/61/
Ownership and Participation Information	18. Geocapital Bus Coll Rol#168-29	/62/
Ownership and Participation Information	18. Geocapital Bus Coll Rol#168-29	/63/
Ownership and Participation Information	19. Marin Bus Coll Rol#168-126	/64/
Ownership and Participation Information	19. Marin Vol Part Rol#168-126	/65/
Ownership and Participation Information	Resolucion Lote B	/66/

Parcel Maps	Calificación_Lote B la Palmilla_	/67/
Ownership and Participation Information	20. Videla, Bus Coll, Rol #168-136	/68/
Ownership and Participation Information	20. Videla, Vol Part Rol #168-136	/69/
Ownership and Participation Information	Resolucion Lote C	/70/
Parcel Maps	Calificación_Lote C la Palmilla_	/71/
Ownership and Participation Information	21. VIAL Bus Coll Rol#136-8	/72/
Ownership and Participation Information	21. VIAL CONAF Doc Rol #136-8	/73/
Ownership and Participation Information	22. Perez Bus Coll Rol#547-43	/74/
Parcel Maps	22. Perez CONAF Rept & Maps Rol #547-43	/75/
Ownership and Participation Information	22. Perez Vol Part Rol#547-43	/76/
Parcel Maps	22. Perez Map #1-3 Rol #547-43	/77/
Ownership and Participation Information	calificación 1 plano	/78/
Ownership and Participation Information	calificación 2 plano	/79/
Parcel Maps	calificación 1	/80/
Parcel Maps	calificación 2	/81/

Ownership and Participation Information	Calificación 1136-10	/82/
Parcel Maps	Calificación 1136-10 plano	/83/
Ownership and Participation Information	Calificación 42-251	/84/
Parcel Maps	Calificación 42-251 plano	/85/

2.3 Interviews

Interviews constituted an important component of the audit process. The following personnel associated with the project proponent and/or implementing partner were interviewed. The phrase “throughout audit” under “Date(s) Interviewed” indicates that the individual in question was interviewed on multiple occasions throughout the audit process.

<i>Individual</i>	<i>Affiliation</i>	<i>Date(s) Interviewed</i>
Mark Kean	Mikro-Tek Inc.	5 March 2018 – 9 March 2018
Erin Swails	Terracarbon	5 March 2018 – 9 March 2018
Alfredo Unda	Mikro-Tek Inc.	5 March 2018 – 9 March 2018
Italo Eduardo Fazzi Urzúa	Mikro-Tek Inc. (subcontracted for forest inventory)	6 March 2018 – 8 March 2018
Teresa Giglillo	Landowner and subcontracted for forest inventory by Mikro-Tek	9 March 2018
Hugo Vera	Landowner	2 April 2018
Patricio Guzman	Landowner	2 April 2018
Julio Covarubbias	Landowner	4 April 2018
Francisco Vial	Landowner	10 April 2018

2.4 Site Inspections

The objectives of the on-site inspections performed were to:

- Ensure that the geographic area of the project, as reported in the project description and the accompanying KML file, is in conformance with Section 3.11.1 of the VCS Standard;
- Select samples of data from on-the-ground measurements for validation and verification in order to meet a reasonable level of assurance and to meet the materiality requirements of the project, as required by Section 5.1.3 of the VCS Standard;
- Perform a risk-based review of the project area to ensure that the project is in conformance with the eligibility requirements of the VCS rules and the applicability conditions of the methodology; and
- Perform a risk-based review of the project area to ensure that the project conforms to all other requirements of the VCS rules and the methodology

In fulfilment of the above objectives, the verification team performed an on-site inspection of the project area on the dates 5 March 2018 – 9 March 2018. The main activities undertaken by the verification team were as follows:

- Interviewed project personnel (see Section 2.3 of this report) to gather information regarding the implementation of the project;
- Interviewed project personnel (see Section 2.3 of this report) for the purpose of seeking evidence of conformance with respect to the specific requirements of the methodology and the VCS rules;
- Perform ground truthing for assessment of GIS imagery;
- Re-measure a sample of permanent inventory plots for quantitative comparison.

The audit team conducted re-measurement activities and reviewed conditions at the following Project Activity Instances (PAIs): MikroTek0050, MikroTek0077, MikroTek0044, MikroTek0021, MikroTek0067, MikroTek0017, MikroTek0013, MikroTek0040, MikroTek0037, MikroTek0038, and MikroTek0035.

2.5 Resolution of Findings

Any potential or actual material discrepancies identified during the assessment process were resolved through the issuance of findings. The types of findings issued by SCS were characterized as follows:

Non-Conformity Report (NCR): An NCR signified a material discrepancy with respect to a specific requirement. This type of finding could only be closed upon receipt by SCS of evidence indicating that the identified discrepancy had been corrected. A total of 6 NCR's were issued during the assessment. Resolution of all open NCRs was a prerequisite for issuance of a validation or verification statement.

New Information Request (NIR): An NIR signified a need for supplementary information to determine whether a material discrepancy existed with respect to a specific requirement. Receipt of an NIR did not

necessarily indicate that the project was not in compliance with a specific requirement. A total of 3 NIR's were issued during the assessment. However, resolution of all open NIRs was a prerequisite for issuance of a validation or verification statement.

Opportunity for Improvement (OFI): An OFI indicated an area that should be monitored or ideally, improved upon. OFI's were considered to be an indication of something that could become a non-conformity if not given proper attention, and were sometimes issued in the case that a non-material discrepancy was identified. 1 OFI was issued during this assessment. OFIs were considered to be closed upon issuance.

All findings issued by the verification team during the verification process have been closed. In accordance with Section 5.3.6 of the VCS Standard, all findings issued during the validation and verification process, and the impetus for their closure, are described in Appendix A of this report.

2.5.1 Forward Action Requests

Not applicable as no forward action requests were issued during this verification assessment.

2.6 Eligibility for Validation Activities

SCS Global Services is an accredited verification body for Sectoral Scope 14: Agriculture, Forestry, and Land Use.

3 VALIDATION FINDINGS

The audit team conducted validation activities for the new project activity instances, as described in section 3.4 below.

3.1 Participation under Other GHG Programs

Not applicable as the project is not seeking registration under any other GHG program.

3.2 Methodology Deviations

Not applicable as no methodology deviations have been applied to the project.

3.3 Project Description Deviations

During the assessment activities, the verification team assessed two project description deviations. These deviations were evaluated as described in findings NCR 2 and NCR 3 (see Appendix A) and are related to the inventory standard operating procedure.

The first deviation, as the monitoring report was updated to describe, addresses the shift from clockwise to row-by-row measurement of trees. This updated process was demonstrated in the field by project personnel and the description in the monitoring report of increased speed and decreased likelihood of missed trees was deemed appropriate by the audit team. This method results in reduced walking time between trees, with less confusion switching between rows which would be required for the clockwise angle-based method. As project personnel have identified, this only affects the order in which the trees in a plot are measured, and does not impact the applicability of the methodology, additionality, or baseline scenario.

