



Verified Carbon Standard

OYU- REFORESTING UGANDA FOR A BETTER TOMORROW



Document Prepared by KBS Certification Services. Ltd.

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Client	OYU Green Pvt. Ltd.
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Summary:

OYU Green Pvt. Ltd. has commissioned KBS Certification Services. Ltd. (KBS) to conduct the validation and First verification of the project titled "OYU- Reforesting Uganda for A Better Tomorrow" (VCS Project ID 4888), in accordance with the relevant requirements of the VCS Standard Version 4.7 for the monitoring period from 01-March-2021 to 31-January-2024.

The purpose of the grouped project activity is to improve community resilience against the negative impacts of climate change via capacity building and establishing woodlands that improve their well-being and support the local environment. This project establishes a sustainable ecosystem by raising commercial tree species, specifically *Eucalyptus* hybrid (GU7 & GU8 – clones of *Eucalyptus grandis* x *Eucalyptus urophylla*; hereinafter referred to as *Eucalyptus* hybrid) and *Pinus caribaea*, promoting biodiversity and environmental well-being, on Northern, Central, and Western regions of Uganda. This grouped Agriculture, Forestry, and Other Land Use (AFOLU) project, under the Afforestation, Reforestation, and Revegetation (ARR) category, is proposed to be implemented on Northern, Central, and Western regions of Uganda. In its first phase, the project will directly impact 3,324 hectares of land. The land designated for the project consists of degraded scrubland and cropland. The project follows the approved CDM Afforestation and Reforestation methodology AR-ACM0003: Afforestation and Reforestation of Lands Except Wetlands Version 2.0.

The proposed project activity aims to include the scope of joint validation and verification, defined as an independent and objective review of the joint PDMR, baseline study, monitoring plan, SOP, NPRR, GHG quantification and other relevant documents. These documents are reviewed against the VCS Standard Version 4.7 for project activities.

This report is based on the assessment of the joint PDMR, conducted through stakeholder consultations and the application of standard auditing techniques, including but not limited to desk reviews, on-site visits, follow-up actions such as virtual interviews, telephone or email. The assessment also includes a review of applicable approved methodologies, relevant tools, guidance, and CDM decisions.

The review of the project design documentation and subsequent follow-up interviews have provided KBS with sufficient evidence to determine that the project fulfills all the stated criteria. In our opinion, the project meets all applicable VERRA requirements for the AFOLU sector.

A risk-based approach was followed to conduct joint validation and verification. During the assessment, 6 Corrective Action Requests (CARs) and 19 Clarification Requests (CLs) were raised and successfully closed. 01 Forward Action Request (FAR) was raised. For further details, please refer to Appendix 4.

The validation and verification are based on the VCS joint PDMR, the Emission Reduction Removal (ERR) calculation spreadsheet, additional documents related to the baseline and monitoring methodology, as well as subsequent background investigations, follow-up interviews, and supporting documents provided to the Validation and Verification team by the project proponent.

Based on the information reviewed and evaluated, the audit team confirm that the implementation of the grouped project is estimated to result in total emission reduction of 7,597,837 tCO₂e (including buffer) within the 20 years and average annual emission reduction of 379,891 tCO₂e per annum throughout its crediting period (from 01-March-2021 to 28-February-2041).

For the current verification, the implementation of the first project instance has resulted in the achievement of 429,924 tCO₂e in emission reductions during the monitoring period from 01-March-2021 to 31-January-2024 (dates are inclusive). No restrictions or uncertainties were identified during the joint validation and verification process.

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1 INTRODUCTION

1.1 Objective

The purpose of the validation and First verification activity was to conduct an independent assessment of the project to determine whether the project complies with the pre claimed validation criteria, including the monitoring procedures adopted to establish the project and that the GHG emission reductions and removals reported in the Project Description are materially accurate and correctly calculated

OYU Green Pvt. Ltd. has appointed KBS Certification Services Ltd. (VVB) to perform the validation and first verification as well as certification of greenhouse gas (GHG) emission reductions reported from the grouped project “OYU- Reforesting Uganda For A Better Tomorrow” This report summarizes the findings of the validation and first verification of the project, conducted in accordance with the VCS Program Guide (v4.4, updated 29 August 2023), VCS Standard (v4.7, updated 29 August 2023), Program Definitions (v4.4, updated 29 August 2023), Registration & Issuance Process (v4.4, updated 31 August 2023), and the VCS Validation and Verification Manual (v3.2, dated 19 October 2016).

The purpose of verification is to provide a thorough and independent assessment of the proposed grouped project against applicable VCS requirements, particularly the project's baseline, monitoring plan, and compliance with relevant VCS and host Party criteria. The objectives of the validation and verification engagement were to assess:

- The project's conformance to the VCS rules and requirements.
- The project's conformance with the applied methodology, including the procedure for the demonstration of additionality specified in the methodology.
- The likelihood that the methods and procedures set out in the project description will generate verifiable GHG data.

These elements are verified to confirm that the monitoring report is accurate, reasonable, and meets the identified criteria. The other objective of the validation engagement was to assess the non-permanence risk analysis. Furthermore, standard auditing techniques were applied throughout the validation process.

Validation and Verification is essential for all VCS projects, providing stakeholders with assurance about the quality of the project and its potential to generate Verified Carbon Units (VCUs). The monitoring system is fully implemented and functional, ensuring the generation of emission reductions without double counting. The reported data are reviewed for accuracy, completeness, consistency, transparency, and freedom from material error or omission by checking the monitoring records and emissions reductions calculations.

1.2 Scope and Criteria

For validation and verification, the scope is defined as an independent and objective review of the project description, baseline study, monitoring plan, and other relevant documents provided to the KBS team, along with the contract conditions. This information is evaluated against the requirements of VCS Standard v4.7 and any additional requirements specific to VCS AFOLU projects. KBS employed a risk-based approach in the validation process, concentrating on identifying significant risks that could affect project implementation and the generation of emission reductions.

The items covered in the validation and Verification are described below:

- VCS Criteria, VCS standard version 4.7
- VCS program rule.
- VCS Project Description (Joint PDMR) v4.3
- Monitoring Plan
- Background investigation and follow up interviews
- Findings report with CARs, CLs & FARs.
- SOPs
- Non-Permanence risk assessment tool

For Validation and Verification, the scope is defined as an independent and objective review of the monitoring aspects, including the initial Joint Project Description and the Monitoring Report (Joint VCS PDMR), as well as the monitored data and other relevant documents provided to the audit team. This review will also encompass information collected through interviews conducted during the site visit. KBS has adopted a risk-based approach to verification, in accordance with the recommendations outlined in the latest version of the Verified Carbon Standard v4.7, focusing on identifying significant reporting rules and assessing the reliability of project monitoring. The validation and verification will cover the following aspects:

- Ensure that the project activity has been implemented and operated as per the project description along with all physical features (technology, project equipment, and monitoring) of the project are in place as per the documents provided by the client and observed the same during onsite audit.
- Ensure that the monitoring part and other supporting documents provided are complete.
- Ensure that the practiced monitoring system and procedures comply with the monitoring systems and procedures described in the monitoring plan and the applied CDM methodology.
- Evaluate the data recorded and stored are as per the monitoring methodology.

- The joint validation and verification are based on the information provided to KBS and the contract conditions.
- The scope of work does not include providing any consulting services to the project proponent. However, requests for clarifications and/or corrective actions may offer input for improving the project description. The work carried out by KBS is conducted without any conflict of interest.

1.3 Reasonableness of Assumptions and Level of Assurance

☒ Reasonable level of assurance

Following the requirements of Voluntary Carbon Standard (VCS) Agriculture, Forestry and Other Land Use (AFOLU) project, the “reasonableness of assumptions”, in this project refers to the validity and credibility of the fundamental principles which are part of the project’s design and implementation. In planning of the validation and verification, Assessment Team took cognizance of clause 4.1.10 (4) of the “VCS Standard: Validation and Verification Process” version 4.7. “The threshold for materiality with respect to the aggregate of errors, omissions, and misrepresentations relative to the total reported GHG emission reductions and/or removals shall be 5% for projects and 1% for large projects”, as established for projects by the VCS Standard. Current project falls under “Project” category hence materiality of 5% is applicable. In this project scenario the project validity is confirmed by assessing the project area and conditions onsite.

These assumptions included in the project activity are but not limited to, the following aspects:

- i) Project Boundary:** The spatial area of 3,324 hectares is currently covered by the initial project activity instance i.e. the land area under which the GHG impacts are occurring, but PP has estimated to increase the area to 10,000 hectares by including more instances within the grouped project by meeting all inclusion criteria. The initial demarcated area of 3,324 hectares is assessed by assessment team during desk review and site visit through sampling.
- ii) Baseline Scenario:** The baseline scenario of the project scenario comprises unused lands predominantly comprising of degraded scrubland and croplands.. In the last 10 years land has not been cleared of the native ecosystem. The project activity aims to raise well-managed sustainable plantations in these lands and sequester carbon, while meeting the growing demand for high-quality wood products. The project activity significantly contributes to restoring local ecosystem services added with sustainable environmental management and socio-economic upliftment of the local community. Also, community engagement in the project activities and associated livelihood diversification boosts the local economy, leading to increased resilience and poverty alleviation within the project area.
- iii) Applicability of the methodology:** The project meets all the applicability conditions as mentioned in the applied methodology AR-ACM0003 v 2.0.
- iv) Leakage:** Leakage emission occurs when the displacement leads to an increase in GHG emissions relative to the GHG emissions attributable to the activity as it exists within the

project boundary. The project is being implemented on degraded scrubland and croplands that mainly consist of invasive shrubs such as Lantana and are devoid of any significant vegetation. As per the preliminary survey in the project area and GIS analysis of the past 10 years of land use, the amount of vegetation to support grazing activity in the project area is negligible and therefore, there will be little or no displacement of pre-project activity leading to minimum or no leakage due to the project activity. Hence, leakage emissions are considered zero in the project activity as per applied methodology.

- v) **GHG Emission Reductions and Removals:** The estimation of the net change in GHG emissions by plantations is attributable to the establishment of this project during the project's stated crediting period of 20 years which will be renewed once making the total crediting period of 40 years, while the project longevity has kept for 40 years. Further the calculation used to determine the estimated emissions is assessed completely as all the clarifications raised on applicability of methodology & GHG quantification are completely addressed by PP.

The reasonableness of these assumptions stated above is critical as they directly influence this project's effectiveness and its estimated carbon sequestration potential. The findings raised during the initial assessment stage after site visit needs to be closed and then the through assessment of the response will ensure a positive evaluation statement which reasonably assures that the project GHG assertions are materially correct and is a fair representation of the GHG data and information.

All the versions of the validation and verification report were subjected to an independent internal technical review to confirm that all validation activities had been completed according to the GHG program requirements and KBS internal procedure.

The technical review was performed by a technical reviewer(s) qualified in accordance with KBS qualification procedure.

1.4 Summary Description of the Project

OYU - Reforesting Uganda for a Better Tomorrow is a carbon sequestration project based in Uganda that falls under the Afforestation, Reforestation, and Revegetation (ARR) category of Agriculture, Forestry, and Other Land Used (AFOLU) projects. The first project activity instance encompasses revegetation of 3,324 Hectares of land and the area of total grouped project area is 10,000Ha across the Northern, Central, and Western Regions of Uganda.

This project seeks to empower private landowners who initially encountered investment limitations in establishing plantations. However, by strategically incorporating the sale of carbon credits, the scale of the revegetation initiative has experienced a substantial uplift. This enhancement not only addresses the previous limitations but also contributes to the broader objective of nurturing environmental sustainability. The selected land for the project activity is classified as degraded scrubland and croplands before the implementation of the project.

The project aims to improve community resilience against the negative impacts of climate change via capacity building and establishing woodlands that improve their well-being and support the local environment. This project establishes a sustainable ecosystem by raising commercial tree species, specifically Eucalyptus hybrid (GU7 & GU8 – clones of Eucalyptus grandis x Eucalyptus urophylla; hereinafter referred to as Eucalyptus hybrid) and Pinus caribaea species, promoting biodiversity and environmental well-being. Eucalyptus hybrid and Pinus caribaea species stand out as prime options for carbon sequestration, possessing a higher capacity compared to other tree species. This characteristic makes the project an effective and enduring solution in the efforts to address climate change.

The expected total GHG benefit for a 20-year crediting period (i.e. from 01-March-2021 to 28-February-2041) is 7,597,837 tCO₂e, the Long-Term Average (LTA) benefit is estimated as 3,916,621 tCO₂e and the average annual Emission Removal is 379,891 tCO₂e. Also, the total GHG emission removals generated (ex-post) in the first monitoring period (i.e., 01-March-2021 to 31-January-2024) are calculated as 429,924 tCO₂e (Including buffer).

2 VALIDATION AND VERIFICATION PROCESS

2.1 Method and Criteria

The validation and verification were performed through a combination of document review, onsite visit and interviews with relevant personnel associated with the project activity. At all times, the project was assessed for conformance to the criteria. The findings raised were issued to ensure that the project was in full conformance to all the necessary project requirements as per the VCS standard version 4.7.

The ARR project is assessed according to the requirements and guidance set by the following documents:

- VCS Program Guide version 4.4
- VCS Standard version 4.7
- VCS Program Definitions Version 4.4
- AFOLU Non-Permanence Risk Tool version 4.2
- Large-scale Consolidated Methodology: AR – ACM0003 Afforestation and reforestation project activities implemented on lands other than wetlands — Version 2.0.
- Methodological tools:

- i. AR-AM-TOOL-14- Estimation of carbon stocks and change in carbon stocks of trees and shrubs in A/R CDM project activities
- ii. AR-TOOL02- Combined tool to identify the baseline scenario and demonstrate additionality in A/R CDM project activities.
- iii. AR-TOOL17- Demonstrating appropriateness of allometric equations for estimation of aboveground tree biomass in A/R CDM project activities
- iv. AR-TOOL03- Calculation of the number of sample plots for measurements within A/R CDM project activities.

The key Project information reviewed can be summarized as follow:

- Project proponent, developers/management team, local onsite team
- Stakeholder consultation process & Public Comment Period
- Project rights and legal requirements
- Project communication
- Project conflicts, barriers, or difficulties
- Risk to local stakeholders
- Additionality assessment
- Methodology used and deviations
- Baseline scenario, project scenario, leakage
- Ex-ante Quantification of emission reductions or removals
- Monitoring plan, Monitoring procedures, Monitoring Team & Equipment
- Review of operation and measurement records
- Controls established to detect and correct any changes required
- Error of omission in monitoring parameters

The validation and verification consisted of the following phases:

- I. **Planning and Intimation to VERRA about site visit:** The Assessment Team planned the GHG-programme site visit and started with a desk review of VCS joint PDMR and ER calculation spreadsheet along with other supporting docs submitted by PP. Assessment Team also shared a NOVS Form 15 business days before the opening meeting with the project proponent.
- II. **Strategic Analysis:** The Assessment Team conducted a strategic analysis to gain insights into the organization's project activities. This analysis was aimed at determining the scope and scale of the validation & verification activities.
- III. **Evidence Gathering Activities;** Using a risk-based approach Assessment Team prepared the evidence gathering activities to collect sufficient and appropriate evidence upon

which to base the conclusion & determine whether the GHG statement conforms to the criteria, taking into account the principles of the standards that apply to the GHG statement.

- IV. **Evidence Gathering Plan:** The evidence-gathering plan is formulated in accordance with the evidence gathering activities conducted by KBS Assessment Team. This plan is structured to reduce the validation & verification risk to a level considered acceptable. As a result, the evidence-gathering plan outlines the specific nature and scope of the evidence collection activities.
- V. The requirement for a site visit is recognized, and subsequently, the planning for the site visit is undertaken. The site visit was conducted based on the requirement of section 4.1.11 of VCS standard version 4.7. Physical site inspection of randomly selected 18 samples in Northern, Central, and Western regions of Uganda.
- VI. **Audit and Sampling Plan:** An audit plan is prepared, including all sub-elements required for an integrated validation & verification process aligned with the contract, scope, objectives and materiality.
- VII. **Client Confirmation and Approval:** The audit plan is sent to the client for confirmation /approval via email
- VIII. **Document Review:** Relevant documents, such as the joint PDMR, monitoring plan, methodology, stakeholder consultation report, Ex-ante sheet and non-permanance risk tool and QA/QC procedures, are thoroughly reviewed.
- IX. **On-Site Assessment:** This includes interviews with the project management team, stakeholders, field staff and farmers and evaluation of the actual project scenario through onsite visit is in line with the VCS standard version 4.7.
- X. **Independent Review:** A technical reviewer conducted an independent assessment of the project.
- XI. **Final Verification:** After the completeness check, the validation & verification report is issued.

KBS employs a risk-based validation and verification approach, which begins with a desk review of the project documentation, followed by an onsite assessment conducted by the assessment team members. The assessment team confirms that the figures stated in the VCS Project Description and Monitoring Report (PDMR) are verifiable and supported by reliable evidence

Table 1: The following team members from KBS were involved in the Validation & Verification process of the project:

S. No.	Name	Role	Responsibility
1.	Mr. Madhusudhana Reddy B.	Team Leader & Technical Expert	Documentation review, Background investigation, preparation of questionnaire for interviews, Project coordination, review of the audit findings and its response from PP and adequate closure. preparation of the Final Validation and Verification report.
2.	Dr. D. Siddaramu	Monitoring Team leader	Oversee the audit team and conduct evaluations.
3.	Mr. Shankar Shan Patro	Validator/Verifier & Technical Expert	Documentation review, Background investigation, preparation of questionnaire for interviews, Project coordination, preparation of the draft Validation & Verification report, review of the audit findings and its response from PP and preparation of Draft verification report.
4.	Mr. Satyam Singh	Trainee Validator/Verifier & Technical Expert	Documentation review, preparation of the draft & final Validation & Verification report, review of the audit findings and its response from PP.
5.	Mr. Kulubya Brian	Local Expert	Onsite visit, interviews with community and local stakeholders, review of project compliance with host country laws and regulations.
6.	Mr. Akhilesh Joshi	Technical Reviewer	Technical review
7.	Mr. Pradeep Kumar	Expert to Technical reviewer	Technical review

Timeline of the Validation/Verification:

Desk review	22-May-2024 to 24-May-2024
Onsite audit & Interviews	27-May-2024, 28-May-2024, 30-May-2024, 02-June-2024 and 06-June-2024
Draft joint Validation and Verification Report	21-November-2024
Final joint Validation and Verification Report	30-November-2024
Final joint Validation and Verification Report (PRR1)	19-May-2025
Final joint Validation and Verification Report (PRR2)	20-September-2025
Final joint Validation and Verification Report (PRR3)	03-December-2025

2.2 Document Review

After the submission of the draft Joint PDMR and supporting background documents related to the project design and baseline from the client, the completeness of information made available as per VCS standard version 4.7 requirements is reviewed. Furthermore, the team used additional documentation by third parties like host party legislation, technical reports referring to the project design or to the basic conditions and technical data available on public domain. The project has been listed in the VERRA (<https://registry.verra.org/app/projectDetail/VCS/4888>).