The second deviation addresses the lack of re-measurement activities having taken place after the 2017 inventory. The SOP document describes the need for 10 percent of center plots to be re-measured, as had taken place in 2012. That this activity is intended as a training tool is an important consideration, in that the same inventory crew leaders conducted the 2012 and 2017 inventory. Perhaps with different crew leaders this change may be deemed less appropriate, but given the crew leaders are certified foresters and project resources are somewhat limited, this deviation is reasonable. The deviation described in the monitoring report notes also that this re-measurement is not a procedural requirement for the AR-ACM0001 methodology, and does not impact additionality or the baseline scenario.

In conclusion the verification team has no reservations stating that the validation is valid and the project remains in compliance with the VCS rules.

3.4 Grouped Project

The audit team conducted validation activities to assess the inclusion of new PAIs into this grouped project. The additional 39 PAIs approximately doubled the total area of the project and the number of separate parcels involved. The monitoring report appropriately describes that these new PAIs are consistent with the geographic boundaries, eligibility, requirements, and applicability conditions of the initial project criteria.

All project instances are located in the Chilean regions specified in the PD (V, VI, VII, and VIII), as shown in maps and accompanying GIS files. The eligibility conditions prior to the time of planting were checked with the use of historical imagery in Google Earth to confirm no native ecosystems or forest were cleared. In interviews with landowners the historical land use for specific parcels was discussed, with individuals corroborating the eligibility claims made in the PD. Of the 11 total new landowners the audit team interviewed 4, as noted above, along with a previous landowner, as well. These discussions addressed the process for becoming involved in the project, including project activity implementation details such as confirmation of no flooding irrigation, organic soil disturbance, and fuelwood availability, and confirmation of understanding of collaboration agreements. Additionally these landowners confirmed there have not been any disputes over project area boundaries or ownership, and there had not been any agricultural activities displaced as a result of project activities. They described the barriers to implementation of reforestation activities in manners similar to what's described in project documentation, agreeing that the inoculation technique was a significant advantage in particular.

As described in section 2.4, re-measurement activities were conducted on a total of 11 PAIs, with selection randomized and allowing for sufficient review of the strata associated with these new PAIs. Boundary conditions of these PAIs were reviewed on site and in some case adjacent PAIs not referenced in section 2.4 were also identified during the site visit activities. The monitoring documentation for the new PAIs is consistent with what's described in the PD for the initial PAIs, with collaboration agreements and planning documents serving as supporting evidence.

The audit team finds that the new PAIs are in conformance with the eligibility criteria set out in the project description.

4 VERIFICATION FINDINGS

4.1 Project Implementation Status

The audit team assessed the implementation of the project activities against section 4.3 of the Project Description. The audit team confirmed that section 2.1 of the monitoring report provided an accurate description of the implementation of the project. For a complete description of the steps taken to assess the project implementation see below:

Item	Verification Findings
Material discrepancies between project implementation and the project description	The audit team performed a series of visits to the parcels included in the project and observed the project activities taking place. Interviews with project personnel and landowners resulted in no material discrepancies discovered.
Implementation status of monitoring plan and completeness of monitoring	The audit team confirmed that all monitoring activities documented in Section 3.3 of monitoring report and the PD were correctly carried out accordingly with the requirements and frequency of the monitoring plan described in section 4.2 and 4.3 of the PD, through the following: - Observed the set up and re-measurement of four plots across the project area and confirmed that the sampling design was implemented as described in section 3.3.2 of the monitoring report, as well as using best practices in forest mensuration. In addition, the audit team performed spot measurements during the field verification and consistently produced the similar results as the project team. - Spent several days in the field with the project team, both observing the re-measurement of plots and confirming the implementation of project activities within communities and confirmed that the organizational structure and operation is as described in the PD. - Reviewed the process for data management and storage and confirmed that the description provided in the PD was followed completely and is sufficient

Item	Verification Findings
	for providing quality data management and storage - Interviewed biomass team while on site and confirmed that the personnel were highly skilled and educated as to the processes described in section 3.3.2 of the monitoring report. During this time the audit team confirmed that the description provided in the monitoring report was followed completely, with the exception of the two project description deviations (addressed in section 3.3 of this report). These deviations were addressed in the findings process and found to be immaterial. - Reviewed the allometric equations provided by project personnel and confirmed that the equations were correctly calculated in the project's workbooks. Finally, the audit team re-calculated the plot level biomass for all plots in the inventory and produced consistent results with those reported in the project calculations. - Re-calculated the GHG Emission Reductions or Removals using the required methodological functions for the biomass emissions model and confirmed the project reporting to be accurate
Existence of material discrepancies between monitoring system and monitoring plan (as described in 4.3 of project description) and applied methodology	All tasks described in section 3.3 of the monitoring report agreed with the monitoring plan as described above. No material discrepancies were noted.
Whether GHG Emission Reductions or Removals generated by the project have become included in emissions trading program or other mechanism that includes GHG allowance trading	Audit team applied professional judgment to determine there is very low risk of GHG Emission Reductions or Removals having been included in any other program.
Whether project has received or sought any other form of environmental credit, or has become	Audit team is unaware of any other environmental crediting program that

Item	Verification Findings
eligible to do so since validation or previous verification	project would be eligible to participate in given the transparency of GHG programs today.
Whether project has participated or been rejected under any other GHG programs since validation or previous verification	The audit team confirmed that the project has not previously been rejected by the VCSA and that a compliance program does not exist in Chile now. Therefore, the risk of the project not being in conformance with this requirement is very low at this time.
Sustainable development contributions	This requirement was added after project validation, and as such the project does not make any formal contributions to nationally stated sustainable development priorities.

Based on the information provided in the table above and the assessment of methodology deviations, the verification team confirms that the project has been implemented as described in the project description.

4.2 Accuracy of GHG Emission Reduction and Removal Calculations

The GHG Emission Reductions or Removals have been quantified correctly in accordance with the project description and the applied methodology.

For all instances in which values were transcribed between datasets (e.g., transcription from the project description to reporting workbooks, or between reporting workbooks), the audit team carefully traced values to ensure the absence of manual transposition errors.