The following are the project documents reviewed during this validation & verification as listed in the below table.

Table 2: The project documents reviewed during this Validation & Verification: -

S.NO.	Document
PP's Document	
1.	VCS joint PDMR for- "OYU- Reforesting Uganda for A Better Tomorrow" VCS PDMR 4888 01 March 2021 - 31 January 2024 v2.1
2.	Ex-ante and Ex-post sheet VCS 4888_Ex-ante_V7

	VCS_4888_Ex post_V7
3.	NPRT Tool Version 4.2 in verra project hub.
4.	Land ownership and consent forms
5.	KML Files for grouped project and First Instance
6.	NDVI assessment report
7.	Adaptive management plan
8.	Policies
9.	Credit ownership evidence
10.	Project management plan
11.	Training Report
12.	Project SOP
13.	Double counting declaration
14.	Stakeholders Consultation Report
15.	Photographs of field management
16.	Baseline Survey report
17.	RUBT_Tree_Cover_Assessment_Raster_layer,
18.	VCS_4888_Stratum_Area_140525
19.	VCS_4888_Tree_Cover_Assessment_Report (1)
20.	VCS4888_Wetland_Analysis_Report
21.	Invoice GU 8 Seedlings(ZILIMITI)
22.	VCS 4888_Legal agreement and benefit sharing
23.	Employed_workers_record
24.	Evidence (payment vouchers) for salary of workers 1
Background Documents	
25.	Methodology- AR – ACM0003 Afforestation and reforestation project activities implemented on lands other than wetlands- Version 2.0

26.	AR-AM-TOOL-14- Methodological tool for the Estimation of carbon stocks and change in carbon stocks of trees and shrubs in A/R CDM project activities
27.	AR-TOOL02- Combined tool to identify the baseline scenario and demonstrate additionality in A/R CDM project activities
28.	AR-TOOL17- Demonstrating appropriateness of allometric equations for estimation of aboveground tree biomass in A/R CDM project activities
29.	AR-TOOL03- Calculation of the number of sample plots for measurements within A/R CDM project activities
30.	Module-Example for Calculating the Long-Term Average Carbon Stock for ARR Projects with Harvesting
31.	ISO- 14064- 3: 2019
32.	ISO 14065: 2020
33.	VCS Program Guide version 4.4
34.	VCS Validation & Verification Manual, Version 3.2
35.	VCS Standard Version 4.7
36.	AFOLU NPRT Tool V4.2
37.	IPCC guidelines for good Practices
38.	VCS Program Definitions
Methods of Audit Performed by KBS	
39.	Site visit Conducted: - Onsite - 27-May-2024, 28-May-2024, 30-May-2024, 02-June-2024 and 06-June-2024 (18 samples)
40.	Interviews of Personnel
41.	Interviews of Stakeholders/ Landowners
42.	PSP plots vetted

2.3 Interviews

The Objective of the interview process was to solicit important information from personal related to the project and relevant to the validation and verification process. Onsite interviews and

information discussions were conducted with representative of the project developer, Community members, Stakeholders, Patrolling Scouts, Nursery members, Farmers and project technical consultant. The interview was performed by the audit team onsite (within the project area i.e. Northern, Central, and Western regions of Uganda) and the following is the list of interviewees with discussed key points.

An Onsite audit was undertaken by members of assessment team, involving but not limited to verify general aspects of the project:

- Implementation of the monitoring plan
- Parameter's monitoring
- Procedural aspects of the Monitoring
- Stakeholders' communication procedure
- Maintenance of the Plantation site
- Data analysis, Data uncertainty and residual risks
- Quality management system
- Involved personnel and responsibilities
- Training and practice of the operational personnel

Table 3: List of interviews conducted during audit:

Date:	Field Visit –27-May-2024, 28-May-2024, 30-May-2024, 02-June-2024 and 06-June-2024 Stakeholder Interviews - 27-May-2024, 28-May-2024, 30-May-2024, 02-June-2024 and 06-June-2024		
Key points discussed:	Name of person, interviewed	Designation, Organization	Team member

Host Country rule and regulations related to project activity, Project description, Ownership, Project start date, technology, Conditions prior to the Project initiation, Participation under other GHG program, Project land Eligibility, Project Design, Project site Location, Land agreements signed with individual farmers, Species selected for plantation, Sample plots inspection, AFOLU Specific parameters inspection, sampling, procedure to avoid double counting, monitoring plan, Project risk and mitigation measures.	• Shubham prajapati • Vartika Mishra • G.S.Patil • Kulubya Brian • Srajan Gupta • Alex Kakooza • Harriet Nakaggo • Byamukama Josephat • Alex Buyondo • Twinamasiiko Mercy • Katugugu Echesza • Byamukama M • A Bon Prakash • A SBI Aron • Kiron. R • Musinguzi Geofrey • Rukundo • Kainamula • Higilo SA • Nkwakanda • Chemonges Denis • Twayem Tonny • Jesca Sebuages • Alex • Bugabo Emma • Obed Tugumisiriza • Tukunde Busiyano • Happiness Ariho • Byabeli Ambrose • Mulenguzi Bruce • Tugiho Benet • Senjuki Ravoced • Ndeera Kenneth • Byarugaba • Tubahame • Nanataba Phoebe • Choweinsekis • Kasackya • Muhangane Lauben	• AM • Sr. Program Manager • Country Manager • Local Expert • Director • Plantation owner • Sister to Kakooza • Director • Manager • Worker • Worker • Worker • Plantation Manager • Plantation Manager • COO • UPDF • UPDF • UPDF • Worker • Plantation Owner • Worker • Worker • Teacher • Manager • Worker • Worker • Worker • Manager • Owner • Community • Community • Manager • Worker • Worker • Worker • Teacher • PWD • Chairperson • Youth counselor	Team Leader&TE: Mr. Madhusudhana Reddy B. Validator/Verifier & TE: Mr. Shankar Shan Patro Local Expert: Kulubya Brian
Consultation with community member on project activity, capacity building & Training workshop, job opportunity,	• Kaweesi Geofry • Gordon Mwesigwa • Gumisiriza Odrene • Safari Eric • Nirawereebe Ashraf • Mubiru Godfrey	Interviewed Stakeholders (The attendance sheet with names of stakeholders interviewed is listed	Team Leader&TE: Mr. Madhusudhana Reddy B. Validator/Verifier & TE: Mr. Shankar Shan Patro

Scouts & Patrolling baseline and project scenario, women empowerment, plantation activity, Risk to the community members, Safety and security of the community member, nursery management, Project Start Date, Benefit sharing mechanism	• Nakandi Josephine • Kiyembe Enock • Walulya Moses • Godfrey Kyeswa • Isaac Kyeswa • Kiwanuka A • Tumuhimbisibwe A • Peter • Nakato Angella • Bazadde Joseph • Minami Vicent • Buzadde Erizimaana	in Appendix 5 of this Report.)	Local Expert: Kulubya Brian
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2.4 Site Visits

A comprehensive desk review of the PD-MR and all relevant supporting evidence was carried out by the audit team. Information obtained from interviews and references provided in the PD-MR and supporting documents was cross-checked for accuracy.

Additionally, guided by the standard "Sampling and Surveys for CDM Project Activities and Programs of Activities v 09.0, Section 6," the verification team employed an acceptance sampling method using their own professional techniques. A random sampling strategy was applied, considering an Acceptable Quality Level (AQL) of 1.0% and an Unacceptable Quality Level (UQL) of 20%. In a more conservative approach, maximum error was considered, with Consumer Risk at 10% and Producer Risk at 10%, as per Table 2 of the standard.

The final sample size was determined to be 18, but the audit team opted to use 20 samples (18 + 2) for a more conservative approach. These samples were selected from the established 35 Primary Sampling Plots (PSPs) and a few plots out of PSP, covering all 6 stratum divisions that were visited and re-measured during the site visit. Inspection of the sample plots was conducted to assess input values for calculations of Emission Reductions (ERs). The additional sampling of 2 was chosen at the site visit to maintain independence in sampling and to prevent influence from external sources.

Thus, the total sampling plots established by the auditing team, with their professional judgment, are deemed reliable and provide a reasonable level of assurance in sampling.

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

- Select samples of data and information from field observations to meet a reasonableness of assumptions and to meet the materiality requirements of the project as required by the VCS Standard.
- Perform a risk-based review of the project area and project activities to ensure that the project conforms to the validation & verification criteria.
- Confirm the validity of information presented in the non-permanence risk report.

2.5 Resolution of Findings

KBS applies the risk-based approach aimed at focusing on high-risk issues to the Joint validation & verification results whilst not omitting any part of the mandatory processes. A few discrepancies were found during the Joint validation verification and the verification report was submitted to the project proponent, indicated under the titles corrective action requests (CARs) and clarification requests (CLs). CARs and CLs require the PP to take relevant actions. Criteria for judging items as CAR or CL are as follows:

Corrective action request (CAR):

- the project participants have made mistakes that will influence the ability of the project activity to achieve real, measurable additional emission reductions
- the Voluntary Carbon Standard's requirements have not been met, or
- there is a risk that emission reductions cannot be monitored or calculated.

Clarification request (CL):

- Information is insufficient or not sufficiently clear to determine whether the applicable VCS requirements have been met.

FAR (Forward Action Request):

FARs is to be raised to highlight issues related to project implementation that require review during the first verification of the project activity. FARs does not relate to VCS requirements for registration.

CARs and CLs are to be resolved or closed out if the PP modifies the project description, rectifies the MR or provides adequate additional explanations or evidence that satisfies the concerns. If this is not completed, the project activity cannot be recommended for issuance under VCS registry.

The joint PDMR was revised addressing the CARs & CLs issued by KBS. After reviewing the revised and resubmitted joint PDMR; resolving the CARs & CLs raised and outstanding concerns, KBS issues this final validation and verification report and opinion.

06 CARs ,19 CLs and 01 FAR were found during validation and verification and closed satisfactorily. The list of CARs/CLs raised, and the response provided, the means of validation and verification, reasons for their closure and references to correction in the joint PDMR are provided in appendix 4 of this report. The revised PDMR with changes incorporated as per the issues raised were rechecked with the documentary evidence and found to be inline.

2.5.1 Forward Action Requests

Based on the responses provided by PP 01 forward action requests (FAR) have been raised by assessment team that needs further attention in subsequent verification.

3 VALIDATION FINDINGS

3.1 Project Details

Based on the evaluation conducted, the joint PDMR has been found to be accurate and comprehensive in presenting the key aspects of the project. The information provided within the PDMR sufficiently covers the technical, environmental, and social parameters necessary for a thorough understanding of the project.

The following points have been confirmed:

- **Accuracy:** The project description accurately reflects the scope, scale, and objectives of the project. The data provided in terms of baseline scenarios, project interventions, and projected outcomes align with the methodologies applied under the VCS requirements.
- **Completeness:** All essential components of the project, including project boundaries, baseline scenario, monitoring methodologies, and risk assessments, are clearly outlined. The PD also addresses all required criteria as per the VCS guidelines, ensuring that no critical information has been omitted.

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Audit history	The assessment team has cross checked from the verra website to vet the audit history and found that KBS certification services Ltd. has awarded for doing the validation and 1st verification audit.

Sectoral scope	Sectoral Scope:14, Agriculture Forestry and other Land Use As per the VCS PDMR submitted and cross verification with the VERRA Project webpage the project scope is found to be 14.
AFOLU project category, if applicable	The Project is an ARR: Afforestation Reforestation and Revegetation project as verified from the VCS PDMR and VERRA Webpage.
Project activity type	This is grouped project as verified from the VCS PDMR submitted by PP and conformed by onsite visit.
General eligibility of the project to participate in the VCS Program	- The project falls under the ARR project category under the VCS_AFOLU project type. The project is a reforestation activity in the Northern, Central, and Western Regions of Uganda and not included in the table 1 (Excluded Project Activities) under section 2.1 of VCS Standard version 4.7. Hence, the project is eligible to participate in the VCS program. - According to the requirements under clause 3.8.2 of VCS Standard version 4.7 the project is fulfilling the guidelines. The project start date is 01-March-2021 as per VCS PDMR submitted and same was verified from the land preparation photograph and labour payment receipt submitted by PP. The pipeline listing was completed on 28-December-2023 as per the deed of representation available on the project webpage, hence the pipeline listing has been completed within three years of the project start date. As per clause 4.1.5 of VCS Standard v4.7 “the Validation/Verification team shall ensure that the project is listed on the project pipeline with a status of under validation before the opening meeting with the project proponent” which is followed by Validation/Verification team, and project was under validation status as confirmed from the project webpage of VCS. Also, the public comment period of the project was over at the time of onsite audit of the project since the public comment period was from 23-January-2024 to 22-February-2024 (as verified from VERRA webpage) and the site visit happened on 27-May-2024, 28-May-2028, 30-May-2024, 02-June-

	2024 and 06-June-2024 hence this requirement was fulfilled. - PP has applied CDM Methodology- AR – ACM0003 Afforestation and reforestation project activities implemented on lands other than wetlands- Version 2.0 which is an approved methodology for the VCS AFOLU projects and VERRA has approved the usage of this methodology however, as per the recent VERRA Announcements this meth is no longer applicable to be used as new VCS methodology VM0047 is available to use since 28-September-2023 which has been approved by VERRA to be used for this project activity. But the applied methodology, AR-ACM0003, is eligible under Verra VCS Program. According to Verra notification, new projects and projects listed as ‘under development’ using AR-ACM0003 or AR-AMS0007 must be listed as ‘under validation’ by 28-December-2023. All projects using AR-ACM0003 or AR-AMS0007 must complete validation by 30-June-2025. The project applied for pipeline listing as “Under validation” in February 2023. The project will complete the validation process much before 30-June-2025. Please refer to this link for more information - https://verra.org/methodologies/vm0047-afforestation-reforestation-and-revegetation-v1-0/. Hence this condition is also applicable. - As per the requirements under section 3.10.3 of the VCS standard 4.7 for the fragmented part of a larger project or activity that would otherwise exceed such limits, this project is not a part of any large project and Validation/Verification team has independently assessed the VERRA Registry for similar projects within 1 Kms and other registries also which confirms that this is not a part of any fragmented part of any large project activity. The project has located in the Northern, Central, and Western Regions of Uganda. and hence verified. - No other relevant eligibility information is required, and the following sections of report will include all the requirements of the program.
AFOLU project eligibility, if applicable	The applicability of the selected AFOLU project categories and related category requirements as

	stated by PP are complete as confirmed via VCS PDMR and onsite visit. - The audit team assessed the project's AFOLU eligibility, confirming it meets VCS ARR requirements. The project involves planting Eucalyptus hybrid and Pinus caribaea on degraded scrubland, increasing carbon sequestration and vegetative cover. Sustainable harvesting with immediate replanting is included. A thorough analysis (satellite imagery, Hansen tree cover, LULC for 2011-2020) confirmed no native ecosystems were cleared within ten years pre-project. The project area, under the National Forest Authority, was identified as degraded scrubland and cropland, leased for commercial plantations. - GIS and remote sensing, followed by ground-truthing, validated the degraded status. The Hansen assessment identified and excluded false-positive tree cover areas. LULC data showed predominantly scrubland, open land, and cropland with no forest. Ground surveys confirmed that areas initially appearing as forest were mainly invasive species and scattered trees. The National Forest Authority also classified the land as degraded scrubland and leased it for restoration. Consequently, 3324 hectares were deemed eligible for the ARR activity after excluding ineligible areas.
Transfer project eligibility, if applicable	Assessment Team could not find any such project in any other registry when searched independently and PP has also provided Double counting declaration to confirm that the project was not registered under any other registry hence it is not a transferred project.
Project design	As per VCS PDMR this project is a grouped project located in Northern, Central, and Western Regions of Uganda.
Project ownership	The audit team reviewed Section 1.8 of the PD&MR, which comprehensively outlines the land ownership structures within the project. The audit team identified three distinct categories: Freehold, Leasehold, and Private Mailo, noting that the majority of the project area falls under leasehold agreements with the landowners. These landowners, the audit team confirmed, have secured leases from the National Forest Authority of Uganda for durations of 99 and 49 years,

both extending beyond the project's lifespan, under the provisions of the National Forestry and Tree Planting Act of 2003.

The audit team's examination of the legal framework, specifically the National Forestry and Tree Planting Act No. 8, 2003, revealed that it empowers the Ugandan government to grant licenses to private entities for the restoration of degraded reserves. Section 41 of this Act, the audit team noted, permits the NFA to issue licenses for sustainable forest management activities, including tree planting and restoration, thereby granting landowners full authority and user rights as stipulated in their legal agreements. Consequently, the audit team concluded that landowners leasing land from the NFA possess the legal authority to transfer carbon rights, a determination supported by the audit team's verification of the lease agreements.

Upon scrutinizing the lease agreements, the audit team confirmed that these agreements confer upon the lessees the legal right to enter into binding agreements, including carbon projects, and to transfer their associated carbon rights, provided the lease terms extend beyond the project's conclusion. The audit team established that the Project Proponent, OYU Green, holds project ownership based on the legal agreements executed with the participating landowners. The audit team further verified the legal ownership of the land for all participating landowners through an examination of digital landownership records and onsite inspections conducted by the audit team.

The audit team confirmed that the Project Proponent conducted Free Prior Informed Consent (FPIC) to secure the participation of landowners, who signed forms acknowledging their understanding of the project's objectives and the proposed carbon benefit-sharing plan. The audit team observed that these landowners, through their legal agreements with OYU Green, possess the legal right to undertake plantation activities based on the legally recognized landownership types in Uganda, as defined under the Uganda Land Act. These categories, the audit team noted, include Freehold (indefinite ownership with comprehensive rights), Leasehold (exclusive possession for a specified

	period), and Private Mailo (indefinite ownership with rights respecting existing occupants). The audit team documented the landownership distribution within the project area as 87% Leased, 3% Freehold, and 10% Private Mailo. The audit team affirmed that the lease agreements grant landowners full authority and user rights for plantation establishment and management. Landowners under Freehold and Private Mailo tenures possess complete autonomy over land use decisions, including plantation activities and ownership. The audit team concluded that these land ownership arrangements are consistent with the Verified Carbon Standard (VCS) guidelines outlined in Section 3.7.1 of the VCS Standard v4.7. Finally, the audit team assessed the transfer of carbon ownership rights within the leasehold framework. The audit team determined that the lease agreements do not contain provisions prohibiting carbon credit claims, landowners retain full financial and operational control over the plantations, and no conflicting claims regarding carbon ownership exist. Similarly, landowners holding Freehold and Private Mailo titles possess independent ownership of the land and its associated benefits. In the interview with NFA person also it has been confirmed. Therefore, the audit team concluded that the landowners hold the carbon ownership derived from the plantation activities and have the right to transfer these rights to OYU Green, as stipulated in the landowner project registration agreements, the commercially sensitive details of which were reviewed and validated by the audit team.
Project start date	The audit team determined that field planting commenced in the project area on March 1, 2021, following land preparation activities such as sapling transportation, site preparation, and pit digging in February 2021. The audit team examined the invoices for seedling purchase on February 28, 2021, which is prior to the considered start date. And the satellite data from Google Earth Pro 26onfirms that planting began on March 1, 2021.