An identification of the data and parameters used to calculate the GHG Emission Reductions or Removals and a description of the steps taken to assess each of them, follows:

	Steps taken by audit team to assess...		
Data/Parameter	accuracy of GHG Emission Reductions or Removals	whether methods/formulae set out in project description have been followed	appropriateness of default values
A	The verification team performed onsite activities in which maps were compared with GIS information from handheld devices, in order to confirm project boundaries on the ground. In addition, the	Specific methods are not required by the methodology, but the process follows the methods described in the project description, as demonstrated in the field and through	N/A

	Steps taken by audit team to assess...		
Data/Parameter	accuracy of GHG Emission Reductions or Removals	whether methods/formulae set out in project description have been followed	appropriateness of default values
	verification team recalculated the total project area for the eligible cohorts and confirmed the project reporting to be accurate	demonstration of GIS data entry/analysis.	
LKA _{Agric,t}	Interviews with landowners addressed the pre-planting state of the land included in the project area, and whether their involvement had resulted in any displacement of agricultural activities. Historical imagery was reviewed through Google Earth for parcels to corroborate descriptions of abandoned pasture.	The calculation shown in the monitoring report has been re-calculated, and is appropriate.	N/A
D _t	Interviews with landowners addressed the pre-planting state of the land included in the project area, and whether their involvement had resulted in any displacement of agricultural activities. Historical imagery was reviewed through Google Earth for parcels to corroborate descriptions of abandoned pasture.	This fraction is appropriately given as zero, due to the previous state of the project parcels being abandoned pasture.	N/A
Ad _t	Interviews with landowners addressed the pre-planting state of the land included in the project area, and whether their involvement had resulted in any displacement of agricultural activities. Historical imagery was reviewed through Google Earth for parcels to corroborate descriptions of abandoned pasture.	This value is appropriately given as zero, due to the previous state of the project parcels being abandoned pasture.	N/A

	Steps taken by audit team to assess...		
Data/Parameter	accuracy of GHG Emission Reductions or Removals	whether methods/formulae set out in project description have been followed	appropriateness of default values
ΔC_{dt}	The audit team reviewed the calculation worksheet for changes in carbon stocks and recalculated them independently	The audit team reviewed and re-calculated this parameter using the methods and formulae set out in the project description and the methodology and confirmed that they were being followed	N/A
$\Delta C_{t=ver}$	The audit team reviewed the calculation worksheet for changes in carbon stocks and recalculated them independently	The audit team reviewed and re-calculated this parameter using the methods and formulae set out in the project description and the methodology and confirmed that they were being followed	N/A
ΔC_{dt}^*	The audit team reviewed the calculation worksheet for changes in carbon stocks and recalculated them independently	The audit team reviewed and re-calculated this parameter using the methods and formulae set out in the project description and the methodology and confirmed that they were being followed	N/A
f	The audit team reviewed the calculation worksheet for this land cover percentage, and recalculated them independently. The supporting CONAF historical summary was also reviewed and corroborates the calculation.	The audit team reviewed and re-calculated this parameter using the methods and formulae set out in the project description and the methodology and confirmed that they were being followed	
dbh	During the site visit, the verification team observed the set up and re-measurement of plots by project personnel. In addition, the verification team re-measured a	The audit team reviewed and re-calculated this parameter using the methods and formulae set out in the project description and the methodology and	N/A

	Steps taken by audit team to assess...		
Data/Parameter	accuracy of GHG Emission Reductions or Removals	whether methods/formulae set out in project description have been followed	appropriateness of default values
	subset of inventory plots using the methods reported in the PD and SOP and produced results consistent with those of the project proponents	confirmed that they were being followed	
Ai	During the site visit, the verification team observed the set up and re-measurement of plots by project personnel. In addition, the verification team re-measured a subset of inventory plots using the plot radius value reported in the PD and produced results consistent with those of the project proponents	No changes to the plot sizes have occurred since the previous verification. Specific methods are not required by the methodology; however, the process follows the methods described in the project description	N/A
api	During the site visit, the verification team observed the set up and re-measurement of plots by project personnel. In addition, the verification team re-measured a subset of inventory plots using the plot radius value reported in the PD and produced results consistent with those of the project proponents	No changes to the plot sizes have occurred since the previous verification. Specific methods are not required by the methodology; however, the process follows the methods described in the project description	N/A

In summary, it is the opinion of the audit team that sufficient and appropriate quality of evidence exist to determine the GHG emission reductions or removals.

4.3 Quality of Evidence to Determine GHG Emission Reductions and Removals

The evidence used to determine the GHG reductions and removals was of sufficient quantity and appropriate quality. An identification of the categories of evidence used to determine the GHG Emission Reductions or Removals, and a description of the steps taken to assess the sufficiency of quantity, and appropriateness of quality, of each category of evidence, follows:

	Steps taken by audit team to assess...		
Category	reliability, source, nature of evidence	information flow from data generation and aggregation, to recording, calculation and final transposition into the monitoring report	appropriateness of implemented calibration frequency of monitoring equipment
Reporting workbooks	The main workbook originated from Project Personnel and was determined, after thorough testing, to be of high quality and highly reliable; quantity of workbooks provided to audit team was sufficient	Audit team traced data contained in the monitoring report from the emission reduction workbook back to their respective sources in the Carbon Calculation Workbook.	N/A
Field Protocols	The field protocols were reviewed by the audit team, who confirmed that they were designed using best practices and are capable of capturing changes in carbon stock in conformance with the methodology	The audit team reviewed the field protocols and confirmed that the QA/QC procedures provide checks and balances to ensure high quality data collection. Checks between the original field sheets and the excel data sheets were conducted to analyze potential errors.	N/A

GIS Data	All stratification and other demographic data was provided to the audit team, who confirmed that the data contained all the necessary information to recreate the processes employed by the project and found the calculations consistent with values stated in the project description, monitoring report and applied calculations.	The audit team re-calculated the total project area, as well as the area of each land class in the project area. In addition, the audit team collected GPS data at each plot point visited to ensure consistency with GIS information provided.	N/A
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In summary, the audit team reviewed the QA/QC procedures for data management and determined that they were being followed. The audit team has a reasonable level of assurance that the GHG emission reductions and removals have been quantified correctly in accordance with the project description and applied methodology.

4.4 Non-Permanence Risk Analysis

The determined value of the overall risk rating has not changed since the prior verification audit. The audit team perform a re-assessment of the non-permanence risk analysis with respect to the additional PAIs, including assessment of the following for the project as a whole:

- Whether any circumstances or conditions may have transpired since the prior verification audit such that the determination made by the previous verification body is no longer valid; and
- Whether items meant to address certain risks are in place and functioning as intended.

The determined value of the overall risk rating of 10% is appropriate and in conformance to the AFOLU Non-Permanence Risk Tool.

Internal Risk – Project Management

Risk	Assessment of rationale, assumptions and justification	Assessment of quality of documentation and data provided	Conclusion regarding appropriateness of the risk rating
(a)	The verification team reviewed the evidence provided by project personnel and observed areas adjacent to the project area and confirmed that the species used by the project are adapted to the same agro-ecological zone, confirming claims in the project risk report.	The approved CONAF management plans describe these activities as approved, and the government data from /12/ identifies these species as historically common for plantations in the regions.	Risk rating is appropriate
(b)	Access issues and sparse population are valid reasons to expect no ongoing enforcement is needed to prevent encroachment. There is relatively little incentive for outside actors to encroach and property lines do seem to be well-marked.	This was evident from the site visit, and maps show relatively small populations near parcels.	Risk rating is appropriate
(c)	The audit team reviewed the work history and training of the Project Personnel and implementing partners. The audit team confirmed that the management team includes individuals with significant experience necessary undertake all project activities (i.e., any area of required experience is not covered by at least one individual with at least 5 years' experience in the area). While there has been an update in personnel involved in the project by TerraCarbon overall they still have the relevant experience to fill their respective role.	The Mikro-Tek project management team has successfully validated and verified this project previously with TerraCarbon. The verification team considers the VCS website to be of high quality	Risk rating is appropriate
(d)	Audit team worked and assessed the project in the country and in the project area and confirmed that the project management team meets this criterion.	N/A	Risk rating is appropriate