Project crediting period	01-March-2021 to 28-February-2041, 20 years (20 years crediting period, which will be renewed four times up to 100 years). According to clause 3.9.3 of VCS Standard “for all AFOLU projects other than ALM projects, in this project, the first crediting period has been set at 20 years which will be renewed once making the total crediting period of 40 Years.
Project scale	Large scale project as the estimated annual GHG emission removals (Ers) of the project are greater than 300,000 tonnes of CO ₂ e per year as per clause 3.10.1
Likelihood of achieving estimated GHG emission reduction or removals	The project expected to be calming the total GHG benefit for a 20-year crediting period (i.e. from 01-March-2021 to 28-February-2041) is 7,597,837 tCO ₂ e, and the average annual Emission Removal is 379,891tCO ₂ e. Also, the total GHG emission removals generated (ex-post) in the first monitoring period (i.e. from 01-March-2021 to 31-January-2024) are calculated as 429,924 tCO ₂ e. The assessment team reviewed the Ex-post & Ex-ante sheet to confirm the GHG quantification.
Technologies and measures implemented by the project activity	The project falls under ARR category under the VCS AFOLU project type as per clause 3.2.1 of VCS Standard version 4.7
Implementation schedule of the project activity or activities	The Assessment team has assessed the implementations of the project activity as per the PDMR, Ex-ante, Ex -post Sheet, List of land ownership database, project policies, SOPs, PSPs provided by the PP and the onsite interview & assessment which confirms the no. of plot, Area covered in the first instance and the project activity as per the first instant details provide.
Project location	The project is in Northern, Central, and Western Regions of Uganda as per the VCS PDMR submitted by PP which was cross verified by Assessment team through site visit and desk review of the KML files.
Conditions prior to project initiation	The predominant baseline scenario comprises degraded scrubland and croplands as per VCS PDMR and the GIS record submitted by PP for the area which is found to be appropriate by Assessment Team by reviewing of GIS files and through interview with stakeholder during onsite audit.

Project compliance with applicable laws, statutes and other regulatory frameworks	Yes. The project is compliant with major national forestry laws mandatory as per the host country requirements. A list of applicable laws is mentioned in section 1.15 of the PD submitted by the client. Assessment team also verified this from "https://www.nfa.go.ug/images/UgandaForestryPolicy2001.pdf" where all the laws are mentioned, and the project is found to comply.
Double counting and participation under other GHG programs	- Assessment Team could not find such project in any other registry where it is receiving or seeking credit for reductions and removals from a project activity when searched independently. PP has also submitted a No double counting declaration that was verified by the Assessment Team and found correct. - PP has provided the information that this project is not registered and not seeking registration in any other registration under any other GHG programs and same is found to be correct on independent assessment by the Assessment Team. PP has further submitted a No double counting declaration that was verified by the Assessment Team and found correct. - PP has provided the information that this project is not rejected by another GHG program and same is found to be correct on independent assessment by the Assessment Team. PP has further submitted a No double counting declaration that was verified by the Assessment Team and found correct.
No double claiming with emissions trading programs or binding emission limits	PP has provided the information that at this project is not claiming with emissions trading programs or binding emission limits by another GHG program as per clause 3.23.1 of VCS Standard version 4.7 and same is found to be correct on independent assessment by the Assessment Team. Further PP has provided a No double counting declaration that was verified by the Assessment Team and found correct.
No double claiming with other forms of environmental credit	PP has provided the information that at this project is not claiming with emissions trading programs or binding emission limits by another GHG program as per clause 3.23.1 of VCS Standard version 4.7 and same is found to be correct on independent assessment by the Assessment Team. Further PP

	has provided a No double counting declaration that was verified by the Assessment Team and found correct.
Supply chain (Scope 3) emissions double claiming	PP has provided the information in the PDMR section 1.17.3 that this project does not have any scope-3 emissions. The project proponent (PP) is exclusively responsible for implementing and managing afforestation and reforestation activities. The primary focus of the PP is carbon sequestration during the growth phase of the trees. The PP does not own the project land or any timber harvested from it. Ownership of the land and the rights to any timber products remain entirely with the landowners, as stipulated in the agreement between the PP and the landowners. The PP retains ownership of the carbon rights only. Since the commencement of the project on March 1, 2021, no timber—particularly hardwood has been harvested. The first harvesting cycle is scheduled for year 10 for Eucalyptus and year 20 for Pinus species. The project does not currently generate any goods or services that may influence another organization’s Scope 3 emissions. The PP is not involved in the sale, processing, or distribution of any harvested timber, thereby establishing a clear separation from any downstream supply chain activities. While the project incorporates timber harvesting as one of its components aiming to produce high-quality timber through species management, corrective pruning, and thinning this activity is intended to enhance timber quality rather than establish a supply chain. Harvested timber is expected to meet market demands by producing straight, defect-free, and high-value logs. The landowners retain full ownership and control of timber and related products. Any entry of harvested timber into a supply chain is entirely landowner-driven and outside the scope of the PP’s control or involvement. According to VCS Standard v4.7, Section 3.24, obligations related to Scope 3 emissions apply only if the PP or its authorized representative is a buyer or seller of a product that is part of a supply chain. As stated in section 1.17.3 of the Project Description and Monitoring Report (PD&MR), this condition is not applicable to the PP. Furthermore, the VVB concurs with this assessment and confirms that the project’s

	activities do not place any obligation on the PP to report Scope 3 emissions, as any supply chain formation post-harvest is independent of the PP's operations. The audit team concludes that the PP's role is limited to forest management for carbon sequestration, with no participation in timber sales or distribution. The independent nature of landowner-driven timber utilization precludes any supply chain-related obligations on the PP, ensuring alignment with the applicable provisions of the VCS Standard v4.7.
Sustainable development contributions	As per PDMR section 1.18 three SDGs claimed by the project are- SDG-8 (Decent work and economic growth), SDG-13 (Climate action), & SDG-15 (Life on land). Under the SDG target 8.5, indicator 8.5.2 the PP has created 294 employments including both men and women. The audit team has reviewed the employment record and cross checked with the salary vouchers to confirmed that the project has created 294 employments (permanent & temporary) which includes men & women both. During the onsite audit the audit team has interviewed few workers to verify the same. Apart from the SDG target 8.5, 13.2 and 15.1 has contributed by the project. Under the SDG target 8.5, 429,924 tCO₂e GHG emission and reduction has accounted during the first monitoring period. The audit team has cross verified the same with reference to the ERR sheet and also vetted the same through onsite observation. In SDG target 15.1.1, the project has increased the green cover by 3324 hectares of land which was earlier degraded scrubland and crop land. The audit team has verified the SDG the KML and google earth imagery.
Additional information relevant to the project	The project is being implemented on degraded scrubland and croplands that mainly consist of invasive shrubs such as <i>Lantana camara</i> & <i>Solanum Mauritianum</i> and are devoid of any significant vegetation. As per the preliminary survey in the project area and GIS analysis of the past 10 years of land use, the amount of vegetation to support grazing activity in the project area is negligible and therefore, there will be little or no displacement of pre-project activity leading to minimum or no leakage due to the project activity. Furthermore, plantation boundaries are precisely demarcated together with regular

	patrolling, which prevents leakage possibilities due to grazing. The assessment team has verified the same while interacting with patrolling scouts. No other Additional information is provided by PP in the PDMR which needs to be assessed by assessment team.
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3.2 Project Activity Instances in Grouped Projects

Eligibility Criteria	Justification/Description by PP	VVB assessment
Meet the applicability conditions set out in the methodology applied to the project.	The project meets the applicability conditions set out in AR ACM0003 "A/R Large scale Consolidated Methodology, Afforestation and reforestation of lands except wetland" v 2.0 and specified in the project description (Section 3.2)	The audit team confirmed that the project meets the applicability conditions outlined in AR ACM0003 "A/R Large scale Consolidated Methodology, Afforestation and reforestation of lands except wetland" v 2.0, as specified in Section 3.2 of the project description. The audit team checked the requirements.
Use the technologies or measures specified in the project description.	Applies the technologies or measures in the same manner as specified in the description of the Project Activity (Section 1.12) and indicated in the AR ACM0003 methodology.	The audit team confirmed that the project applies the technologies and measures in the same manner as specified in the Project Activity description (Section 1.12) and indicated in the AR ACM0003 methodology. The site visit and document review confirms the same.
Are subject to the baseline scenario determined in the project description for the specified project activity and geographic area.	To assess the baseline scenario of new geographic areas under the new project activity instance a Hansen Tree cover assessment analysis will be	The audit team confirmed that the project is subject to the baseline scenario determined in the project description for the specified project activity and

	done followed by LULC analysis and ground truthing . Areas that were degraded in the past due to encroachment and agricultural practices will be included in the project.	geographic area. The audit team noted that to assess the baseline scenario of new geographic areas under a new project activity instance, a Hansen Tree cover assessment analysis will be conducted, followed by LULC analysis and ground truthing. The audit team also observed that areas that were degraded in the past due to encroachment and agricultural practices will be included in the project.
Have characteristics with respect to additionality that are consistent with the initial instances for the specified project activity and geographic area.	The additionality of the new instances will be consistent with the initial instances for the specified project activity and geographic area. The activities to be implemented will not be common practice in the region.	The audit team confirmed that the new instances exhibit additionality characteristics consistent with the initial instances for the specified project activity and geographic area. The audit team determined that the activities to be implemented in the new instances will not constitute common practice in the region.
Occur within one of the designated geographic areas specified in the project description.	The upcoming project activity instances will be situated within the defined project zone consisting of the Northern, Central, and Western regions of Uganda. Each of the upcoming project activity instances will fall within the project zone boundary and will also share commonalities in terms of geography and meteorological conditions.	The project zone map which consists of Northern, Central & Western region of the Uganda is the grouped project area where all future project instances will be included. The assessment team reviewed the project zone map and also the KML file of first project instance.
Conform with at least one complete set of eligibility criteria for the inclusion of new project	New project activity instances will meet the requirements outlined in a predefined set of	The Validation/Verification Team confirmed that the new project activity instances have

activity instances. Partial compliance with multiple sets of eligibility criteria is insufficient.	criteria established for eligibility. The new instances will satisfy all the specified conditions and guidelines within that particular set of criteria to be considered eligible for inclusion in the grouped project.	satisfied all the applicability conditions outlined in the CDM AR-ACM0003 A/R Large-scale Consolidated Methodology, as applied in the first project instance.
Be included in the monitoring report with sufficient technical, financial, geographic and other relevant information to demonstrate compliance with the applicable set of eligibility criteria and enable sampling by the Validation/Verification Body.	The applicable set of eligibility criteria is mentioned in section 6 of this PDMR, which will be applicable for all the new project activity instances.	The Validation/Verification Team confirmed that the project participant has supplied adequate information to be included in the monitoring report, encompassing sufficient technical, financial, geographic, and other relevant details to demonstrate compliance with the applicable eligibility criteria and facilitate sampling.
Have evidence of project ownership, in respect of each project activity instance, held by the Project Proponent from the respective start date of each project activity instance (i.e., the date upon which the project activity instance began reducing or removing GHG emissions)	The Project Proponent holds legal documents as evidence of ownership for each project activity instance, with the corresponding start date signifying when the project activity instance commenced its efforts to remove or eliminate greenhouse gas emissions.	The Validation/Verification Team confirms that there is evidence of project ownership for each project activity instance, held by the PP from the respective start date of each instance (i.e., the date on which it began reducing or removing GHG emissions). The Project Proponent possesses legal documents that serve as proof of ownership for each project activity instance, in accordance with section 3.7 of the VCS standard v4.7.
Have a start date that is the same as or later than the grouped project start date	The project start date aligns with the grouped project start date, and it corresponds to the initiation of soil preparation and planting activity. This commencement date is consistent with the	The Validation/Verification Team confirms that the project start date aligns with the grouped project start date, corresponding to the field planting started on March 1, 2021. This planting followed the

	specifications outlined in section 3.8 of the VCS standard, version 4.7.	completion of land preparation activities, including pit digging and sapling transportation, which occurred in February 2021. Thus, the project start date is recognized as March 1, 2021, in accordance with Section 3.8 of VCS standards version 4.7.
Only be eligible for crediting from the later of start date of the project activity instance or the start of the verification period in which they were added to the grouped project activity, through to the end of the total project crediting period.	Project instances that are subsequently added will be eligible for credits from their respective start date through the conclusion of the project crediting period.	Future Project instances that are subsequently added will be eligible for credits from their respective start date through the conclusion of the project crediting period.
Not be or have been enrolled in another VCS project.	The project activity is not concurrently participating in any other VCS project. This has been validated by verifying all the registered projects that are present within the project zone.	The Validation/Verification Team confirms that the project is not registered under any other VCS project. Furthermore, it is the first of its kind on Northern, Central, and Western Regions of Uganda
Adhere to the clustering and capacity limit requirements for multiple project activity instances set out in 3.6.8 - 3.6.9.	The project complies with the clustering and capacity limit requirements for multiple project activity instances, as detailed in section 3.6.9, it aligns with the established guidelines and standards.	Validation/Verification Team confirms that the project adheres to the clustering and capacity limit requirements for multiple project activity instances, as outlined in sections 3.6.8 to 3.6.9 of the VCS standards v4.7. According to section 3.6.8, future project instances will be located within ten kilometers of each other on Northern, Central, and Western Regions of Uganda. The first project instance has covered a total area of 3,324 hectares, ensuring that none exceed the

		capacity limit of 10000 hectares, thus complying with section 3.6.9 of the VCS standards v4.7.
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3.3 Safeguards

3.3.1 Stakeholder Engagement and Consultation

The project emphasizes the importance of local stakeholder consultation to ensure that the project is executed with consideration for the inputs and impacts of all identified stakeholders, in accordance with international carbon standards. The main objective of the consultation activities was to ensure transparency and accountability in project operation, engage the full range of stakeholders in formulation, implementation and monitoring of the project activities. Maintain transparency and accountability to stakeholders and by responding to their concerns in a timely manner.

3.3.1.1 Stakeholder Identification

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Stakeholder identification	As per VCS PDMR Stakeholders under the project activity involved recognizing the individuals and communities that can be affected by or influenced by the project. This includes surrounding local communities, local councils, government bodies and community-based organizations. The process includes defining the project scope, listing potential stakeholders, analyzing their interests and influence, prioritizing them based on their impact and involvement, and planning engagement strategies. This ensured inclusivity, addressed local needs and facilitated successful project implementation. The project engages several stakeholders for the effective implementation of the project listed below: 1. Local Community Members 2. Member of village- level local council. 3. Village heads During the onsite audit, the assessment team verified the process of stakeholder identification while interaction with different community members and reviewed the stakeholder consultation report to confirm

	the stakeholder identification process are in line with the PDMR and VCS standard.
Legal or customary tenure/access rights	The entire land under the project area is solely possessed by the landowners. The land currently in their possession consists of three types of ownership across different plantation sites (planted initially) within the project area: 1. Leasehold 2. Freehold 3. Private Mailo The assessment team has verified the access right by reviewing the landownership document, consent form and while interaction with project management team during the onsite audit.
Stakeholder diversity and changes over time	The primary stakeholders in this project reflect significant cultural and ethnic diversity, stemming from the project's span across three regions: Northern, Central, and Western. This geographic range introduces a variety of cultural dynamics: • Northern Region: Predominantly includes the Acholi and Baganda tribes. • Central Region: Dominated by the Baganda and Busoga communities. • Western Region: Features Busoga as the prominent group. Although each region has dominant tribes, other tribes are also present in smaller numbers, contributing to a rich cultural mosaic across the project area. The majority of stakeholders speak Luganda as their native language, with some areas also having Lusoga speakers, most of whom are fluent in Luganda. To facilitate consistent and effective communication and documentation for the field team, Luganda has been selected as the primary language for local communication within the project. The assessment was done by Assessment Team via stakeholder consultation report and the assessment team has confirmed the

	stakeholder diversity while interaction with the different stakeholder during the onsite audit.
Expected changes in well-being	The project has been strategically designed to foster holistic development for both landowners and neighboring communities residing near plantation sites. Expected improvements in the well-being of primary stakeholders include: For Landowners Improved Income: Idle lands, previously degraded scrubland land and croplands, are converted into productive assets by planting commercial tree species, generating sustained financial returns. Increased Competency: Landowners gain expertise in plantation establishment and maintenance through sustainable practices aligned with VCS Standard guidelines. Increased Risk Tolerance: Carbon financing incentivizes landowners to undertake investments in plantations, enhancing their risk appetite for sustainable ventures. Climate Resilience: Awareness campaigns on climate change inspire landowners to adopt and promote sustainable practices, fostering long-term resilience. Enhanced Community Relationships: By providing livelihood opportunities to nearby communities, landowners foster empathy and strengthen social ties with surrounding populations. For Communities Better Financial Planning: Proximity to livelihoods reduces travel expenses, enabling better allocation of resources, such as investing in children's education. Improved Livelihoods and Lifestyle: Enhanced income stability from employment opportunities allows families to improve their standard of living over time.

	3. Increased Expertise: Skills gained in plantation establishment, management, and monitoring open pathways to new jobs and small business opportunities. 4. Access to Basic Amenities: Encouraged by the project, landowners provide food and accommodation for workers, improving their quality of life. 5. Climate Resilience: Community awareness programs on climate change encourage sustainable practices and enhance their capacity to adapt to environmental challenges. Through these integrated initiatives, the project seeks to create a mutually beneficial framework for economic, social, and environmental sustainability. This was assessed by Assessment Team based on interviews of stakeholders conducted during onsite and also reviewing of stakeholder consultation report, training records.
Location of stakeholders	The stakeholders are located in close proximity to each plantation site, comprising both landowners and the surrounding communities. This strategic proximity ensures: • Efficient Collaboration: Landowners and communities can actively participate in plantation activities, fostering cooperation and seamless implementation of the project. • Improved Accessibility: Being near plantation sites allows communities to access livelihood opportunities without incurring significant travel costs or time. • Enhanced Engagement: The close location facilitates regular communication, capacity-building sessions, and the monitoring of plantation activities, strengthening stakeholder involvement. This setup promotes a cohesive and sustainable relationship between the landowners and the communities, ensuring the project's success and mutual benefits.

Location of resources	The resources owned by stakeholders are situated outside the plantation sites, in alignment with the selection criteria established by the project proponent. These criteria are specifically designed to: • Preserve the Native Ecosystem: By ensuring the plantation sites are selected away from areas of ecological importance, the project avoids disrupting natural habitats and biodiversity. • Safeguard Community Access: The design prevents any hindrance to community accessibility, ensuring that local communities retain unimpeded access to their traditional resources and pathways. • Promote Sustainable Development: This careful selection of land guarantees that project activities are carried out in a manner that respects both environmental and social considerations. This approach demonstrates a commitment to balancing project objectives with the well-being of the local ecosystem and communities.
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3.3.1.2 Stakeholder Consultation and Ongoing Communication

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Stakeholder engagement process	The project implements a systematic stakeholder engagement process to ensure inclusivity, transparency, and active participation of all stakeholders. The engagement process involves three primary methods: Group Meetings, Individual Meetings, and Online Meetings, described in detail below: A. Group Meetings 1. Stakeholder Invitation: • Invitations extended through village heads to enhance participation. • Steps taken include: ➤ Meeting with village heads to explain the project. ➤ Sharing details on project objectives, consultation dates, and accessible venues.

- Encouraging village heads to involve landowners with unused land parcels.

2. Flow of Consultation:

- Consultations conducted in Luganda, the local language, ensuring clear communication.
- Structure of the Meetings:
 - Introduction (Icebreaking): Brief introductory session.
 - Project Summary Distribution: Shared in the local language for stakeholder reference.
 - Discussion Topics:
 - ✓ Understanding climate change and its impact on daily life.
 - ✓ OYU Green Pvt. Ltd.'s role in mitigating climate change.
 - ✓ Overview of the project: *"OYU – Reforesting Uganda for a Better Tomorrow."*
 - ✓ Risks and benefits associated with the project.
 - ✓ Explanation of the VCS Validation & Verification process.
 - ✓ Free, Prior, and Informed Consent (FPIC) process.
 - ✓ Grievance redressal mechanism.
 - ✓ Benefit-sharing mechanism.
 - Q&A Session: Open forum for participants' queries and clarifications.

3. Consultation Documentation Process:

- Detailed records maintained in both physical and digital formats for future reference and continuous improvement.
- Documentation includes:
 - Meeting minutes.
 - Attendance records.
 - Stakeholder feedback.
 - Q&A outcomes from the sessions.

B. Individual Meetings

- One-on-One Interactions:
 - Conducted with landowners to address case-specific queries.

- Provides a platform for detailed discussions and clarification before onboarding into the program.

C. Online Meetings

- Periodic Virtual Sessions:
 - Designed for continuous engagement with the management team and landowners.
 - Ensures transparency in information sharing and facilitates quick resolution of grievances or concerns.

This comprehensive engagement process fosters trust, promotes inclusivity, and ensures that stakeholder needs and concerns are integrated into the project framework.

The project's working conditions are in-compliance with all the applicable laws, regulations, worker's rights. All relevant laws and regulations covering the worker's rights were explained during the local stakeholder consultation. The same were also communicated with the workers and landowners during the consultation meetings to ensure that any temporary or permanent worker hired for plantation work is informed. The audit team has reviewed the worker right policy, salary vouchers, workers sheet and also interviewed the worker to ensured that the worker right policy has shared with them. During the Local Stakeholders Consultation (LSC) programs, the project proponent informed all workers and participants about their legal rights and obligations in accordance with relevant national labor laws. The following key legislative instruments were discussed and explained:

i. Employment Act No. 6 of 2006

This Act governs employment relationships in Uganda, specifying provisions on working hours, leave entitlements, and termination procedures. In line with this legislation, the project ensures:

- Employees are informed of their rights.
- Compliance with legal working hours.
- Provision of entitled leaves.

These measures ensure that all employees operate under conditions that comply with national labor standards.

ii. Labour Disputes (Arbitration and Settlement) Act No. 8 of 2006

	This Act provides mechanisms for the resolution of labor disputes through arbitration. - The project has established both an arbitration mechanism and a grievance redress mechanism to address and resolve any employment-related disputes in a fair and timely manner. iii.Occupational Safety and Health Act No. 9 of 2006 This Act mandates the maintenance of health and safety standards in the workplace. - To uphold workplace safety, the project provides essential Personal Protective Equipment (PPE) such as gumboots, helmets or caps, and a basic first aid kit to all workers engaged in field activities. Additional relevant labor laws and workers' rights were communicated during the LSC programs. These have been consolidated and distributed in a Workers' Rights Document, which was shared with all participants to ensure full understanding and transparency regarding labor conditions and expectations. Evidence checked: VCS PDMM, onsite stakeholder interviews, worker right policy and Stakeholder consultation report. Assessment conclusion: Based on the evidenced checked and onsite audit assessment it has concluded that the Stakeholder engagement process is in line with VCS Requirements.
Consultation outcome	The consultation process provided valuable insights and highlighted concerns from stakeholders, helping the project proponent tailor the project to better address their needs and expectations. Below is a summary of the key concerns raised, and the major insights gained: Key Concerns Raised by Stakeholders Financial Constraints: - Many stakeholders expressed challenges in investing in plantation establishment due to limited financial resources. Assurance of Climate Financing: - Stakeholders sought reassurance regarding the certainty and sustainability of climate financing for the project. Project Duration and Communication Consistency:

	- Concerns were raised about the project's timeframe and the need for consistent, ongoing communication to ensure clarity and transparency. 4. Training and Learning Opportunities: - Stakeholders emphasized the importance of receiving adequate training and capacity-building opportunities to manage plantations effectively. Major Insights Gained Through Consultations 1. Reasons Behind Unused Land: - The proponent identified key reasons why landowners left their land unused, including: ➤ Financial and Technological Constraints: Lack of resources and technical know-how. ➤ Fear of Plantation Failure: Concerns about unsuccessful plantation outcomes. ➤ Fear of Market Unavailability: Uncertainty regarding a reliable market for harvested products. ➤ Longer Gestation Period: Reluctance to invest in plantations due to delayed financial returns. These findings underscore the importance of addressing financial, technical, and market-related barriers to gain stakeholder trust and enhance their participation in the project. They also point to the need for strong communication, consistent training, and a clear benefits-sharing mechanism to ensure long-term stakeholder satisfaction and project success. Evidence checked: VCS PDMR, onsite stakeholder interviews, Stakeholder consultation report, Project SOP and training records. Assessment conclusion: Based on the evidenced checked and onsite assessment it has concluded that the Stakeholder engagement and outcome process is in line with VCS Requirements.
Ongoing communication	To ensure effective communication and sustained engagement, the project proponent has implemented a structured communication mechanism. This approach helps maintain transparency, address concerns promptly, and foster trust among stakeholders. Below are the steps taken: Mechanism for Regular Communication with Stakeholders

	Regular Consultation Meetings with Landowners: - Scheduled meetings are held with landowners to: ➤ Discuss project progress. ➤ Address queries and concerns. ➤ Gather feedback for ongoing improvement. Engagement with Village Heads and Local Councils: - Periodic meetings with village leaders and local councils to: ➤ Share project progress updates. ➤ Receive feedback on community-level challenges and opportunities. Casual Visits to Plantation Sites: - Regular on-site visits enable direct interaction with workers and community members. - Objectives of these visits include: ➤ Addressing grievances and resolving issues informally. ➤ Strengthening relationships through consistent presence. ➤ Ensuring alignment with community expectations for long-term project success. Online Meetings with Landowners: - Virtual sessions are organized to: ➤ Address case-specific queries. ➤ Provide a flexible communication channel for landowners unable to attend in-person meetings. This multifaceted communication strategy ensures that stakeholders remain well-informed and engaged, fostering collaboration and mutual understanding essential for the project's sustained success. Evidence checked: VCS PDMR, onsite stakeholder and personnel interviews & Stakeholder consultation report. Assessment conclusion: Based on the evidenced checked and onsite interaction Assessment Team concluded that the Stakeholder engagement process is in line with VCS Requirements.
Stakeholder input	The consultations provided valuable insights and actionable inputs from stakeholders, which were addressed effectively by the project

proponent. Below is a summary of the key inputs received, and the corresponding responses or actions taken:

Key Inputs and Responses/Actions Taken

Stakeholders	Input Received	Response/Action Taken
Landowners	How will the proponent ensure transparency within project activities and among landowners?	Regular stakeholder consultation programs.

- Established a robust Grievance Redressal Mechanism.
- Created an official communication channel through the OYU Green on-ground team.
 - ✓ Local Communities
 - ✓ What are the recruitment criteria that will be followed by the proponent?
 - ✓ Recruitment is prioritized for surrounding community members.
- Recruitment will be carried out by landowners, identifying individuals based on their work and skills to execute project activities.
 - ✓ Landowners
 - ✓ Proponent should provide manuals along with the training for self-learning.
 - ✓ Developed manuals and Standard Operating Procedures (SOPs) detailing plantation activities.
- Distributed copies of these materials to landowners for self-learning and reference.
 - ✓ Local Communities
 - ✓ How can the proponent ensure the health and safety of the workers?

	✓ Implemented strong workplace health and safety policies at each plantation site. Trained landowners to execute and enforce these policies effectively. These actions demonstrate the proponent's commitment to transparency, inclusivity, and stakeholder well-being while addressing concerns and fostering trust in the project. Evidence checked: VCS PDMR, onsite stakeholder interviews and Stakeholder consultation report. Assessment conclusion: Based on the evidenced checked and onsite visit assessment, it has concluded that the Stakeholder engagement process is in line with VCS Requirements.
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3.3.1.3 Free, Prior, and Informed Consent

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Obtaining consent	The process of obtaining stakeholder consent for the project activities has been structured to uphold transparency, inclusivity, and clarity. The proponent ensured all communications and interactions adhered to principles of Free, Prior, and Informed Consent (FPIC), ensuring that stakeholders fully understood the program before agreeing to participate. Key Aspects of the Consent Process Primary Stakeholders (Landowners) Consent Focus: ➤ Structured consent documents tailored to individual landowners, explicitly detailing their roles, rights, and responsibilities under the project. Process Followed to Receive Consent: Provision of Information: ➤ Clear, complete, and detailed project information was shared through multiple channels:

Written documents:

- ✓ Project summaries provided in Luganda and Lusoga, the local languages.

Verbal explanations:

- ✓ Information explained in the local language for those who preferred oral communication, though all landowners could read and write in English and Luganda.

1. Query Resolution:

- Stakeholders were encouraged to raise queries and had all doubts addressed promptly during consultation meetings.

2. Consent Document Review:

- Detailed explanations of the consent document, including conditions and requirements, were provided.
- Queries specific to consent conditions or carbon project applicability were clarified.

3. Consent Documentation:

- Written consent was formally obtained in the form of stakeholder signatures on the provided documents.

Secondary Stakeholders (Community Members and Others)**Consent Focus:**

- Received acknowledgment or support letters to confirm their understanding and agreement with project objectives and execution.

Process for Secondary Stakeholders:

- Shared detailed project information.
- Allowed for questions and clarifications during engagement sessions.
- Formal acknowledgment provided through letters of support.

This structured process ensured that all stakeholders were fully informed and empowered to make decisions regarding their participation. By addressing queries transparently and avoiding coercion, the project proponent fostered trust and collaboration among all participants.

	Evidence checked: VCS PDMR, onsite stakeholder interview, Stakeholder consultation report, signed Consent form and land ownership document.
Outcome of FPIC discussion	After being thoroughly aware about the project activities, outcomes and landowners provided their consent and support to the project. The assessment has confirmed the through FPIC process during the onsite visit and by reviewing of lease agreement (Land ownership document) and signed consent form.

3.3.1.4 Grievance Redress Procedure

Item	Evidence gathering activities, evidence checked, and assessment conclusion				
Development process	The project proponent has implemented a well-structured grievance redressal procedure to ensure transparency and fairness in resolving stakeholder concerns. Below is an outline of the process developed: Grievance Redressal Development Process A. Identification of Grievants Stakeholders whose grievances fall within the scope and capacity of the proponent: Landowners – Participants in the program. Local Communities – Residing near the plantation sites. Workers – Hired by landowners for plantation activities. Village Heads/Local Councils – Representing community concerns. B. Categorization of Grievances by Party Involvement Grievances have been divided into categories based on the parties involved: <table border="1"> <thead> <tr> <th>Party Involved</th><th>Major Grievance Types</th></tr> </thead> <tbody> <tr> <td>Landowner to Proponent</td><td> - Updates on project progress - Training and capacity building - Benefit sharing </td></tr> </tbody> </table>	Party Involved	Major Grievance Types	Landowner to Proponent	- Updates on project progress - Training and capacity building - Benefit sharing
Party Involved	Major Grievance Types				
Landowner to Proponent	- Updates on project progress - Training and capacity building - Benefit sharing				

	- Proponent on-ground team - Plantation growth and maintenance
Local Community to Proponent	- Recruitment opportunities - Inappropriate behavior by landowners - Inconvenience caused by project activities
Landowner to Local Community	- Damage to plantations - Anti-social or inappropriate behavior toward landowners - Illegal encroachment
Local Community to Landowner	- Mismanagement of plantation boundaries - Inconvenience caused by plantations - Recruitment and workplace behavior concerns

C. Grievance Submission Channels

Multiple channels have been established to accommodate the convenience of all stakeholders:

1. **In-person submissions** during consultations or casual visits by proponent representatives.
2. **Written submissions** via forms or letters addressed to the project team.
3. **Phone or digital communication**, including emails or mobile applications (if applicable).
4. **Village Head/Local Council** as an intermediary to collect and escalate grievances.

D. Team Hierarchy for Grievance Handling

A structured team hierarchy ensures that grievances are addressed appropriately and efficiently:

1. **Initial Contact Points:**

	• Local on-ground team for immediate concerns. • Village Head/Local Council for grievances raised within the community. 2. Grievance Escalation Path: • Level 1: Grievances reviewed by the project's community engagement officer. • Level 2: Escalated to regional project managers for complex or unresolved issues. • Level 3: Addressed by the senior management team for high-priority or sensitive concerns. 3. Resolution Timelines: • Clear timelines for grievance acknowledgment, investigation, and resolution to ensure prompt action. This grievance redressal process underscores the proponent's commitment to maintaining open communication and fostering trust among stakeholders, ultimately supporting the project's long-term success. Evidence gathering activities: During onsite visit the Assessment Team assessed via stakeholder interviews that process is designed to ensure any concerns or issues arising from the project activity will be addressed promptly and effectively, to maintain good relations with the community and ensure the success of the project. Evidence checked: VCS PDMR, onsite stakeholder interviews, Stakeholder consultation report, Suggestion box and grievance register. Assessment conclusion: Based on the evidenced checked and onsite visit assessment it has concluded that the Stakeholder engagement process is in line with VCS Requirements.
Grievance redress procedure	The grievance submission and resolution procedure developed by the project proponent ensures a transparent, efficient, and stakeholder-focused approach. Below is a summary: Grievance Submission Procedure Submission Channels Stakeholders can lodge grievances through the following mediums:

Email: A dedicated grievance submission email address provided during consultations.

In-Person: Stakeholders can approach the project proponent's point of contact during:

- Stakeholder consultation meetings.
- Periodic site visits by the OYU Green team.

Alternate Channels: WhatsApp, phone calls, or other convenient digital communication platforms.

Grievance Record Management

Maintenance of Records:

- A **Grievance Register** is maintained by the local community outreach team to log all grievances received in-person or during consultations.
- Grievances submitted through digital channels (e.g., email or WhatsApp) are stored in a **digitized format** for secure and organized tracking.

Grievance Validation Check

Preliminary Validation

All grievances undergo an initial validation process based on standardized criteria:

- **Complainant Identification:** Confirm the complainant's name and residence.
- **Grievance Scope:** Verify if the grievance falls within the project's scope. If outside the scope, assess its significance and potential indirect relation to the project.
- **Categorization:** Identify the type of grievance and the involved parties (landowners, local community, proponent).

Ground Verification:

- As an additional step, conduct field verification to ensure the grievance’s legitimacy and accuracy.

Standard Resolution Procedure

Action and Feedback:

- Upon validation, the grievance is addressed with appropriate actions, and feedback is provided to the complainant promptly.

1. Resolution Timelines:

- **Local Team Resolution:** Grievances must be resolved within **15 days** of submission by the community outreach team.
- **Escalation:** If unresolved locally, the grievance is escalated to the **Program Manager** at the OYU Green Head Office.

Program Manager Action:

- The Program Manager reviews the grievance, consults internally with management if required, and ensures resolution.
- The management team must resolve the grievance within **30 days** of its submission.

Monitoring and Reporting:

- Regular monitoring ensures timely resolution and transparency in handling all grievances.
- A grievance resolution report is shared with the relevant stakeholders as required.

This structured procedure prioritizes responsiveness and fairness, ensuring stakeholder trust and aligning with the project’s commitment to community well-being.

The audit team observed that a structured arbitration mechanism exists for resolving grievances between OYU Green and the landowners, a process clearly communicated during consultation

	meetings with primary stakeholders. The audit team noted the key characteristics of this mechanism: neutrality, ensuring a fair and impartial process with an independent arbitrator (the village head acting as a neutral third party in unresolved cases); confidentiality, maintaining the privacy of dispute resolution proceedings; binding decision, where the village head/jury's final ruling is the accepted verdict if resolution fails at OYU Green's managing level; efficiency, adhering to a structured timeline for timely resolution; flexibility, allowing mutual agreement on procedures and arbitrators as a priority; legal governance under the Uganda Arbitration and Conciliation Act, 2000; cost-effectiveness, aiming to minimize litigation costs; and mutual representation, providing equal representation for both OYU Green and landowners in the process. Evidence checked: VCS PDMR, onsite stakeholder interviews, Stakeholder consultation report, Suggestion box and grievance register.
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3.3.1.5 Public Comments

Comments received	Actions taken by the project proponent	Evidence gathering activities, evidence checked, and assessment conclusion
No public comments have been received during the public comment period that last for 30-days from 23/01/2024 to 22/02/2024.	N/A	The assessment team cross checked with the verra project web page to confirm that the project has not received any public comment during the public commenting period.