Risk	Assessment of rationale, assumptions and justification	Assessment of quality of documentation and data provided	Conclusion regarding appropriateness of the risk rating
(e)	The project is undergoing verification for the 2nd time under the same project management, and thus meets the criteria of this risk item. Jamie Eaton no longer is involved in the project for TerraCarbon, and has been replaced by Erin Swails, but as a whole TerraCarbon still has significant experience with carbon accounting.	The audit team reviewed the information available in the project documentation and interviewed personnel to confirm the status of the management team.	Risk rating is appropriate
(f)	N/A		N/A

4.4.1 Internal Risk - Financial Viability

Risk	Assessment of rationale, assumptions and justification	Assessment of quality of documentation and data provided	Conclusion regarding appropriateness of the risk rating
(a)	-	-	N/A
(b)	-	-	N/A
(c)	-	-	N/A
(d)	The audit team reviewed the financial analysis of the project, including costs and expected income. The audit team also sampled inputs driving the model and confirmed that the future sale of credits is based on appropriate estimates.	The audit team found the financial analysis and associated documentation thorough and well-organized /9/. The project team could provide a clear description of the inner workings of the budget.	Risk rating is appropriate
(e)	-	-	N/A
(f)	-	-	N/A
(g)	-	-	N/A

Risk	Assessment of rationale, assumptions and justification	Assessment of quality of documentation and data provided	Conclusion regarding appropriateness of the risk rating
(h)	As above, the financial analysis describes the funding secured, and justifies the costs of project activities, compared with funding from Mikro-Tek and loans from CONAF.	The audit team found the financial analysis and associated documentation thorough and well-organized /9/. The project team could provide a clear description of the inner workings of the budget.	Risk rating is appropriate
(i)	N/A		N/A

4.4.2 Opportunity Cost

Risk	Assessment of rationale, assumptions and justification	Assessment of quality of documentation and data provided	Conclusion regarding appropriateness of the risk rating
(a)	-	-	N/A
(b)	-	-	N/A
(c)	-	-	N/A
(d)	-	-	N/A
(e)	-	-	N/A

Risk	Assessment of rationale, assumptions and justification	Assessment of quality of documentation and data provided	Conclusion regarding appropriateness of the risk rating
(f)	The audit team reviewed calculations of the Net Present Value, and found that it appropriately compared the value of the abandoned pasture in the baseline scenario as zero. As described, the climate conditions and technological barriers to alternative uses have little value, with an estimate of zero deemed realistic based on the degree of land degradation. The NPV of the plantation establishment with carbon revenues was derived from the financial analysis and applied appropriately.	The verification team reviewed documentation describing the barriers to plantation establishment and previous land use history for the project area, and found it sufficient basis for the NPV determinations.	Risk rating is appropriate
(g)	-	-	N/A
(h)	-	-	N/A
(i)	The management plans and collaboration agreements are legally binding under the CONAF Forest Law 701, and although the term of the obligations are not specified, in order for the plan to remain as approved by CONAF forest cover will have to be maintained in perpetuity. As described in the finding NIR.6, all lands in the project area are under obligation to be reforested following any harvest. As such, the binding commitments for the PAIs cover a period of at least 100 years.	These plans and agreements are clear in their references to each party's obligations, and project personnel have referenced the appropriate sections of the CONAF forestry law with regards to the duration of activities and obligations.	Risk rating is appropriate

4.4.3 Internal Risk – Project Longevity

Risk	Assessment of rationale, assumptions and justification	Assessment of quality of documentation and data provided	Conclusion regarding appropriateness of the risk rating
	The agreements for each individual PAI address the legal requirements under CONAF Forest Law 701, which require replanting and re-growth of harvested areas. This is an indefinite legally binding commitment (or at least 100 years as described) and as such the risk can be calculated to be zero.	The verification team considers the PAI agreement documents to be thorough in their description of obligations and referencing the relevant CONAF law.	Risk rating is appropriate

4.4.4 External Risk – Land Tenure and Resources Access/Impacts

Risk	Assessment of rationale, assumptions and justification	Assessment of quality of documentation and data provided	Conclusion regarding appropriateness of the risk rating
(a)	N/A	N/A	N/A
(b)	The business collaboration agreements and management plans are clear in their descriptions of the land owners having private titles, with Mikro-Tek owning the carbon rights.	These are different entities described in the documents, with the distinction between parties and relative ownership of the land and carbon rights.	Risk rating is appropriate
(c)	The areas where the PAIs are located are sparsely populated, with the land having a relatively low value being abandoned prior to use. In interviews with landowners they corroborated claims of no disputes regarding ownership or land tenure. In observation of the site visit boundaries and through review of project maps there was no apparent encroachment by outside actors.	Project maps were reviewed on site and historical imagery was reviewed to determine if there were any changes along the borders that could be related to ownership disputes. The descriptions of the land areas were consistent between documents.	Risk rating is appropriate

Risk	Assessment of rationale, assumptions and justification	Assessment of quality of documentation and data provided	Conclusion regarding appropriateness of the risk rating
(d)	See item (c) above – Landowners also confirmed their understanding that Mikro-Tek was the owner of carbon rights. There was no dispute mentioned in interviews related to access and use rights.	See item (c) above. As with above, the descriptions in the business collaboration agreements are clear and consistent.	N/A
(e)	N/A – the project is not a WRC project	N/A	N/A
(f)	The management plans and collaboration agreements are legally binding under the CONAF Forest Law 701, and although the term of the obligations are not specified, in order for the plan to remain as approved by CONAF forest cover will have to be maintained in perpetuity. As described in the finding NIR6, all lands in the project area are under obligation to be reforested following any harvest. As such, the binding commitments for the PAIs cover a period of at least 100 years.	These plans and agreements are clear in their references to each party's obligations, and project personnel have referenced the appropriate sections of the CONAF forestry law with regards to the duration of activities and obligations.	Risk rating is appropriate
(g)	N/A	N/A	N/A

4.4.5 Community Engagement

Risk	Assessment of rationale, assumptions and justification	Assessment of quality of documentation and data provided	Conclusion regarding appropriateness of the risk rating
(a)	N/A	N/A	N/A

Risk	Assessment of rationale, assumptions and justification	Assessment of quality of documentation and data provided	Conclusion regarding appropriateness of the risk rating
(b)	As described in the project documentation, due to the dry climate and lacking native seed resources, there's relatively little natural regeneration of potential wood sources in the project area.	Project maps were reviewed to determine whether there are people living within the project areas, and the extent of people living within 20km of the project areas. In traveling to and from the project areas there did not seem to be any populations which would reasonably be expected to be reliant on the project area for food, fodder, fuel, medicine, or building materials, based on proximity to the project area, and very limited availability of these items. Similarly, in areas adjacent to the project area there was little indication of natural regeneration of potential wood or fuel sources.	Risk rating is appropriate
(c)	N/A	N/A	N/A