3.3.2 Respect for Human Rights and Equity

3.3.2.1 Labor and Work

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Discrimination and sexual harassment	No instances of discrimination or sexual harassment have occurred till now. The Project Proponent has designed the project activity in such a way that no discrimination or sexual harassment has occurred or will occur during the lifetime of the project activity. Policies are developed to ensure protection

	from sexual harassment and violence as well as facilitate equal opportunity and respect in all aspects of the stakeholder. Emphasis has also been placed on creating a safe and trusting work environment for everyone involved in the project activities. Evidence gathering activities: Ensuring a workplace free from discrimination and sexual harassment involves a multi-faceted approach, focusing on both prevention and response. The Project Proponent has a straightforward, confidential process for reporting any such unfortunate incidents. The Project Proponent has ensured that there a direct reporting to it so that the concerned party or affected individual can choose the one she/he is most comfortable with. The PP has also placed different policies to control such incidents. This has been assessed through interview with the site personnel and found it to be true and policy regarding same has also been assessed. Evidence checked: VCS PDMR, onsite stakeholder interview and Company Policy. Assessment conclusion: Based on the evidence checked and onsite visit assessment the Assessment Team concluded that there is no discrimination and sexual harassment occur, and it is in line with VCS Requirements.
Management experience	The project proponent's strong expertise across key domains underpins the effective development, execution, and long-term sustainability of the project. The team's diverse skill set, extensive experience, and interdisciplinary approach ensure the project's success and its positive impact on stakeholders and the environment. Below are the highlights: Proponent Expertise Areas Core Competencies: The team excels in the following domains essential for the project's success: ➤ Project Planning & Development: Efficient design and execution of project frameworks tailored to local needs and sustainability goals. ➤ Project Monitoring & Evaluation: Regular tracking of progress, outcomes, and alignment with objectives. ➤ GIS Mapping: Advanced mapping techniques to identify and manage project areas.

- **Baseline & Risk Assessment:** Robust analysis to establish baseline data and identify potential risks.
- **Community & Stakeholder Engagement:** Active and inclusive collaboration with local communities and stakeholders.
- **Technical and Research Activities:** Implementation of innovative methodologies supported by scientific research.
- **Training & Capacity Building:** Equipping stakeholders with the knowledge and skills to sustain project benefits.

Core Management Team Structure

The team comprises specialized roles to ensure efficient management and execution:

- **Project Manager:** Oversees project operations, timelines, and deliverables.
- **Technical Carbon Manager – Forestry:** Leads carbon-related technical aspects, ensuring adherence to global standards.
- **GIS & Remote Sensing Experts:** Provide precise spatial data and monitoring of project areas.
- **Data Analytics Manager:** Analyzes project data to track progress and identify improvements.
- **Community Development Specialists:** Facilitate stakeholder engagement, grievance redressal, and community empowerment.

Work Experience and Specialization

- **Experience Range:**
 - The team members have between 4 to 10+ years of experience in their respective fields, ensuring both innovation and depth of expertise.

Areas of Specialization:

- **Forestry:** The team includes specialists and PhD holders in forestry, providing a scientific basis for sustainable practices.

	• Research and Analysis: Experts dedicated to studying and optimizing project methodologies. • Management & Social Development: Professionals skilled in stakeholder coordination and sustainability practices. AFOLU Carbon Projects: • The team has significant experience in Agriculture, Forestry, and Other Land Use (AFOLU) carbon projects, equipping them with insights into global best practices and standards. The proponent's extensive expertise and well-structured team ensure a comprehensive approach to the project's planning, execution, and sustainability. This foundation positions the project as a benchmark in integrating technical precision with community-centered strategies. The assessment team has verified the project management plan, project SOPs and the management team CVs to confirm the management team experience. During the onsite assessment the assessment team has interviewed with the management to vet the same.
Gender equity in labor and work	The project proponent's dedication to fostering gender equity and inclusivity is a cornerstone of its operations. This commitment ensures that all individuals, regardless of gender, have access to equal opportunities in every aspect of the project. Key Highlights of Gender Equity Initiatives Fair Compensation for Labor and Work: • The project ensures equal pay for equal work, eliminating any gender-based wage disparities. • Compensation policies are transparent and standardized, promoting fairness and accountability. Inclusive Recruitment Practices: • Recruitment processes are designed to provide equal opportunities to all genders, ensuring balanced representation across various roles in the project. • Special attention is given to addressing potential barriers to participation, particularly for women and marginalized groups. Promoting Gender Equality Across Activities:

	• The proponent has implemented measures to ensure equitable access to training, capacity-building sessions, and leadership opportunities for all genders. • Efforts are made to integrate gender considerations into workplace policies and project design. Safe and Inclusive Work Environment: • A strong emphasis is placed on creating a safe and respectful work environment. • Policies addressing sexual harassment and discrimination are in place to protect all workers and foster trust and inclusivity. Commitment to Sustainable Gender Equality The proponent's approach not only ensures equity in the current phase of the project but also seeks to embed gender equality as a long-term standard. These measures contribute to a more inclusive and harmonious work culture, aligning with global best practices in sustainability and social equity. Evidence gathering activities: The Project Proponent offers flexible work options such as part-time schedules, and flexible hours. This helps accommodate employees with caregiving responsibilities, which often disproportionately affect women. In addition, Project Proponent strives to foster a workplace culture that values gender diversity, equity, and inclusion. It encourages open dialogue about gender issues and actively works to eliminate any type of stereotypes and discrimination. This has been assessed through interview with the site personnel and found it to be true and policy regarding same has also been assessed. Evidence checked: VCS PDMR, onsite stakeholder interviews and Company Policy. Assessment conclusion: Based on the evidenced checked and onsite visit assessment Team concluded that there is Gender equity in labor and work, and it is in line with VCS Requirements
Human trafficking, forced labor, and child labor	The project activity categorically rejects the use of victims of human trafficking, forced labor, and child labor in all aspects of the project activity. Stringent measures are in place to ensure that ethical labor practices are upheld, and the project activity is committed to maintaining a workforce free from exploitation, ensuring the well-being and rights of all individuals involved.

During the onsite visit it has confirmed that there is no child labor involved in the project and found it to be true and policy regarding same has also been assessed and found to be correct.

3.3.2.2 Human Rights

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Human rights	The project proponent, OYU Green Pvt. Ltd., demonstrates a strong commitment to safeguarding human rights and upholding international standards related to fundamental rights and freedoms. This approach reflects a comprehensive framework ensuring equity, dignity, and respect for all individuals, particularly Indigenous Peoples (Ips) and workers involved in the project. Human Rights Protection Framework Recognition of Universal Human Rights: - The project acknowledges that human rights are fundamental, inalienable, and universal, transcending barriers of age, origin, language, religion, ethnicity, or social status. - Emphasis is placed on creating an environment where the rights and dignity of all stakeholders are respected and upheld. Protection of Indigenous Peoples (Ips): - The project aligns with international legal frameworks such as: ➤ United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) ➤ ILO Convention 169 on Indigenous and Tribal Peoples - It ensures that Indigenous Peoples' cultural heritage, land, and traditions are respected, and their participation in the decision-making process is prioritized. - Free, Prior, and Informed Consent (FPIC) has been integrated as a critical component to safeguard the autonomy and rights of Indigenous Peoples. Commitment to International Labour Standards: - The proponent strictly adheres to the ILO Declaration on Fundamental Principles and Rights at Work (1998) and the eight ILO Core Labour Conventions, ensuring:

	➤ Freedom of association and the right to collective bargaining ➤ Elimination of forced or compulsory labor ➤ Abolition of child labor ➤ Elimination of workplace discrimination • Strong workplace policies have been developed to uphold these principles across all plantation sites and activities. Implementation Mechanisms: • Regular stakeholder consultations to address grievances, ensure inclusivity, and promote human rights awareness. • Robust monitoring and evaluation systems to assess compliance with international human rights and labor standards. • Clear grievance redress mechanisms to provide stakeholders with accessible channels to voice concerns. Long-Term Commitment The project's alignment with international human rights laws and labor standards exemplifies a model of ethical and sustainable development. By prioritizing the rights of Indigenous Peoples and workers, the proponent ensures that the project serves as a catalyst for social justice, equity, and sustainable progress in the communities it impacts.
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3.3.2.3 Indigenous Peoples and Cultural Heritage

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Preservation and protection of cultural heritage	Cultural Heritage Impact Assessment Overview: The project is designed to ensure minimal impact on Uganda's cultural heritage. All project activities will occur on lands that are either owned or leased from the National Forestry Authority (NFA) by local landowners. These lands are clearly delineated, and the project boundaries have been precisely marked and discussed with the surrounding community members to ensure full transparency. Cultural Heritage Considerations: • Project Location: The project will be conducted on lands that have been taken on lease from NFA by the landowners as well as privately

	owned land. No indigenous or culturally significant lands will be affected by the project's activities. • Community Consultation: The boundaries and scope of the project area have been discussed thoroughly with the community members residing around the project area to address any concerns regarding cultural heritage. • Cultural Sites: Based on a detailed review of the project area, there are no significant cultural or heritage sites located within the plantation areas. Therefore, no cultural or historical landmarks will be impacted by the project activities. Conclusion: Given the careful planning, community engagement, and the absence of significant cultural heritage sites in the project area, the project is unlikely to affect Uganda's cultural heritage. Evidence checked: VCS PDMR onsite stakeholder interviews, project management plan & SOPs and Company Policy. Assessment conclusion: Based on the evidenced checked and onsite visit assessment the Assessment Team concluded that indigenous tribal communities are not the part of the project activity. Hence no Indigenous people rights are harmed, and no cultural rights are harmed since this is forestry project which is on voluntary basis and no cultural rights are harmed by that hence it is in line with VCS Requirements.
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3.3.2.4 Property Rights

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Rights to territories and resources	The entire land is owned by private landowners and thus all the rights within the project boundary is solely owned by them. During the onsite assessment and through interview with the project management team and community members that the land has belong to the project proponent and this was also cross verified with the landownership documents and consent agreement.

Respect for property rights

Protection of Property Rights and Stakeholder Engagement

Commitment to Property Rights: The Project Proponent firmly prohibits any interference with the properties of local community members. The project is committed to respecting and safeguarding the property rights of all stakeholders, ensuring that their interests are fully protected throughout the project's lifecycle.

Measures for Safeguarding Property Rights:

- **Stakeholder Consultations and Awareness Programs:** Regular consultations will be conducted with local community members to keep them informed about the project and its potential impacts. Awareness programs will be implemented to ensure all stakeholders understand the project's scope, benefits, and measures in place to protect their property rights.
- **Free, Prior, and Informed Consent (FPIC):** The Project Proponent is committed to obtaining FPIC from the affected stakeholders, ensuring that all local community members are voluntarily and fully informed before any activities are carried out. This process guarantees that the community's rights and decisions are respected.
- **Grievance Redress Mechanism:** A clear and effective grievance redress mechanism will be in place to address any concerns or complaints from the community promptly. The Project Proponent will ensure that any grievances related to property rights or project activities are addressed in a timely and transparent manner.

Assessment Conclusion: Through these proactive measures, the Project Proponent is dedicated to safeguarding the property rights of local communities, ensuring that their voices are heard, and their concerns are adequately addressed.

3.3.2.5 Benefit Sharing

Item	Evidence gathering activities, evidence checked, and assessment conclusion
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Process used to design the benefit sharing plan	The following steps were undertaken to design a fair and effective benefit-sharing plan: Step 1: Stakeholder Engagement - The project team engaged with landowners through consultations to understand their expectations, needs, and concerns. During these consultations, valuable input was gathered to shape the benefit-sharing structure, ensuring alignment with community priorities. Step 2: Project Analysis - The project goals were carefully analyzed, and the contributions and investments of both the landowners and the project proponent were assessed. This step involved evaluating the roles and responsibilities of each party to establish a balanced approach to benefit distribution. Step 3: Development of the Benefit Sharing Plan - Based on the analysis of investments and roles, a proposed benefit-sharing plan was developed. This plan considered both the potential benefits and expenses involved, with a focus on ensuring that the distribution of benefits would be fair and equitable for all parties. Step 4: Legal Agreement and Financial Model - A legal agreement was drafted to formalize the benefit-sharing terms, ensuring clarity and transparency. A financial model was also established to calculate and fairly distribute the net benefits, providing a clear structure for ongoing benefit allocation. Step 5: Stakeholder Feedback and Finalization - The proposed benefit-sharing plan was presented to all stakeholders for feedback. After gathering input, the plan was refined and finalized, incorporating suggestions from stakeholders and undergoing a thorough legal review to ensure compliance and fairness.
Summary of the benefit sharing plan	The Project Proponent has entered into individual agreements with each landowner, clearly outlining their respective roles and responsibilities in relation to the project. These agreements also specify the carbon credit

	benefits that will be accrued upon issuance, ensuring that all parties are aware of and agree to the distribution of such benefits. This formal arrangement ensures transparency, accountability, and mutual understanding between the Project Proponent and landowners throughout the duration of the project.
Approval and dissemination of benefit sharing plan	The Project Proponent has entered into individual agreements with each landowner, clearly outlining their respective roles and responsibilities in relation to the project. These agreements also specify the carbon credit benefits that will be accrued upon issuance, ensuring that all parties are aware of and agree to the distribution of such benefits. This formal arrangement ensures transparency, accountability, and mutual understanding between the Project Proponent and landowners throughout the duration of the project.
Benefit sharing during the monitoring period	Implementation of the Benefit Sharing Plan The benefit-sharing plan will be implemented through the following structured steps to ensure transparency, accuracy, and accountability: Step 1: Project Monitoring and Verification - Periodic monitoring of the project will be conducted to track progress and performance. - Third-party verification will be carried out on the ground to ensure compliance with project objectives and to validate results. Step 2: Calculation and Distribution of Benefits - Post-issuance benefits will be calculated on a pro-rata basis, in accordance with the approved financial model. - This approach ensures that benefits are distributed fairly based on the agreed-upon terms and contributions of each party. Step 3: Disbursement of Benefits - The calculated benefit amounts will be disbursed directly to the landowners through secure bank transfers. - This method ensures efficiency, security, and timely receipt of benefits by the landowners. Step 4: Communication and Reporting

	• A concise report detailing the sales of carbon credits and the disbursement of revenue shares will be prepared. • Landowners will receive this report via email and hard copies for their records, ensuring full transparency regarding the benefit-sharing process.
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3.3.3 Risks to Local Stakeholders and the Environment

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Risks to stakeholder participation	Identified Concerns and Mitigation Measures Landowner Concerns Lack of Transparency over Benefit Sharing • Mitigation 1a: A robust benefit-sharing mechanism has been developed, ensuring transparency and fairness, addressing key concerns raised during consultations. • Mitigation 1b: Landowners are made aware of the benefit-sharing mechanism during stakeholder consultation programs, where their inputs are actively sought and incorporated for further improvements. Lack of Information and Awareness Around Project Progress • Mitigation 2a: Regular stakeholder consultation programs are conducted throughout various project stages to keep landowners informed about progress and updates. • Mitigation 2b: A dedicated community outreach team maintains direct contact with landowners, providing consistent updates on project outcomes and forthcoming steps to minimize communication gaps. Loss of Financial Investment in Case of Project Failure • Mitigation 3a: The proponent follows a rigorous, step-by-step process to comply with VERRA's standards, ensuring that project development is robust and well-documented. This minimizes the risk of failure by aligning on-ground implementation with established requirements. Exclusion from the Decision-Making Process

	• Mitigation 4a: A structured approach ensures the active involvement of landowners in decision-making alongside the project management team. • Mitigation 4b: Stakeholder-specific needs and perspectives are assessed, and their inputs are incorporated to make balanced and inclusive decisions. Community Concerns Boundary Mismanagement • Mitigation 1a: A sense of kinship between landowners and the community fosters mutual commitment, with landowners taking responsibility for maintaining plantation boundaries to avoid disputes. • Mitigation 1b: Project boundaries are accurately delineated and thoroughly discussed with the community during consultation programs, ensuring clarity and understanding. • Mitigation 1c: Training programs for landowners and workers involved in plantation activities include awareness and management of project boundaries to prevent mismanagement and disputes. The proposed mitigation measures aim to address the identified concerns effectively while fostering transparency, collaboration, and trust between the project proponent, landowners, and the community. Regular feedback loops and structured communication further enhance stakeholder confidence and project success. Evidence checked: VCS PDMR, onsite stakeholder interviews, Stakeholder consultation report. Assessment conclusion: Based on the evidenced checked and onsite visit assessment the Assessment Team concluded that the project has identified few risks related to the stakeholder participation and also preventive measure has taken to rheostat the risk which has confirmed by the assessment team while interaction with the stakeholders and project management team.
Working conditions	Workplace Concerns and Mitigation Measures Identified Concerns 1. Discrimination and Harassment at the Workplace 2. Lack of Training for Workers 3. Worker Safety

Mitigation Measures

1. Discrimination and Harassment

- **Commitment to a Safe Work Environment:** The Project Proponent prioritizes maintaining a safe, inclusive, and respectful workplace. Comprehensive workplace policies have been established to safeguard stakeholders from discrimination and harassment. These policies are strictly enforced to promote equality, dignity, and a harassment-free environment for all workers.

2. Lack of Training

- **Training and Capacity Building:**
 - Landowners and their workers involved in plantation activities are provided with comprehensive training.
 - The training covers plantation establishment, management, and monitoring, following the Standard Operating Procedures (SOPs) developed by OYU Green.
 - These initiatives help mitigate potential risks and ensure workers are equipped to perform their roles effectively and safely.

3. Worker Safety

- **Protective Equipment (PPE) and Basic Amenities:**
 - Workers are supplied with essential PPE, including gumboots, coats, and gloves, to enhance safety during plantation management activities.
 - Additional support is provided in the form of food and accommodation, ensuring the well-being of workers while on-site.
 - *Figure: Workers wearing PPE kits and gumboots during plantation management activities.*
- **First-Aid and Emergency Response:**
 - First-aid kits and measures are readily available at work premises to provide immediate assistance in case of injuries or emergencies.
 - The Project Proponent ensures prompt action to minimize risks and address worker safety concerns effectively.

Through robust policies, structured training, and comprehensive safety measures, Project Proponent is committed to creating a safe, respectful, and

supportive workplace for all stakeholders. These efforts aim to ensure a conducive environment where workers can perform their roles efficiently and without concern.

Evidence checked: VCS PDMR, onsite stakeholder interviews, SOPs, PPE, First-aid, risk mitigation SOP, Fire Protection Plan.



Workers wearing PPE kit and gumboots during plantation management activities

Assessment conclusion: Based on the evidenced checked and onsite visit assessment the Assessment Team concluded that there is no risk identified to Working conditions and it is in line with VCS Requirements. Also, if any such incident occur the PP has its mitigation plan in place to deal with it.

Safety of women and girls

Workplace Concerns and Mitigation Measures

Identified Concerns

1. Sexual Harassment in the Workplace
2. Gender-Based Discrimination in the Workplace

Mitigation Measures

1. Sexual Harassment at the Workplace

- Implementation of Anti-Sexual Harassment Policies:
 - The Project Proponent rigorously enforces a comprehensive anti-sexual harassment policy across all work environments and work-related activities.
 - This policy includes a formal grievance process that enables workers to report any instances of sexual harassment confidentially and securely.
 - A dedicated mechanism ensures timely investigation and resolution of reported grievances.
- Workplace Environment Monitoring:

	➤ During random site visits, the proponent team holds meetings with workers to discuss workplace conditions and gather feedback. ➤ These meetings create a safe space for workers to express concerns, ensuring a supportive and open environment. 2. Gender-Based Discrimination • Commitment to Gender Equality: ➤ The Project Proponent actively promotes gender equality in its workplace and operational policies. ➤ Equal opportunities and fair treatment are foundational principles in all aspects of the project's employment and operations. • Grievance Redress Mechanism: ➤ In case of any incidents of gender-based discrimination, workers can access a well-established grievance procedure to report and resolve concerns. ➤ The procedure ensures that all reports are handled promptly, confidentially, and fairly. The Project Proponent is dedicated to creating an inclusive and equitable workplace by addressing sexual harassment and gender-based discrimination through strict policies, proactive monitoring, and effective grievance mechanisms. These efforts aim to foster a safe, respectful, and gender-sensitive work environment for all stakeholders. Evidence checked: VCS PDMR, onsite stakeholder interviews and Anti-sexual harassment policy. Assessment conclusion: Based on the evidenced checked and onsite visit assessment the Assessment Team concluded that there is no risk identified to Safety of women and girls and the project has also prepared the Anti-sexual harassment policy to deal with any unfortunate incident happens and hence it is accepted which is in line with VCS Requirements.
Safety of minority and marginalized groups, including children	Workplace Concerns and Mitigation Measures Identified Concerns 1. Child Labor in Plantation Activities 2. Unfair Wages for Marginalized Groups Mitigation Measures 1. Child Labor in Plantation Activities

- **Strict Rejection of Child Labor:**
 - The Project Proponent strictly prohibits the use of child labor in all work premises and project-related activities.
 - This commitment is formalized in the employment policies and the project implementation plan, ensuring that no child labor is permitted at any stage of the project.
 - Regular inspections and monitoring are conducted to ensure adherence to this policy.

2. Unfair Wages for Marginalized Groups

- **Transparent Recruitment Processes:**
 - Village leaders are actively engaged in the recruitment process of marginalized groups to ensure transparency and fairness.
 - This approach empowers both the community and village leaders to oversee the recruitment process and report any discrepancies or unfair practices.
 - Open communication channels are established, allowing marginalized groups to voice concerns related to wages or employment conditions.

The Project Proponent prioritizes ethical labor practices by strictly rejecting child labor and ensuring fair wages for marginalized groups. Through robust policies, community engagement, and transparent processes, the project aims to uphold labor rights and foster equitable opportunities for all stakeholders.

Evidence checked: VCS PDMR, onsite interviews, Project Policies and SOPs.

Assessment conclusion: Based on the evidenced checked and onsite visit assessment the Assessment Team concluded that there is no risk identified to Safety of minority and marginalized groups, including children and it is in line with VCS Requirements. During the onsite visit the assessment team has also interviewed with the worker, community members and local chiefs to confirm that there was no child labor involved in the project.

Pollutants (air, noise, discharges to water, generation of waste, release of hazardous materials)	No Risk Identified: There are no activities within the scope of the project that contribute to significant pollution in the area. The project is designed and implemented in a manner that ensures minimal environmental impact, aligning with sustainable and eco-friendly practices. Evidence checked: VCS PDMR, onsite stakeholder interviews. Assessment conclusion: Based on the evidenced checked and onsite visit assessment the Assessment Team concluded that there is no risk identified to Pollutants and hence it is in line with VCS Requirements.
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3.3.4 Ecosystem Health

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Impacts on biodiversity and ecosystems	Environmental Concerns and Mitigation Measures Identified Concerns 1. Increased Susceptibility to Pest and Disease Spread in Monoculture Plantations 2. Destruction of Native Habitats Surrounding Plantation Sites Mitigation Measures 1. Managing Pest and Disease Spread The Project Proponent employs Integrated Pest Management (IPM) practices to mitigate the risks of pest and disease spread in monoculture plantations: ➤ Regular Monitoring: Routine health assessments of trees are conducted to detect pests and diseases early and prevent their spread. ➤ Inspection Practices: Regular site inspections help identify early signs of pest infestations or diseases. ➤ Optimized Plantation Layout: Proper tree spacing and periodic pruning are maintained to reduce potential pest habitats, improve air circulation, and minimize disease risks. ➤ Infected Plant Management: Infected plants are carefully removed and disposed of to prevent further spread.

- **Natural Pest Control:** For pests like termites, methods such as queen removal are employed, disrupting colony reproduction and naturally curbing pest populations.

- Refer to Figure: Removal of Anthill
- Refer to Figure 32: Removal of Termite Queen

2. Protecting Native Habitats

➤ Land Selection Criteria:

The Project Proponent ensures that lands with native ecosystems within or surrounding the parcel are excluded from the program during the land selection process. This precaution preserves biodiversity and prevents any potential impact on native habitats.

Through diligent pest management practices and careful land selection, the project mitigates environmental risks while ensuring sustainable plantation practices that align with biodiversity conservation principles.

Visual Evidence: Figures illustrate these practices, showing the removal of termite queens and the Removal of Anthill.



Figure: Removal of Anthill



Figure: Removal of Termite queen

The assessment team confirms that these mitigation measures align with best practices for environmental management and have been effectively implemented to address the identified risks.

Soil degradation
and soil erosion

Soil and Nutrient Management Concerns and Mitigation Measures

Identified Concerns

1. Soil Erosion
2. Nutrient Depletion in Monoculture Plantations

Mitigation Measures

1. Mitigating Soil Erosion

	• Tree Plantation for Soil Stability: ➤ The establishment of tree plantations enhances soil stability, reducing the risk of erosion by creating a robust root network that binds the soil. • Use of Organic Fertilizers: ➤ Organic fertilizers and natural pest control methods are utilized to improve soil fertility and maintain ecological balance, further stabilizing the soil. 2. Addressing Nutrient Depletion • Application of Compost: ➤ Compost is applied to improve soil structure, replenish essential nutrients, and promote long-term fertility. • Natural Mulching: ➤ Fallen leaves, branches from tree brushing, and additional biomass are left on the ground to act as mulch. ➤ This practice helps retain soil moisture, regulate temperature, and enrich the soil as the organic material decomposes naturally. By promoting soil stability, enhancing fertility, and preserving ecological balance through sustainable practices, the Project Proponent effectively addresses the risks of soil erosion and nutrient depletion associated with monoculture plantations. The Validation/Verification team confirms that these practices are consistent with sustainable soil management and contribute effectively to mitigating nutrient depletion in the project area.
Water consumption and stress	No Risk Identified: The project area is carefully demarcated to exclude wetlands, rivers, and other natural water resources, ensuring that no such resources are impacted by project activities. All project operations rely solely on rainwater, as Uganda benefits from a bi-annual rainfall pattern that supports sustainable plantation practices without additional water extraction. This approach demonstrates a sustainable water management strategy, and the Validation/Verification team finds this to be compliant with environmental safeguarding requirements.

Usage of fertilizers	No Risk Identified: The Project Proponent actively discourages the use of chemical fertilizers and promotes sustainable agricultural practices. Stakeholders are educated on the adverse environmental and health impacts of chemical fertilizers through capacity-building sessions. As a result, no risks associated with chemical fertilizer usage have been identified within the project scope. This approach aligns with sustainable agricultural practices, reducing potential environmental impacts and supporting soil health. The Validation/Verification team finds this measure consistent with best practices for eco-friendly project management.
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3.3.4.1 Rare, Threatened, and Endangered species

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Rare, Threatened, and Endangered species	During validation and verification, a review of project documents and an onsite visit and interview with local stakeholders confirmed that no rare, threatened, or endangered species were present. Furthermore, the audit team also verified the planted species from the ICUN red list² and found that the species which has planted are not categorized as threatened species. Before the implementation of the project activity, the project area was primarily covered by sparse scrubland vegetation, which consisted mainly of invasive species. These species did not fall into the rare, endangered, or threatened categories, as they were classified as invasive and did not contribute to biodiversity conservation. The pre-project land use scenario in the Northern, Central and Western region of Uganda plantation sites consisted degraded lands (i.e. open lands & scrublands) and Cropland (hereinafter referred to as 'Degraded scrublands and croplands) before the implementation of the project. These areas featured sparse to dense shrubby vegetation, with a high presence of invasive shrub species.

² <https://www.iucnredlist.org/>

3.3.4.2 Introduction of Species

Species introduced	Evidence gathering activities, evidence checked, and assessment conclusion
<i>Eucalyptus</i> hybrid (GU7 & GU8 – clones of <i>Eucalyptus grandis</i> x <i>Eucalyptus urophylla</i>) (Naturalized)	The Validation/Verification team confirms the justification for using <i>Eucalyptus</i> hybrid in this project, noting its established role as a multipurpose tree for the pulp, paper, and plywood industries. <i>Eucalyptus</i> has a long history of cultivation in Africa, dating back to 1931 (FAO, 1979), and its utility contributes to economic opportunities for local industries and communities. Assessment of Adverse Effects and Mitigation: The Validation/Verification team has assessed potential adverse effects of <i>Eucalyptus</i> plantations, including concerns about water consumption and soil impacts, and confirms that no significant adverse effects have been identified in the project area. The species has shown adaptability in Uganda, and the project has implemented appropriate site selection and management practices to mitigate any potential ecological concerns. These measures ensure the plantation's sustainability and positive influence on local communities and the environment. This use of <i>Eucalyptus</i> aligns with the project's sustainability goals, and the Validation/Verification team finds it compliant with local environmental standards and community development objectives
<i>Pinus caribaea</i> (Naturalized)	The Validation/Verification team confirms the suitability of <i>Pinus caribaea</i> (<i>P. caribaea</i>) for the project, noting its utility in producing plywood and timber for both heavy and light construction purposes. The species has a long history of cultivation in Africa, dating back to the late 17th century, demonstrating its adaptability and relevance to the region. Assessment of Adverse Effects and Mitigation: Upon evaluation, <i>P. caribaea</i> exhibits favorable characteristics for Uganda's soil and climate. The species imposes no adverse effects on local soil health or climatic conditions, and its managed cultivation is well-suited to the region's environmental requirements. Additionally, site-specific management practices are in place to maintain soil quality and ecosystem balance. The Validation/Verification team finds that <i>P. caribaea</i> aligns with both the project's ecological goals and sustainable land use practices, supporting local economic and environmental objectives without negative impacts on soil or climate

Existing invasive species	Evidence gathering activities, evidence checked, and assessment conclusion
<i>Lantana camara</i> , <i>Senna spectabilis</i> , <i>Solanum Mauritianum</i> & <i>Chromolaena odorata</i>	The Validation/Verification team confirms that the project has implemented effective measures for managing invasive species within the plantation areas, as outlined in the project's Standard Operating Procedures (SOP). Ground slashing and manual eradication are regularly practiced controlling invasive species, with inspections conducted to monitor and respond to any re-emergence. Environmental Considerations in Disposal Practices: The project also demonstrates a strong commitment to environmental stewardship by ensuring careful selection of disposal sites for removed invasive plants. This minimizes the risk of accidental reintroduction and protects surrounding ecosystems from potential contamination or spread. The Validation/Verification team finds that these invasive species management practices are thorough, environmentally sound, and aligned with the project's objectives for sustainable land management. The approach effectively mitigates potential risks posed by invasive species and promotes long-term ecosystem stability.

3.3.4.3 Ecosystem conversion

Item	Evidence gathering activities and evidence checked
Ecosystem conversion	Historical Land Use Assessment Based on the examination of historical satellite images (refer to Section 3.4) of the project area, it was determined that the selected discrete project sites did not host any existing natural forests or hydrological functions of natural, non-degraded native ecosystems within the 10 years preceding the project start date. Consequently, no clearance or disruption of native ecosystems occurred as part of the project activities. These are consistent with the conditions mentioned in sections 3.19.28 and 3.19.29 of VCS standards version 4.7 Further it is found to be correct by the Assessment Team based on-site inspection, GIS files and stakeholder interviews, Land ownership documents.

3.4 Application of Methodology

3.4.1 Title and Reference

As per the VCS PDMR Section 3.1 Applied methodology by the project activity is-

Methodology: AR-ACM0003; Afforestation and reforestation project activities implemented on lands other than wetlands - Version 2

Tools applied:

- AR-TOOL-02 v 01- Combined tool to identify the baseline scenario and demonstrate additionality in A/R CDM project activities.
- AR-AM-TOOL-03 v 02.1.0- Calculation of the number of sample plots for measurements within A/R CDM project activities.
- AR-TOOL-14 v 04.2- Estimation of carbon stocks and change in carbon stocks of trees and shrubs in A/R CDM project activities.
- AR-TOOL17 v 01 - Demonstrating appropriateness of allometric equations for estimation of aboveground tree biomass in A/R CDM project activities.
- AFOLU Guidance - 08-March-2011 - Example for Calculating the Long-Term Average Carbon Stock for ARR Projects with Harvesting.

3.4.2 Applicability

Based on the review of VCS PDMR section 3.2 and the webhosted PDMR, PP has applied Methodology: AR-ACM0003; Afforestation and reforestation project activities implemented on lands other than wetlands - Version 2

Methodology ID	Applicability condition	Assessment and conclusion
AR-ACM0003	(a) The land subject to the project activity does not fall in wetland category	According to the 2006 IPCC Guideline for National GHG Inventories, wetlands include land that is covered or saturated by water for all or part of the year (e.g., peatland) and that does not fall into the forest land, cropland, grassland or settlements categories. This category can subdivide into managed and unmanaged according to national definitions. It includes reservoirs as a managed sub-division and natural rivers and lakes as unmanaged sub-divisions. The project sites include only designated degraded scrublands which can be corroborated from the land title records. They are distinct from forest land, cropland, or settlements, encompassing reservoirs, natural rivers, and lakes

		This was validated and verified by audit team via land agreements, Site inspection, GIS assessment report and stakeholder interviews during onsite audit and additionally, the audit team reviewed the Normalized Difference Water Index (NDWI) assessment conducted within the project area. The audit team noted that the NDWI threshold value ranges from -1 to 1, and that, consistent with McFeeters' 1996 methodology, a zero threshold was applied. The audit team confirmed that cover is classified as water where the NDWI value is greater than zero and as non-water where the NDWI value is less than or equal to zero, a similar approach to that established by McFeeters. The audit team referenced the VCS_4888_Wetland_Analysis_Report.pdf for details of the project-specific NDWI assessment and McFeeters' 1996 publication, "The use of the Normalized Difference Water Index (NDWI) in the delineation of open water features," as the basis for the applied threshold.
AR-ACM0003	(b) Soil disturbance attributable to the project activity does not cover more than 10 per cent of area in each of the following types of land, when these lands are included within the project boundary: (i) Land containing organic soils. (ii) Land which, in the baseline, is subjected to land-use and management practices and receives inputs listed in appendices 1 and 2 to this methodology.	The project sites are involved in the utilization of degraded scrubland and croplands. The soils in project activity do not fall under the organic soil definition. The project Proponent has ensured that there is less than 10 percent soil disturbance across the project area, this includes pit digging for the plantation purpose with appropriate spacing and pit size. Even the project ensures that once the plantation activity has done there were no soil disturbance performed. The lands of Appendix 1 of the applied methodology refer to cropland in which soil disturbance is restricted. The baseline involved the utilization of degraded scrubland and croplands, which were not subjected to land-use

		and management practices nor ever received. The project sites do not fall under the grassland category; therefore, the methodology is applicable as it meets both conditions. This was validated and verified by Audit Team via GIS Files, KML Files, Site inspection, and stakeholder interviews during onsite audit.
AR-AM-TOOL-14	This tool has no internal applicability conditions.	This tool has no internal applicability conditions. Therefore, no justification is required. Hence accepted.
AR-TOOL-02	Forestation of the land within the proposed project boundary performed with or without being registered as the A/R CDM project activity shall not lead to violation of any applicable law even if the law is not enforced.	The project does not violate any law as such. The project activities are compliant with both national and local laws and regulations as outlined in Section 1.15. The statement also asserts that there are no laws that prohibit plantation activities on private lands. The project activity is not a small-scale project This was validated and verified by audit team on Site inspection, and stakeholder interviews during onsite audit.
AR-TOOL-02	This tool is not applicable to small - scale afforestation and reforestation project activities.	According to ex ante ER estimation, the project aims at sequestering 379,891tCO ₂ e annually which is considered a “Project” as per the Verra VCS definition (Section 3.10.1 of the VCS Standard v4.7). This was validated and verified by calculation in ER sheet and default factors used based on IPCC Guidelines
AR-TOOL03	This tool has no internal applicability conditions.	This tool has no internal applicability conditions. Therefore, no justification or explanation is required. Hence Accepted.

3.4.3 Project Boundary

KBS Assessment Team through the review of VCS PDMR section 1.13 showing maps with clusters of land parcels, KML files and an on-site inspection confirms that the project activity is spread across different locations of Northern, Central and Western regions of Uganda. The area coverage under the initial project activity instance is 3,324 hectares, which will be expanded to 10,000 hectares once the project gets registered. On a yearly average, the project activity is expected to achieve 3,79,891 tCO₂e of Average Annual GHG removals for a period of 20-years of crediting period.

The source and sinks of gases included in the baseline and project scenario are as follows: -

Team Leader on basis of discussion with technical expert during onsite inspection and based on applied methodology has concluded the sources and sinks of gases included in baseline and project scenario- but furthermore justification and explanation is required to be provided by PP in VCS PDMR Section 3.3.

Source		Gas	Included?	Assessment and conclusion
Baseline	Aboveground Biomass	CO ₂	No	Pre-existing vegetation and associated carbon stock can be considered negligible. Baseline emissions are also negligible. Assessment Team concluded that this is as per the applied methodology- AR-ACM0003; Afforestation and reforestation project activities implemented on lands other than wetlands – Version 2.
		CH ₄	No	Assessment Team validated during site inspection that- CH ₄ does not have much impact on the lands and in the atmosphere of the surrounding areas due to the project. Pre-existing vegetation is not slashed nor burned. Assessment Team concluded that there is no burning of residues while interaction with community member and also witnessed the same in the baseline assessment sheet.
		N ₂ O	No	Assessment Team validated during site inspection that- N ₂ O does not have much impact on the lands and in the atmosphere of the surrounding areas. Emissions in the baseline can be conservatively ignored. Pre-existing vegetation is not slashed nor burned.