4.4.6 Political Risk

Risk	Assessment of rationale, assumptions and justification	Assessment of quality of documentation and data provided	Conclusion regarding appropriateness of the risk rating
(a)	-	-	N/A
(b)	-	-	N/A
(c)	The audit team downloaded dataset from World Bank Institute's Worldwide Governance Indicators (for the most recent five years, 2011-2015, as of March 2017) and confirmed the WGI score of 1.113	The dataset used is required by the AFOLU Non-Permanence Risk Tool, and can be considered high quality	Risk rating is appropriate

Risk	Assessment of rationale, assumptions and justification	Assessment of quality of documentation and data provided	Conclusion regarding appropriateness of the risk rating
(d)	-	-	N/A
(e)	-	-	N/A
(f)	The audit team confirmed that Chile has established a Designated National Authority, Comisión Nacional del Medio Ambiente (CONAMA), under the CDM (although it was superseded by the Ministerio del Medio Ambiente). There are two CDM A/R projects in Chile, as well.	The CDM website lists the projects in Chile, as well as the country's Designated National Authority.	Risk rating is appropriate

4.4.7 External Risk – Natural risk

Risk	Assessment of rationale, assumptions and justification	Assessment of quality of documentation and data provided	Conclusion regarding appropriateness of the risk rating
Fire	The calculation of percent area affected by fire per year utilizes CONAF data going back to 1997 for the three regions of the project area. The assumption is that fires in the project areas would be as likely as average over these regions for the last 20 years. While there is some variation, extrapolating this percentage over a 100 year period for the project area would mean a fire is likely every 33.3 years for any given parcel. The geographic spread is also a way in which the risk of a fire affecting 50% of biomass is reduced.	The data provided by CONAF /13/ is the authoritative source for this information, and sufficient to inform the calculation.	Risk rating is appropriate

Risk	Assessment of rationale, assumptions and justification	Assessment of quality of documentation and data provided	Conclusion regarding appropriateness of the risk rating
Pest and Disease Outbreaks	The calculation of the percent area of forest in Chile disturbed by pests and disease is calculated in a manner similar to that for fire risk, above. Again the assumption is that the forest is equally likely to be infected by pests and disease, as based on the historical data for Chile as a whole. Similarly there is a conservative assumption that because there is a significant geographic spread for the PAIs, and no pest species that lead to the full stand replacement, pests and disease are unlikely to affect a significant portion of the project area. Local foresters' access to management expertise from the Servicio Agrícola y Ganadero would also be expected to help minimize this risk.	The verification team reviewed the data referenced from the Food and Agriculture Organization (FAO), and found it to be of high quality. It is from 2000 but the percentage basis is reasonable to extrapolate.	Risk rating is appropriate
Extreme Weather	The verification team reviewed the evidence provided by project personnel and confirmed that risk of extreme weather is low for the project area. While there has been some drought conditions in the region, the drought return period described in the article cited in the Monitoring Report is for the appropriate region, and is relatively recent information. That the PAIs are spread across a relatively large area also would help reduce the risk, as does the reduced susceptibility of trees planted due to the mycorrhizal inoculation.	The verification team reviewed the literature referenced by the project team and found it to be high quality.	Risk rating is appropriate

Risk	Assessment of rationale, assumptions and justification	Assessment of quality of documentation and data provided	Conclusion regarding appropriateness of the risk rating
Geological Risk	The closest distance between a PAI and a volcano is 65 km, which means the overall risk from volcanoes would be unlikely. Landslides may pose more of a risk, as noted, but the mitigation measure of planting trees along contours, and avoiding highly-sloped areas reduces this risk. These plantations are more likely to stabilize the soil, and as such the risk can be considered minor.	While the information provided with regards to landslides is relatively limited, the nature of the project activities in reducing erosion outweighs this limitation.	Risk rating is appropriate

5 SAFEGUARDS

5.1 No Net Harm

As described in the Monitoring Report, no environmental impact statement was required prior to project implementation. The project takes place on degraded lands that ensures no relocation of communities during this monitoring period, and the environmental benefits of planting with mycorrhizal inoculation, in particular, is reasonably expected to have net positive environmental benefits. The incorporation of environmental criteria described in the “National Strategy Study for the CDM in Chile” document referenced was also found to be appropriate.

5.2 Local Stakeholder Consultation

As described in the Monitoring Report and corroborated in interviews with landowners, Mikro-Tek has made personnel available in Chile to meet with local stakeholders and collect updated information. Landowners acknowledged that they understand Mikro-Tek is available to respond to any concerns. Collection of public comments was not required prior to this verification.

6 VERIFICATION CONCLUSION

The audit team asserts, with no qualifications or limitations that the project complies with the verification criteria for projects and their GHG emission reductions or removals set out in VCS Version 3.

In addition, the audit team asserts that the project complies with the validation criteria for projects set out in VCS Version 3 (but this statement is qualified and limited in scope to the specific project and methodology deviations assessed by the audit team, as discussed in Sections 3.2 and 3.3 above).

The audit team has been able to confirm that the project has been implemented in accordance with the project description and subsequently validated variations.

The audit team has been able to confirm, with a reasonable level of assurance, that the quantity of GHG emission reductions or removals set out below has been quantified in accordance with the VCS rules. As documented in Section 4.4 above, the audit team can also confirm that the non-permanence risk score of 10% has been quantified in accordance with the VCS rules. Total VCU's to be issued are as follows:

1 June, 2012 – 31 May, 2017: 990,978 tCO₂e

The net change in carbon stocks is 1,574,685 tCO₂e, while the net GHG emission reductions or removals are 1,112,942 tCO₂e. As described in the Monitoring Report, the amount sequestered from the project start date in 2003 to the end of the current monitoring period in 2017 that is eligible for crediting is equal to the long-term average GHG benefit at the project level. The verification team confirms that the net change in carbon stocks (1,574,685 tCO₂e) is more than the long term average of GHG benefits (1,562,830.68 tCO₂e) as required by the VCS requirements. As such, the amount sequestered during the 2012 – 2017 monitoring period that is eligible for crediting is 1,101,087 tCO₂e (equal to the long-term average of 1,562,830.68 tCO₂e minus the total amount of credits issued in 2012 of 461,743 tCO₂e). This amount is divided equally between the emissions years of the reporting period, below. Applying the 10% non-permanence risk deduction, the buffer pool contribution shall be 110,109 tCO₂e. Subtracting this amount from the eligible 1,101,087 tCO₂e leaves 990,978 tCO₂e VCUs to be issued.

Verified GHG Emission Reductions or Removals in the above verification period:

Year	Baseline emissions or removals (tCO ₂ e)	Project emissions or removals (tCO ₂ e)	Leakage emissions (tCO ₂ e)	Net GHG emission reductions or removals (tCO ₂ e)	Eligible Net GHG emission reductions or removals (tCO ₂ e)
2013	0	222,588.4	0	222,588.4	220,217.4
2014	0	222,588.4	0	222,588.4	220,217.4
2015	0	222,588.4	0	222,588.4	220,217.4
2016	0	222,588.4	0	222,588.4	220,217.4
2017	0	222,588.4	0	222,588.4	220,217.4
Total	0	1,112,942	0	1,112,942	1,101,087

APPENDIX A: VERIFICATION FINDINGS

The findings below are a record of issues raised throughout the verification process. All responses from Project Personnel are titled "Client Response" and are a verbatim transcription of their responses.