Source	Gas	Included?	Assessment and conclusion
Project			Assessment Team concluded that there is no burning of residues while interaction with community member and also witnessed the same in the baseline assessment sheet.
		Other	N/A
	Belowground Biomass	CO ₂	Baseline carbon stock or emissions are negligible. Assessment Team concluded that this is as per the applied methodology- AR-ACM0003; Afforestation and reforestation project activities implemented on lands other than wetlands – Version 2.
		CH ₄	Assessment Team validated during site inspection that- CH ₄ does not have much impact on the lands and in the atmosphere of the surrounding areas due to the project. Pre-existing vegetation is not slashed nor burned. Assessment Team concluded that there is no burning of residues while interaction with community member and also witnessed the same in the baseline assessment sheet.
		N ₂ O	Assessment Team validated during site inspection that- N ₂ O does not have much impact on the lands and in the atmosphere of the surrounding areas. Emissions in the baseline can be conservatively ignored. Pre-existing vegetation is not slashed nor burned. Assessment Team concluded that there is no burning of residues while interaction with community member and also witnessed the same in the baseline assessment sheet
		Other	N/A
	Aboveground Biomass	CO ₂	This is the major carbon pool subjected to project activity and is expected to increase due to the implementation of the project activity. Assessment Team validated during site inspection that- above ground biomass (stem, stump, branches, bark, seeds) is the major carbon pool that is subjected to the project

Source		Gas	Included?	Assessment and conclusion
				activity. Aboveground Biomass of trees helps in carbon sequestration and removal of CO₂ from atmosphere over a period. Assessment Team concluded that this is as per the applied methodology- AR-ACM0003; Afforestation and reforestation project activities implemented on lands other than wetlands - Version 2.
		CH ₄	No	Assessment Team validated during site inspection that- CH₄ does not have much impact on the lands and in the atmosphere of the surrounding areas. Since the plantation is taking place on degraded scrubland and croplands and no wetlands were present in the area. Assessment Team concluded that this is as per the applied methodology- AR-ACM0003; Afforestation and reforestation project activities implemented on lands other than wetlands - Version 2.
		N ₂ O	No	Assessment Team validated during site inspection that- N₂O does not have much impact on the lands and in the atmosphere of the surrounding areas. Assessment Team concluded that this is as per the applied methodology- AR-ACM0003; Afforestation and reforestation project activities implemented on lands other than wetlands - Version 2.
		Other	N/A	N/A
	Belowground Biomass	CO ₂	Yes	Carbon stock in this pool is expected to increase due to the implementation of the project activity. Assessment Team validated during site inspection that- is the major carbon pool that Assessment Team is subjected to the project activity. Below ground Biomass of trees helps in carbon sequestration and removal of CO₂ from atmosphere over a period.

Source	Gas	Included?	Assessment and conclusion
			Assessment Team concluded that this is as per the applied methodology- AR-ACM0003; Afforestation and reforestation project activities implemented on lands other than wetlands - Version 2.
	CH ₄	No	GHG emissions throughout the project activity are negligible. Therefore, it is conservatively ignored. Assessment Team validated during site inspection that CH₄ does not have much impact on the lands and in the atmosphere of the surrounding areas. Assessment Team concluded that this is as per the applied methodology- AR-ACM0003; Afforestation and reforestation project activities implemented on lands other than wetlands - Version 2.
	N ₂ O	No	GHG emissions throughout the project activity are negligible. Therefore, it is conservatively ignored. Assessment Team validated during site inspection that- N₂O does not have much impact on the lands and in the atmosphere of the surrounding areas. Assessment Team concluded that this is as per the applied methodology- AR-ACM0003; Afforestation and reforestation project activities implemented on lands other than wetlands - Version 2.
	Other	N/A	N/A

3.4.4 Baseline Scenario

Based on the review of VCS PDMR, Assessment Team confirms that the project baseline scenario has been identified as per the CDM “Combined tool to identify the baseline scenario and demonstrate additionality in A/R CDM project activities” (Version 1).

A more detailed assessment of identification of the most plausible baseline and demonstration of additionality is provided in section 3.4.5 of additionality.

The audit team assessed the pre-project land use scenario, which primarily comprised unmanaged degraded scrubland and cropland under private ownership. To understand the historical land use, vegetation dynamics, and baseline conditions, the audit team reviewed the Land Use and Land Cover (LULC) classification and Hansen tree cover assessment conducted for the period 2011-2020. These assessments, derived from baseline surveys and GIS analysis, established the pre-project conditions in 2021. The LULC assessment for 2020 indicated 81.45% of the land was classified as degraded scrubland, 5.55% as degraded open land 13% was classified as cropland. As per the assessment there is 0% of land classified as forest land as per the LULC assessment.

The audit team confirms that the eligible areas considered under the project for ARR activities do not include forest land in the baseline scenario. The assessment was undertaken in line with the applicability conditions of the VCS Standard v4.7, using a multi-tiered approach combining remote sensing, geospatial analysis, and field verification.

The project proponent (PP) demonstrated the application of the following eligibility assessment tools:

- **Normalized Difference Fraction Index (NDFI) Assessment** – applied to evaluate degradation patterns and vegetation dynamics over a 10-year period.
- **Hansen Tree Cover Dataset** – used to assess tree cover against Uganda’s national forest definition.
- **Visual Satellite Imagery Interpretation** – conducted through Google Earth to cross-check remote sensing outcomes and reduce potential classification errors.
- **Ground Truthing** – performed on-site to validate remote sensing results and verify land characteristics, with particular attention to areas suspected of false-positive classification.

Through the above assessments, the project demonstrated that areas with vegetation meeting or exceeding the national threshold of 30% crown cover over at least 1 hectare, or dense invasive shrubs misclassified as forests, were excluded from the eligible area. According to the Uganda’s national forest definition³, a forest is characterized by

- Minimum 30% crown cover over an area of ≥ 1 hectare, and
- Trees reaching ≥ 4 meters in height.

It was noted that Hansen’s tree cover data captures vegetation from ≥ 5 meters in height. For consistency with both the national definition and international reporting standards, the forest determination for this project was applied using $\geq 30\%$ crown cover over ≥ 1 hectare with trees ≥ 5 meters in height.

³ Source: https://redd.unfccc.int/media/uganda_frl_final_2018_submitted.pdf) - see the definition on page #6

Based on document review, remote sensing analyses, GIS data, and field verification, the audit team concludes that the baseline scenario comprises only non-forest areas in line with Uganda's national forest definition. Accordingly, all planting activities under the project are eligible as ARR activities, as per VCS Standard v4.7 (Appendix 1, Section A1.1).

The audit team noted the significant presence of degraded scrubland characterized by invasive species like *Lantana camara*, *Dichrostachys cinerea*, and others, which disrupt native ecosystems and reduce soil fertility. The majority of the project land is leased from the National Forestry Authority (NFA), having undergone severe degradation due to illegal agriculture, fuelwood collection, and charcoal production. Studies indicate a substantial decline in Uganda's forest cover due to unsustainable harvesting, particularly for commercial charcoal production. In response to this degradation, the NFA leased degraded reserve land for restoration through commercial tree plantations.

The audit team observed that the participating landowners leased degraded land from the NFA to establish commercial tree plantations (*Eucalyptus hybrid* and *Pinus caribaea*), leaving existing baseline trees untouched. Landowners also signed agreements ensuring harvested wood would not be used for charcoal or firewood. For freehold and private mailo land (approximately 20% of the project area), the baseline was primarily underutilized cropland, which landowners opted to convert to plantations for economic and environmental benefits. Consequently, the audit team established the project baseline as predominantly degraded scrublands and croplands.

The audit team cross-checked the baseline scenario during the onsite inspection by visiting sample plots and through interviews with stakeholders and community members. The audit team noted that the area under the project activity lacked pre-project vegetation prior to project implementation. Based on the onsite inspection and interviews, the audit team confirmed that this baseline scenario is justified. The audit team verified that all relevant national or state policies are listed within the project documentation. Upon reviewing the VCS PDMR and the provided evidence, the audit team confirmed that the baseline scenario has been correctly identified and would have occurred in the absence of the project.

3.4.5 Additionality

The additionality of the OYU-Reforestation Uganda for a Better Tomorrow" project has been demonstrated using the "Combined tool to identify the baseline scenario and demonstrate additionality in A/R CDM project activities (Version 01)." The additional demonstration assesses whether the project activities would have occurred in the absence of carbon finance and whether the project meets the regulatory surplus and common practice requirements under the VCS program.

The project applied CDM AR-ACM0003 v2.0 (Afforestation and Reforestation of Lands except Wetlands), alongside the combined tool for baseline and additionality demonstration. The following steps outline how additionality was demonstrated and validated during this verification period.

Adherence to Regulatory Surplus Requirements

The project proponent has provided sufficient evidence to demonstrate that no legal or regulatory requirements exist that mandate the implementation of the project activities. The relevant laws and regulations governing land use and environmental protection in Uganda (including forestry laws) were reviewed, and none require afforestation or reforestation of the degraded lands where the project is implemented. The project goes beyond the regulatory requirements, confirming regulatory surplus.

The project's legal framework was verified to ensure that it does not breach any national or local regulations, and no laws were identified that enforce plantations on degraded scrubland and croplands as part of a legally required land-use change.

The project activity is implemented in a non-annex I country and is not mandated by any law, statute, or regulatory framework, confirming its eligibility under the principle of regulatory surplus. Evidence of compliance with laws, such as private land tenure documentation and adherence to environmental regulations, has been validated by the assessment team. This confirms the voluntary nature of the project activity under existing legal frameworks.

Based on the methodology a stepwise approach to identify the baseline scenario and simultaneously demonstrate additionality in project activity is provided below

STEP 0: Preliminary Screening Based on the Start Date of the A/R Project Activity

In accordance with the VCS tool, the project activity began on 01 March 2021, which is prior to the registration date and after 31 December 1999, as required by the methodology.

The audit team determined that the decision to develop the project was primarily driven by carbon revenue serving as the key financing mechanism, thereby ensuring its long-term sustainability. The audit team confirmed that this decision was made prior to the project's initiation, this is substantiated through the review of the financial decision document. The audit team reviewed the official meeting minutes where the financial viability of the project activity was discussed. The documentation confirms that carbon finance was explicitly considered as a determining factor in the decision to proceed with the project. The minutes state that the project faced significant funding gaps, particularly for plantation establishment and maintenance, and that the revenue from carbon credits was essential to address these costs. The audit team verified that the decision to implement the project activity was formally contingent upon securing additional financing through carbon finance.

STEP 1: Identification of Alternative Land Use Scenarios for the Proposed A/R Project Activity

The project has identified and evaluated two potential alternative land use scenarios, and the most credible baseline scenario has been selected.

Sub-step 1a: Identification of Credible Alternative Land Use Scenarios for the Proposed A/R Project Activity

- **Alternative Scenario 1: Continuation of Pre-Project Land Use i.e. degraded scrublands (87% project area under leased land) and croplands (13% project area under subsistence agriculture)** This involved managing existing degraded scrubland and croplands, characterized by invasive shrubs and scattered trees, a condition exacerbated by illegal logging and poor management, as confirmed by LULC analysis. Croplands, a smaller portion, saw landowners shift to plantations to improve degraded soil. This scenario maintains the land's historical use.
- **Alternative Scenario 2: Establishment of plantations within the project boundary without being registered as the ARR VCS project activity.**

This involves afforestation with species like *Pinus caribaea* and *Eucalyptus* hybrid, independent of carbon revenues and VCS registration. The audit team noted Uganda's National Forestry Policy recognizes the importance of commercial plantations for reducing pressure on natural forests and promoting economic growth. The audit team also observed the increasing reliance of Uganda's wood-based economy on plantations, with significant value attributed to sawn wood and poles. The audit team determined that establishing high-density monocultures of commercial timber species for timber production is credible and practicable, contingent on landowners' capacity for initial investment.

Outcome of Sub-step 1a: The project has two alternative scenarios (i.e. scenarios 1 & 2) are credible and would have occurred on the land within the project boundary of the ARR project activity.

Sub-step 1b: Consistency of Credible Alternative Land Use Scenarios with Enforced Mandatory Applicable Laws and Regulations

Scenarios 1 and 2, are viable alternative land-use options for the ARR VCS project both of which fully comply with all applicable laws and regulations, regardless of their active enforcement status in Uganda. During the onsite audit, the audit team cross checked with the stakeholders and local expert that NFA encouraged the establishment of tree plantation and not mandate by any laws. Further the audit team reviewed the NFA leased agreement and not found any such clause. Audit team reviewed the National Forestry and Tree Planting Act of 2003 encourage such activities but do not make them a compulsory legal requirement for all land lease scenarios. The audit team cross verified with the local expert also and concluded that NFA only encourages the tree plantation activities but it is not mandate in any national or country wide laws.

Outcome of Sub-step 1b:

The audit team determined that Scenarios 1 & 2 represent plausible alternative land-use scenarios to the ARR VCS project activity and comply with mandatory legislation and regulations in Uganda, irrespective of their active enforcement status. The audit team noted that Scenario 2 encounter multiple barriers, which will be addressed in subsequent sections. Importantly, the audit team found that these scenarios do not violate any presently enforced mandatory laws and regulations. The audit team concluded that if the project activity is not implemented, the most probable outcome is that the land will remain in its pre-project condition without significant

changes, having been recognized as degraded scrubland and cropland prior to any intervention associated with the project activity.

Barrier Analysis

Sub-step 2a. Identification of barriers that would prevent the implementation of at least one alternative land use scenario.

For the Scenario 1, continuation of pre-project activity i.e., degraded scrublands (87% project area under leased land) and croplands (13% project area under subsistence agriculture), no barriers are identified. On the contrary, Scenario 2, i.e., the establishment of private plantations without the use of carbon finance faces multiple barriers which are described below,

The project proponent has identified several barriers to implementing the project in the absence of carbon finance. The barriers were analyzed and validated through review of supporting documents, feasibility studies, and stakeholder consultations:

Investment barrier:

The audit team assessed whether debt financing is available for private landholders to establish tree plantations or execute revegetation activities in Uganda. The assessment team used method of review of legal policies from the bank with the help of local expert (Uganda) and interview with the relevant government officials to confirmed that there is not debt funding available for the plantation activities. The assessment confirmed that debt funding mechanisms are absent for plantation activities. The auditor reviewed existing policies, schemes, and financial institutions for debt funding relevant to the forestry/plantation sector and concluded that plantation projects face significant financial barriers when it comes to securing working capital via debt funding.

Agricultural Credit Facility (ACF) – The team confirmed that the ACF, managed by the Bank of Uganda with Participating Financial Institutions, explicitly excludes forestry activities such as tree planting and working capital for plantation establishment. The audit team reviewed Uganda Government Credit Scheme from the website <https://www.bou.or.ug/bouwebsite/ACF/> and confirmed that there is no debt funding available for the plantation activities. This exclusion is documented in official scheme guidelines

Also, the audit team reviewed the ACF guidelines and confirmed that the scheme excludes financing for forestry/tree planting. ACF operational documents exclude tree planting as an eligible activity.

Uganda Development Bank Limited (UDBL): Review of UDBL's mandate and financing portfolio indicated that supported sectors include agriculture (agro-processing), manufacturing, human capital, infrastructure, and tourism; forestry is not identified. Publicly available UDBL project

portfolio and eligibility criteria explained that tree plantation activities are not eligible for UDBL financing.

Farm Income Enhancement and Forestry Conservation Project (FIEFOC 2 – AfDB): The audit team reviewed FIEFOC 2 design documents and confirmed that it is a government/community-based program with no provisions for direct debt financing to individual landholders. Project documentation indicates focus on irrigation, watershed management, and agribusiness support, not plantation debt financing. It is not relevant as a financing mechanism for individual plantation establishment.

National Forestry Authority (NFA): Though, NFA provides degraded lands on lease to the private landholders along with limited technical support, it does not provide financial assistance or debt funds to private landholders. The audit team cross verified the same from on-site interviews of select stakeholders & NFA official.

Based on the above evidence checks, the audit team concludes that no dedicated debt financing mechanisms are available in Uganda for private plantation activities. Existing facilities either exclude forestry, operate at community/governmental levels, or provide non-financial contributions only. Furthermore, structural financing constraints such as lack of collateral acceptance, high interest rates, and policy implementation gaps exacerbate the investment barrier. During the onsite audit, the audit team interacted with the stakeholders including landowners and confirmed that none of them had been able to access credit for afforestation projects. Therefore, the project activity faces a credible and significant investment barrier that supports its additionality claim under CDM AR-TOOL 02 v1. The project has funded by the PP using its own capital confirms through the PP financial statement and interview with the project financial team.

The Project Proponent (PP) identified that the NFA and Government of Uganda face significant financial and operational barriers to independently establish and sustain large-scale plantations.

- The audit team cross-checked this claim against national data on forest reserves (506 Central Forest Reserves, 192 Local Forest Reserves, totalling 1.26 million ha, with an additional 730,000 ha in parks and game reserves).
- Reports from the IMF (2010) and subsequent forestry sector reviews were examined, which confirmed that the forestry sector is almost entirely dependent on donor and private investment, with limited public financial support.
- The audit team verified that in response to this funding gap, the NFA developed a strategy (2005 Plantation Strategy) to lease degraded forest lands to private entities. This leasing

model was confirmed as a documented policy response to overcome the lack of government investment capacity.

Based on these sources, the audit team concludes that insufficient public sector funding and investment barriers have been a driving force behind NFA's reliance on private sector engagement.

Barriers for Private Investors Without Carbon Finance: - The PP stated that private investors, small, medium, and large-scale face substantial financial, technical, and institutional barriers to establishing sustainable plantations without carbon finance.

The audit team cross-verified these claims as follows:

- **Cost Analysis:** Documentation provided by the PP, supported by independent forestry sector studies, was reviewed to confirm the establishment and maintenance cost structure (USD 1,819.78/ha) including saplings, labour, thinning, management, and monitoring.
- **Revenue vs. Costs:** Independent calculations were reviewed, showing that revenues from thinning and harvest (USD 3,251/ha over 20 years) are insufficient to cover total costs (USD 4,363/ha). This supports the PP's conclusion that carbon revenue is indispensable for financial viability.
- **Credit and Finance Access:** National financial inclusion statistics were reviewed. Independent data confirmed that only ~8% of Ugandans save with formal financial institutions and that long-term forestry finance products are largely unavailable. The audit team verified that this limits access to affordable credit, forcing smallholders to rely on personal savings or high-interest informal loans.
- **Large-Scale Investor Constraints:** FAO and sectoral reports were reviewed to confirm that restrictive timber export policies, lack of standardized grading systems, and low domestic timber prices create profitability barriers for large investors. Independent NPV analyses (2020) were examined, confirming that pine plantations showed negative NPV (USD -368 to -657/ha), discouraging reinvestment.