Project: REFORESTING DEGRADED LANDS IN CHILE THROUGH THE USE OF MYCORRHIZAL INOCULATION

Reporting Period: 1 June, 2012 – 31 May, 2017

NCR 1 Dated 30 Apr 2018

Standard Reference:

Document Reference: Monitoring Report; Mikro-Tek 2017 Inventory Calculation and Results

Finding: The monitoring report provides descriptions of the allometric equations used to determine total aboveground biomass for *Pinus radiata* as " $bm = -5.0506 + 0.8173*(dbh^2)$ " and the root to shoot ratio as "0.2543." These parameters are understood to be correct, however the "Mikro-Tek 2017 Inventory Calculation and Results" worksheet utilizes the *Eucalypt globulus* equation " $bm = \text{Exp}(2.3177 + 0.1303 * dbh)$ " in column J, and the root to shoot ratio for *Eucalyptus globulus* of "0.2159" in column K, for all tree measurements, including the Pine species. This results in a non-conformity with the Monitoring Report.

Project Personnel Response: We have updated the file "Mikro-Tek 2017 Inventory Calculations and Results - 9May2018" to utilize the *Eucalyptus globulus* equation " $bm = \text{Exp}(2.3177 + 0.1303*dbh)$ " in column J and the root:shoot ratio "0.2159" in column K for measurements on *Eucalyptus globulus* trees, and the *Pinus radiata* equation " $bm = -5.0506 + 0.8173*dbh^2$ " in column J and the root:shoot ratio "0.2543" in column K for measurements of *Pinus radiata* trees. This has increased the value of mean live aboveground and belowground carbon stock calculated for the project, and reduced the error calculated as the 90% confidence interval as a percentage of the mean. We have updated Section 4 of the monitoring report as well as the calculation of the buffer contribution in the Non-Permanence Risk Report (Annex A) as well as the file "Mikro-Tek Chile Cash Flow Analysis 2018 - 9May2018" with these revised values.

Auditor Response: The calculation worksheet has been appropriately updated to include the *Eucalyptus* allometric equations for each of the relevant trees, resulting in updated averages, as described in the findings response. The confidence interval has been updated appropriately, as well, and the Section 4 of the Monitoring Report reflects these changes. As such the finding is closed.

Bearing on Material Misstatement or Conformance (M/C/NA): C

NCR 2 Dated 30 Apr 2018

Standard Reference:

Document Reference: Mikro-Tek SOPs English

Finding: Section 2.3 of the "Standard Operating Procedures for Monitoring Carbon in Chilean Plantation Forests" (or "SOP") document states "To avoid either missed trees or double recording, the point of initiation of measurement will be noted, and measurement should proceed in a consistent clockwise or counter-clockwise fashion." In observations of inventory staff demonstration of the measurement methods used it was shown that the order in which trees are measured is not consistent with this description. The process instead involved measuring each tree in a row before moving to the next row. Generally all rows downhill or south of the plot center were measured prior to moving to the uphill or northern plots. This method was described as being both more efficient and less prone to error than a simply clockwise or counter-clockwise fashion. That this practice is used results results in a non conformance with the SOP.

Project Personnel Response: The observation described here is correct. As implemented in the 2017 inventory, measurement of trees in sampling plots proceeded by measuring each tree in a row before moving to the next row. Rows downhill of the plot center were measured prior to moving to rows uphill of the plot center. This method represents an adaptation and improvement on the procedure of measurements of trees in a clockwise or counter-clockwise direction as described in the SOP. The clockwise/counter-clockwise approach is typically employed in naturally regenerated forest stands. In forest plantations where trees are planted in rows, such as the eucalyptus and pine plantations in the project, the clockwise/counter-clockwise approach is less efficient. Procedure of measurements row by row increased the speed with which plots were measured by crews and decreased the likelihood that trees were either missed or measured twice. However, the actual measurement of dbh, the required input for estimating tree biomass, proceeded as described in the SOP. Therefore the row by row approach to plot measurement implemented in the 2012 - 2017 period only affected the order in which trees in a plot were measured, and did not have an impact on the applicability of the methodology, additionality or the appropriateness of the baseline scenario. Such deviations are allowed per VCS Standard 3.7 Section 3.6.1 (2) if they are appropriately described and justified in the monitoring report. We have updated the project monitoring report to describe and justify the adapted measurement approach as a project description deviation in Section 2.2.2

Auditor Response: The audit team agrees with project personnel that the procedure demonstrated increased speed of measurement and decreased likelihood that trees were missed or measured twice. This was determined through the remeasurement process and deemed reasonable, while not impacting materiality, applicability to the methodology, baseline scenario, or additionality. The deviation described in the updated monitoring report is described and justified appropriately, and allowed by the VCS standard v3.7 section 3.6.1(2). As such this finding is closed.

Bearing on Material Misstatement or Conformance (M/C/NA): C

NCR 3 Dated 30 Apr 2018

Standard Reference:

Document Reference: Mikro-Tek SOPs English

Finding: Section 3.0 of the "Standard Operating Procedures for Monitoring Carbon in Chilean Plantation Forests" (or "SOP") document states, "Throughout field monitoring events, a consistency check of an opportunistic sample (approximately 10%) of center plots (not clusters) shall be re-measured to identify and correct any field measurement issues which arise during implementation of the monitoring plan. Re-measurement for this purpose shall be done by different field personnel. These internal check cruises will also serve to quantify measurement error." However, project personnel acknowledged that no remeasurement checks had been done in 2017 in relation to the updated inventory, and this results in a non-conformity with the SOP.

Project Personnel Response: The observation described here is correct. The SOP states that approximately 10% of center plots shall be re-measured during field monitoring events to identify and correct any field measurement issues which arise during implementation of the monitoring plan. Re-measurement of plots did not occur in the 2017 inventory due to the finite nature of time and resources available for the inventory. In the 2012 inventory re-measurement of plots did occur. The 2017 inventory was implemented by the same field crew leaders as the 2012 inventory. The re-measurement procedure as described in the SOP is intended as a training tool. As the 2017 field crew included the same crew leaders, who are both certified foresters in Chile, it was decided that re-training would not be an effective use of time or resources, and re-measurement of plots did not occur. As re-measurement of a subset of inventory sampling plots is not an applicability condition or procedural requirement of the applied methodology AR-ACM0001, lack of re-measurement of plots in the 2017 inventory is a deviation to the project description that does not have an impact on the applicability of the methodology, additionality or the appropriateness of the baseline scenario. We have updated the project monitoring report to describe and justify lack of plot re-measurement as a project description deviation in Section 2.2.2

Auditor Response: The implementation of the 2017 re-measurement by the same field crew leaders as the 2012 inventory is an important consideration, along with the fact that this practice was intended as a training tool. While there was some need for "refreshing" of the inventory methodology by field leaders during the field assessment overall they demonstrated competence and the limited nature of time and resources is a valid reason to deviate from the SOP. The deviation described in the updated monitoring report is described and justified appropriately, and allowed by the VCS standard v3.7 section 3.6.1(2). As such this finding is closed.

Bearing on Material Misstatement or Conformance (M/C/NA): C

NCR 4 Dated 30 Apr 2018

Standard Reference:

Document Reference: Monitoring Report

Finding: The monitoring report states describes the monitoring and verification schedule as "starting in 2012 and at least every five years thereafter". The first inventory was conducted in September/October 2012, however the inventory used for the monitoring report was conducted in November/December 2017. Because greater than five years had passed since the inventory in 2012 this results in a non-conformity with the Monitoring Report.

Project Personnel Response: Use of the word "year" in reference to the monitoring and verification period in the monitoring report is intended to convey calendar year. Accordingly, as the previous inventory occurred in 2012, the following inventory would then occur before the end of 2017. The 2017 inventory was completed in December, before the end of 2017.

Auditor Response: The audit team appreciates this clarification. In planning for the verification there was also some delay due fires relatively near the project area, which pushed the inventory beyond the five year mark unexpectedly. Because the five year requirement is reasonable to expect to be completed within the calendar year, and therefore before the end of 2017, this finding is closed.

Bearing on Material Misstatement or Conformance (M/C/NA): C

NIR 5 Dated 30 Apr 2018

Standard Reference: VCS Standard v3.7 section 2.4.1; AFOLU Non-Permanence Risk Tool v3.3 section 2.2.3

Document Reference: Monitoring Report

Finding: The principles of "Completeness" and "Conservativeness" described in the VCS Standard, and taken from ISO 14064-2, "provide[s] the basis for, and shall guide the application of, the VCS rules and requirements. They prompt the project developer to "Include all relevant information to support criteria and procedures" and "Use conservative assumptions, values and procedures to ensure that net GHG emission reductions or removals are not overestimated," respectively. Section 2.2.3 of the AFOLU Non-Permanence Risk Tool v3.3 states that the opportunity cost analysis shall include a net present value (NPV) analysis, covering the project crediting period, of such alternatives as compared to the project, taking into consideration a conservative estimate of revenue from GHG credit sales and other project revenue streams, and potential price fluctuations of commodities impacted by the project. The financial discount rates used shall be based on published sources and represent the appropriate risk for the relevant land use scenario. Estimates of prices for GHG credit sales shall be based on published sources such as market intelligence reports. The analysis shall be undertaken in a transparent manner and shall provide all relevant assumptions, parameters, and data sources such that a reader may reproduce the analysis and determine the same results."

The opportunity cost section of the monitoring report includes the following description: "The only credible alternative land use scenario, as identified and substantiated in the additionality analysis, is abandoned pasture, with an equivalent NPV of zero. Hence, NPV from the project activity is expected to be at least 50% more profitable than the most profitable than the credible alternative land use activity." The additionality analysis section does not appear to include all relevant information to support the determination that the NPV is zero, and without such information that determination might also not be considered conservative. Please provide further evidence of this NPV value calculation as prompted by the Risk Tool.

Project Personnel Response: We have added an analysis of NPV for the baseline and project scenarios to the supporting documentation for the risk assessment. Please see file "NPV Analysis". We have added text to the risk assessment in the opportunity cost section describing the procedures and assumptions used in the NPV analysis. The NPV analysis and new supporting text and documentation (i.e. Sills 2016) in the risk assessment substantiates the claim that the NPV of the project area in the baseline is zero and the NPV of the project activity is at least 50% more profitable.

Auditor Response: The audit team appreciates this NPV calculation documentation and elaboration in the risk assessment. The description substantiates the claim that the net annual revenue per acre of abandoned pasture could reasonably be considered zero. Even with a substantial value per acre, though, the calculation demonstrates that the NPV with reforestation would be significantly greater than 50% more profitable. As such this finding is closed.

Bearing on Material Misstatement or Conformance (M/C/NA): C

NIR 6 Dated 30 Apr 2018

Standard Reference: AFOLU Non-Permanence Risk Tool v3.3 section 2.2.3

Document Reference: Monitoring Report

Finding: In row H of table 3 in of Section 2.2.3 of the Risk Tool there are -8 points applicable to the risk rating if the "Project is protected by legally binding commitment (see Section 2.2.4) to continue management practices that protect the credited carbon stocks over at least 100 years. Section 2.2.4 describes this legal requirement with the following language: "Legal agreement or requirement to continue the management practice refers to any legally enforceable agreement or requirement, such as a conservation easement or protected area law that would require the continuation of the management practice that sequesters carbon or avoids emissions for the entire project longevity. In ARR and IFM projects with harvesting, where allowing re-growth of harvested areas is required by law, this may be demonstrated by citing the appropriate legal statute and common practice. Any project with a legally binding agreement that covers at least a 100 year period from the project start date shall be assigned a score of zero for project longevity."

In the associated section of the Monitoring Report (2.2.3) it states that "Project is protected by legally binding commitment (i.e., CONAF approved forest management plan with commitment to replant after each harvest) to continue management practices that protect the credited carbon stocks over at least 100 years." Please provide evidence of this legally binding commitment (as applicable for individual parcels), specifying where term description of at least 100 years is included.

Project Personnel Response: CONAF Forestry Law 701 Title IV Article 22 covers the legally binding commitment to continue management practices that protect the credited carbon stocks over at least 100 years. The relevant language from Forestry Law 701 Title IV Article 22, found in the first sentence of the article, is translated as "Harvesting plantation forests on lands suitable for reforestation obligates the owner to reforest an area of land at least equal to the area harvested, following the management plan approved by the Corporation [La Corporación Nacional Forestal or CONAF]". The term over which the obligation to reforest applies is not specified, effectively committing landowners to whom the law applies, that is, landowners who receive a subsidy from CONAF to establish forest plantations under Forestry Law 701, to maintain land receiving a subsidy under forest cover as specified in their CONAF approved management plan, in perpetuity. All lands included in the project, including initial and new grouped project instances, were identified as suitable for forestry, as evidenced by the approval of management plans for each project instance by CONAF. Furthermore all lands received subsidies from CONAF for forest plantation establishment under Forestry Law 701. Therefore, all lands included in the project are under obligation to be reforested following any harvest activity in perpetuity. Thus, there is a legally binding agreement that covers at least a 100 year period from the project start date. We have added supporting information to the opportunity cost section of the risk assessment and included CONAF Forestry Law 701 in the supporting documentation to the monitoring report.

Auditor Response: This supporting evidence is appreciated, as is the elaboration in the monitoring report. Although the period of the obligation is not specified, the term can reasonable be interpreted to be in perpetuity, as they are under obligation to be reforested following any harvest activity. The CONAF law describes this requirement and associated subsidy, with the landowners committing to the management plan approved. As such, this finding is closed.

Bearing on Material Misstatement or Conformance (M/C/NA): C

NIR 7 Dated 30 Apr 2018

Standard Reference: AFOLU Non-Permanence Risk Tool v3.3 section 2.2.4

Document Reference: Monitoring Report

Finding: Section 2.2.4 part 5 of the Risk Tool describes the legal requirement with the following language: "Legal agreement or requirement to continue the management practice refers to any legally enforceable agreement or requirement, such as a conservation easement or protected area law that would require the continuation of the management practice that sequesters carbon or avoids emissions for the entire project longevity. In ARR and IFM projects with harvesting, where allowing re-growth of harvested areas is required by law, this may be demonstrated by citing the appropriate legal statute and common practice. Any project with a legally binding agreement that covers at least a 100 year period from the project start date shall be assigned a score of zero for project longevity."

In the relevant section of the monitoring report it is stated that "While the project crediting period is 40 years, on each project parcel there is a legal requirement under CONAF Forest Law 701 to replant and allow re-growth of harvested areas, hence maintaining the areas as forest. As there is a legally binding agreement that covers at least a 100 year period from the project start date, a score of zero is applied. Please provide evidence of this legally binding commitment (as applicable for individual parcels), specifying where term description of at least 100 years is included.

Project Personnel Response: We have added supporting information providing evidence of the legally binding commitment to maintain forest cover on project lands for a period of at least 100 years from the project start date to the opportunity cost section of the risk assessment. We have also included CONAF Forestry Law 701 in the supporting documentation to the monitoring report.

Auditor Response: This supporting evidence is appreciated, as is the elaboration in the monitoring report. Although the period of the obligation is not specified, the term can reasonable be interpreted to be in perpetuity, as they are under obligation to be reforested following any harvest activity. The CONAF law describes this requirement and associated subsidy, with the landowners committing to the management plan approved. As such, this finding is closed.

Bearing on Material Misstatement or Conformance (M/C/NA): C

NCR 8 Dated 30 Apr 2018

Standard Reference:

Document Reference: Monitoring Report

Finding: During the field audit at least one example arose where it was clear that the language included in the Monitoring Report was incorrect because it "reforestation" was used in place of "afforestation". An example of this is the statement on page 23 that "It is demonstrated in the project document with the most up to date INE Agriculture and Forestry Census data currently available (2007) that reforestation in the project region is not common practice (Step 4) and thus would not have occurred on these privately owned lands without carbon finance funding the mycorrhizal inoculation and thus overcoming a technological barrier (and related investment barrier)." In the case described here project personnel acknowledged that it was not accurate that reforestation in the region is not common practice, however it is accurate that afforestation in the region is not common practice. Please clarify to what extent the terms "afforestation" and "reforestation" may be used interchangeably throughout the Monitoring Report, and provide an updated version with the correct terms applied where they may be inappropriately used.

Project Personnel Response: To minimize confusion and avoid inaccuracies in the use of the terms afforestation and reforestation in the monitoring report, we have added the following text to Section 1.1: 'In this monitoring report, the language "establishment of forest plantation" is used to refer to the project activity, and encompasses both initial planting (afforestation) and subsequent replanting activities after harvest (reforestation).' We have updated the text of the monitoring report to use this language throughout.

Auditor Response: The audit team appreciates these updates. This is a sufficient clarification and this finding is closed.

Bearing on Material Misstatement or Conformance (M/C/NA): C

OBS 9 Dated 5 Jun 2018

Standard Reference:

Document Reference: Mikro-Tek SOPs English

Finding: During the field audit it was discovered that the 4th and 5th plots of cluster MT-037 did not have their plot centers in locations that would be consistent with the SOP. It was determined with the field inventory leader that the ricochet angle had been calculated incorrectly when establishing these plots. As a result there would be an effect on the resulting biomass calculation, and guidance from Verra prompted the audit team to request information from project personnel on the potential materiality of the miscalculation. Project personnel responded that the miscalculation is "a random error and therefore doesn't introduce bias that could result in a materially significant error", and the audit team has confirmed that comparison between inventory results and results from remeasurement does not result in any materially significant error. There was no indication the ricochet angle was calculated with the intention of including additional trees or any other bias. Additionally, the project personnel proposed updating SOPs with more specific language, and conduct training of field crews before the next inventory. Example text to improve clarity was provided below, and is sufficient to close the issue: "Prior to implementing the ricochet (or mirage), crews will consult maps and GPS readings to confirm the location of any boundaries (and potential of plot overlap) between strata or of the inventory area. Crew members shall mutually agree to the location of a boundary based on available maps or GPS coordinates."

The exact border, as interpreted in the field, will be marked with flagging, and its location recorded and mapped. The configuration of the boundary (e.g. exact orientation in degrees azimuth, if a straight line), along with a description (e.g. demarcated by the canopy line of the adjoining hemlock stand) will be recorded. The distance and degrees azimuth of the boundary line from the plot center, and the orientation of the boundary line, will also be recorded. Where an irregular boundary is involved, distance and degrees azimuth of the boundary line from the plot center will be recorded for 2-3 points along the boundary line."

Project Personnel Response:

Auditor Response:

Bearing on Material Misstatement or Conformance (M/C/NA): C

NCR 10 Dated 26 July 2018

Standard Reference:

Document Reference: Monitoring Report; Mikro-Tek 2017 Inventory Calculation and Results

Finding: In the “Calculations” sheet of the Inventory Calculation and Results file, it was noted that for clusters MT-34 through MT-47, the equation used in column J for aboveground biomass incorrectly refers to the DBH value in the row above, rather than the same row. While this is not expected to result in a material error, this affects the t/ha calculations and resulting emissions reductions calculations, and for any given tree in these clusters the allometric equation hasn’t been applied appropriately.

Project Personnel Response: I have updated the calculations in the “Calculations” sheet of the Inventory Calculation and Results file to resolve this issue. Please see the attached file “Mikro-Tek 2017 Inventory Calculation and Results – 26July2018”. This file should replace the file “Mikro-Tek 2017 Inventory Calculation and Results – 9May2018” in the supporting documentation to the monitoring report. I have updated the equation used in column J for MT-34 through MT-47 in the “Calculations” sheet to refer to the DBH value in the same row. The update to the “Calculations” sheet results in small changes in the variance, standard deviation, and coefficient of variation (row 43 – 46 in the sheet “Statistics”) for the strata EUC-03-08 and EUC-09-13. However, it does not change the strata level means or the project level descriptive statistics (row 44 – 48, column L – M in “Statistics” sheet). Therefore there is no change to the emission reduction calculations. Nonetheless, I have updated table 4.2 in the monitoring report with the revised variance, standard deviation, and coefficient of variation values for strata EUC-03-08 and EUC-09-13 in the monitoring report. I have included the updated monitoring report, “Mikro-Tek 2017 Monitoring Report V2.2” in clean and tracked changes versions as Word and pdf files.

Auditor Response: The updated calculation and results file includes revised calculations for Column J for the clusters identified. The resulting changes in variance, standard deviation, and coefficient of variation for the affected strata are indeed small and it does not change the mean values. While the emissions reductions have not changed, the Monitoring Report has been updated appropriately. This finding is closed.

Bearing on Material Misstatement or Conformance (M/C/NA): C