The audit team concludes that:

- For NFA and Government of Uganda, chronic underfunding and donor dependency have prevented plantation development without private involvement.

- For private investors, high establishment and maintenance costs, long gestation periods, weak credit systems, and low profitability render plantations financially unviable without additional revenue streams such as carbon finance.
- Both small/medium and large-scale investors face barriers, though in different forms: lack of finance for smallholders and low profitability/market constraints for larger investors.

The National Forestry Authority (NFA) faces financial constraints (insufficient funding) hindering independent forest management and restoration, leading to the leasing of degraded lands for private plantations since 2005 to alleviate financial burdens.

Private investors, regardless of scale, face high initial and ongoing costs for plantation establishment, maintenance, and long maturation periods, deterring investment without external support. Cost analysis shows expenses exceeding potential timber revenue, highlighting the necessity of carbon credits for financial viability and incentivizing participation in carbon-certified projects.

The project's reliance on carbon revenues to recover upfront costs (e.g., sapling procurement, site preparation, and plantation management) was validated. Financial projections demonstrated that without carbon credit revenue, the project would not achieve an adequate return on investment. Evidence of the financial infeasibility of Scenario 2 was provided through comparative cost assessments of plantation establishment and maintenance.

Institutional Barriers:

The audit team identified institutional barriers applicable to Scenario 2. The audit team observed that recent government interventions have created skepticism among private investors regarding commercial plantation activities. Specifically, the audit team noted the imposition of strict timber export restrictions in 2023, which has rendered the commercial plantation business less profitable. The audit team also referenced discussions and concerns in 2020 and 2021 among environmental groups and industry stakeholders regarding a potential timber export ban due to deforestation and unsustainable logging. Furthermore, the audit team found that obtaining the necessary export license for timber is a difficult and complex process, posing another significant constraint on large-scale commercial plantation adoption. The audit team acknowledged that Uganda's timber export ban was implemented to address soil degradation caused by extensive harvesting without adequate revegetation, with potential license exemptions for those undertaking replanting activities. Additionally, the audit team noted the government's initiative to shift from timber to concrete electric poles in certain regions due to the increased cost of timber poles, which will likely decrease domestic timber demand and further discourage private investment in plantations. The audit team concluded that carbon project revenue represents a crucial incentive for landowners to establish plantations on their lands in light of these institutional barriers.

Sub-step 2b. Elimination of land use scenarios that are prevented by the identified barriers

Scenarios 2 (i.e., Establishment of plantations within the project boundary without being registered as the ARR VCS project activity) is prevented by barriers and is therefore eliminated. Whereas, scenario 1 i.e., the continuation of pre-project land use emerges as the potential baseline scenario as it encounters no barriers.

Outcome of Step 2a: List of barriers that may prevent one or more land use scenarios identified in the Step 1b.

<i>Alternative land use scenarios</i>	<i>Investment barriers</i>	<i>Institutional barriers</i>
<i>Continuation of the pre-project land use</i>		
<i>Establishment of plantations within the project boundary without being registered as the ARR VCS project activity.</i>	✓	✓

Sub-step 2b. Elimination of land use scenarios that are prevented by the identified barriers

Scenario 2 is prevented by barriers and is therefore eliminated. Scenario 1, the continuation of pre-project activity use where lands remain as degraded scrublands and cropland emerges as the potential baseline scenario as it encounters no barriers.

Outcome of Sub-step 2b: List of land use scenarios that are not prevented by any barrier

Scenario 1 i.e. Continuation of the pre-project land use i.e. degraded scrubland & cropland is the only alternative without barriers. Thus, it is the baseline scenario

Investment Analysis

Investment analysis was not required for this project, as the baseline scenario was identified as the continuation of degraded scrubland and cropland. However, the project proponent has demonstrated that the project would not be financially viable without the revenue generated from carbon credits.

Common Practice Analysis

In accordance with Step 4 of the CDM AR Tool 02 (v1.0), the audit team assessed the extent to which activities similar to the proposed project have been implemented in Uganda, with respect to their scale, funding source, and geographical area.

- **Scale:** The project involves both small-scale (<50 ha) and medium-scale (51–100 ha) landholders, covering a total project area of 2,891.9 ha (87%) under leasehold ownerships. The remaining 432.12 ha (13%) falls under Private Mailo and freehold land ownership. The audit team cross-checked the ownership details against lease agreements provided by the National Forestry Authority (NFA) and land titles from private stakeholders. Records confirmed the scale distribution as presented in the PDD.
- **Funding:** The plantation establishment has been financed directly by the participating landowners without reliance on upfront carbon revenues. The audit team reviewed financial disclosures from project participants, including signed meeting minutes, landowner investment receipts, and stakeholder consultation records. These confirmed that prior to project registration, no concessional loans or external carbon finance were accessed.
- **Geographical area:** Uganda, specifically including leased lands under small and medium-scale holders, as well as Mailo and freehold owners. The audit team validated the project's geographic delineation through KML, NFA lease agreements, and field inspections at sampled sites.

A quantitative review was carried out in line with paragraph 32 of the AR Tool, assessing comparable reforestation or commercial forestry activities implemented or initiated since 31 December 1989, excluding other registered carbon projects.

The review indicated that while Uganda's plantation forestry expanded to approximately 84,000 ha by 2019, this growth was predominantly driven by large-scale private organizations and not by small or medium landholders. Records from the National Forestry Authority (NFA) confirm that although a plantation strategy was adopted in 2005 (targeting 200,000 ha by both NFA and the private sector), actual outcomes remained modest. Large-scale companies such as New Forest Company (7,320 ha), Green Resources Ltd (5,791 ha), and Global Woods (2,600 ha) account for the majority of plantations established, whereas diffusion of similar plantation activities by small and medium-scale landholders is either absent in official records or characterized by frequent failures, non-compliance, and revocation of lease licenses due to financial and resource barriers.

Based on this assessment, the audit team concludes that plantation establishment and long-term maintenance by small- and medium-scale landholders in Uganda has not been common practice. The project activity is therefore not considered to be a prevailing practice within the defined region and scale, and its additionality is upheld.

Criteria	Project Information	Audit Cross-Checks	Conclusion
Scale	Project area includes small (<50 ha) and medium (51–100 ha) landholders covering ~2,891.9 ha (87%) under leasehold, and 432.12 ha (13%) under Mailo and freehold ownership.	Verified lease agreements from the National Forestry Authority (NFA); reviewed freehold and Mailo land titles; cross-checked ownership records during field sampling.	Scale distribution as stated in the PDD is correct and reflects project circumstances.
Funding Structure	Initial plantation establishment and maintenance costs were borne by landowners without access to concessional loans or external carbon finance.	Reviewed signed meeting minutes, stakeholder consultation records, and financial receipts submitted by landowners; confirmed absence of concessional finance.	Evidence supports that without carbon finance, project viability would have been constrained.
Geographic Area	Project implemented across leased NFA land and private landholdings (Mailo and freehold) in Northern, Central, and Western Uganda.	Validated cadastral maps, NFA lease documents, and conducted field verification of sampled sites; GPS coordinates aligned with PDD boundaries.	Geographic delineation is consistent with PDD and accurately reflects project scope.
Existence of Similar Activities	Uganda reported 84,000 ha of private plantation expansion by 2019, mostly by large investors (New Forest Company, Green Resources Ltd, Global Woods, Nileply Ltd). Small/medium landholders attempted plantations but faced high failure rates and lease cancellations.	Triangulated NFA Plantation Strategy reports (2005–2019), stakeholder consultation outcomes, and independent literature; confirmed limited and unsustainable success of smallholder plantations.	Similar activities at this scale and funding model are rare and unsustainable without carbon finance.
Common Practice Determination	The project's combination of scale, funding structure, and landholder profile is not commonly observed in Uganda	Independent review against AR Tool 02 (v1.0) requirements; excluded other carbon projects in accordance with paragraph 32 of the Tool.	Project activity is not common practice, carbon finance is a decisive factor enabling implementation and sustainability.

The Project identified that the project activity represents a first-of-its-kind initiative in Uganda, where small and medium-scale landholders (<50 ha and 51–100 ha, respectively) have jointly implemented long-rotation reforestation activities on NFA-leased lands. The initiative is principally dependent on carbon revenue for long-term sustenance, with landowners themselves contributing the initial working capital without debt funding or large-scale investor involvement.

To substantiate this claim, the audit team cross-verified the information by reviewing:

- Historical Programs and Schemes – Records of the Sawlog Production Grant Scheme (SPGS Phases I–III) were assessed. The audit team confirmed that earlier smallholder-led plantations were established only with direct support under SPGS, whereas landowners participating in this project (planting initiated from 2021 onwards) were ineligible due to the declared program end date in 2020.
- COVID-19 Restrictions – Publicly available government orders and international publications were reviewed to confirm that severe restrictions between March–July 2020, including nationwide lockdowns, business closures, and associated loss of incomes, created financial and operational barriers that further limited plantation activity during the SPGS III timeline.
- Market Conditions – Sectoral reports and government notifications on timber export bans and resulting price volatility were examined. The audit team verified that these conditions discouraged private investors and rendered smallholder-led plantations financially unviable without carbon revenue support.
- Comparability Check – The audit team examined National Forestry Authority (NFA) plantation data and sector studies, which confirmed that reforestation or commercial forestry by small/medium-scale landholders on leased lands has not been widely practiced. Past attempts outside carbon finance were either discontinued or failed due to high establishment and maintenance costs, long rotation periods, and lack of consistent funding mechanisms.

The evidence confirms that:

- Large-scale plantations have diffused in Uganda since the 1990s, but these are supported by significant capital investments from major organizations.
- Attempts by small and medium-scale landholders have been rare, unsustainable, and heavily dependent on external grant schemes.
- Without carbon finance, such initiatives have consistently failed due to high establishment and maintenance costs, long rotation periods, and lack of interim financial returns.
- The present project is therefore distinguished as the first coordinated effort of small and medium-scale landholders collectively investing their own capital, relying on carbon revenue as the principal enabling factor for long-term viability.

Based on this independent review, the audit team concludes that the project activity is not a common practice within the defined geographic and sectoral context. The analysis demonstrates that similar activities, when implemented, relied heavily on grant schemes and did not sustain beyond their support periods. In contrast, the present project's reliance on carbon finance as the principal enabling factor confirms its additionality and alignment with the requirements of the applied methodology and the VCS Standard v4.7.

Overall Conclusion

The project activity demonstrates additionality based on the following:

- The continuation of degraded scrubland and cropland is the most plausible baseline scenario.
- The project face significant Investment barrier, and institutional barriers that would have prevented its implementation without carbon revenues.
- Afforestation/reforestation activities of this type are not common practices in the region.

This assessment confirms that the project meets the additionality requirements of the VCS program and the applied methodology. The evidence supporting this conclusion has been cross verified through document review, stakeholder consultations, and site inspections.

3.4.6 Quantification of GHG Emission Reductions and Carbon Dioxide Removals

The process for quantifying the GHG reduction & removals by the project during the project's crediting period was conducted in accordance with the applied methodology "AR-ACM0003: Afforestation and reforestation project activities implemented on lands other than wetlands – Version 2.0. The KBS Assessment Team has performed review of all data, parameters, formulas, calculations, conversions, statistics and resulting uncertainties and output data to ensure consistency with the VCS documentation, methodology tools, and the VCS PDMR.

As per the clause 3.10.1 of VCS Standard 4.7- "Projects: Less than or equal to 300,000 tCO_{2e} per year". Large projects: "Greater than 300,000 tCO_{2e} per year". Since the estimated emission removals is 3,79,891 tCO_{2e} per year that is greater than 300,000 tCO_{2e} per year so the project activity falls under Large project category.

Baseline Emission: -

The baseline net GHG removals by sinks is the sum of the changes in carbon stocks of the selected carbon pools within the project boundary that would have occurred in the absence of the project activity. Under the conditions of the applied methodology, changes in the carbon stock of above-ground and below-ground biomass of non-tree vegetation, dead wood, litter, and soil organic pools may be conservatively assumed to be zero for all strata in the baseline scenario.

Baseline Emissions have been estimated in accordance with the selected A/R methodology, Section 5.4 “Baseline Emissions”. Baseline net GHG removals by sinks are calculated as follows:

$$\Delta C_{BSL,t} = \Delta C_{TREE_BSL,t} + \Delta C_{SHRUB_BSL,t} + \Delta C_{DW_BSL,t} + \Delta C_{LI_BSL,t}$$

Where:

$\Delta C_{BSL,t}$	=	Baseline net GHG removals by sinks in year t ; t CO ₂ -e
$\Delta C_{TREE_BSL,t}$	=	Change in carbon stock in baseline tree biomass within the project boundary in year t , as estimated in the tool “Estimation of carbon stocks and change in carbon stocks of trees and shrubs in A/R CDM project activities”; t CO ₂ -e
$\Delta C_{SHRUB_BSL,t}$	=	Change in carbon stock in baseline shrub biomass within the project boundary, in year t , as estimated in the tool “Estimation of carbon stocks and change in carbon stocks of trees and shrubs in A/R CDM project activities”; t CO ₂ -e
$\Delta C_{DW_BSL,t}$	=	Change in carbon stock in baseline dead wood biomass within the project boundary, in year t , as estimated in the tool “Estimation of carbon stocks and change in carbon stocks in deadwood and litter in A/R CDM project activities”; t CO ₂ -e
$\Delta C_{LI_BSL,t}$	=	Change in carbon stock in baseline litter biomass within the project boundary, in year t , as estimated in the tool “Estimation of carbon stocks and change in carbon stocks in deadwood and litter in A/R CDM project activities”; t CO ₂ -e

As the project activity is solely focused on the growth and monitoring of trees, the Project Proponent chooses to account for aboveground and belowground biomass, but chooses not to account for the potential increased sequestration of dead wood, litter, or soil organic carbon. Thus, the baseline for these values shall be assumed to be zero, and the baseline calculation shall be:

$$\Delta C_{BSL,t} = \Delta C_{TREE_BSL,t} + 0 + 0 + 0$$

$$\Delta C_{BSL,t} = \Delta C_{TREE_BSL,t}$$

To calculate the $\Delta C_{TREE_BSL,t}$, the project applied the “Estimation of carbon stocks and change in carbon stocks of trees and shrubs in A/R CDM project activities” tool (AR-TOOL 14).

The project activity ensures that no biomass burning takes place during the land preparation and plantation phase, hence only slashing of invasive shrubs is the appropriate method to control weeds and they are allowed to decompose into the soil.

Baseline tree biomass carbon stocks

Pre-project tree biomass carbon stocks are calculated using the equation below from section 8.3 in AR-TOOL 14 on default estimation by proportionate crown cover (equation 20).

$$C_{TREE_BSL} = \sum_{i=1}^M C_{TREE_BSL,i}$$

Equation 4.2

In all cases where the project does not clear trees (i.e., stems > 10 cm DBH) during site preparation, $C_{TREE_BSL,t} = 0$.

In accordance with the Food and Agriculture Organization (FAO) of the United Nations, stands are defined as stems with a diameter at breast height (DBH) of 10 cm or more⁴. However, in the context of this project activity, it has been noted that no stems with a DBH greater than 10 cm have been cleared at the time of site preparation. Consequently, the carbon stock estimation variable $C_{TREE_BSL,t}$ is considered zero in this particular case.

KBS Assessment Team in accordance with applied methodological tool- “Estimation of carbon stocks and change in carbon stocks of trees and shrubs in A/R CDM project activities” confirms that the baseline estimated as zero is in compliance with the conditions mentioned of the tool.

This is to clarify that the invasive shrubs for which the baseline carbon stocks were accounted as zero or insignificant followed the indicator (c) under paragraph 12 of the AR tool 14 v4.2, which states: "the presence of plant species locally known to be indicator of infertile land."

The vegetation existing in the baseline (t=0) comprise two distinct types:

- a. Sparsely distributed native trees that were not cleared or removed during land preparation activities. They have been and will continue to be retained throughout the crediting period.
- b. Invasive shrubs that were cleared or removed for land preparation. The invasive shrub species identified in the project are viz., *Lantana camara* and *Senna spectabilis* (a species of genus ‘Senna’).

Degraded lands are infertile lands:

PP would like to emphasize that degraded lands often result from reduced soil fertility stemming from intensive management, poor soil conservation measures, and climate change⁵. Moreover,

⁴ <https://www.fao.org/3/I8661EN/I8661en.pdf>

⁵ Mosier S, Córdova SC and Robertson GP (2021) Restoring Soil Fertility on Degraded Lands to Meet Food, Fuel, and Climate Security Needs via Perennialization. *Front. Sustain. Food Syst.* 5:706142. doi: 10.3389/fsufs.2021.706142

Soil degradation is the process that lowers the current or future capacity of the soil to produce goods or services. The term implies a long-term decline in soil productivity and its environment-moderating capacity (Blum, 1998)⁶. It is the soil degradation that lowers the soil fertility⁷ (or renders it infertile).

Furthermore, the United Nations Convention to Combat Desertification (UNCCD)⁸ defines land degradation as reduction or loss, in arid, semi-arid and dry sub-humid areas, of the biological or economic productivity and complexity of rain-fed cropland, irrigated cropland or range, pasture, forest and woodlands resulting from land uses or from a process or combination of processes, including processes arising from human activities and habitation patterns such as: soil erosion caused by wind and/or water; deterioration of the physical, chemical and biological or economic properties of soil; and long-term loss of natural vegetation, noting a decline in **soil fertility** as a consequence.

Similarly, the Food and Agriculture Organization (FAO)⁹ of the UN defines land degradation as a natural and human-induced process that negatively affects the land's natural functions related to water, energy, nutrient storage, and recycling, leading to a **decline in land productivity**. It links degradation to a “decline in the productive capacity of soil” and a “diminished capacity of the ecosystem to provide goods and services.” Therefore, when a land is degraded, it loses its ability to support plant growth and provide ecosystem services, rendering it functionally infertile for its natural or desired productive uses.

Thus, it is implied that the identified degraded lands in the baseline (via. LULC assessment) are infertile lands.

Invasive shrub, an indicator of degraded or infertile lands:

According to the FY 2021 report¹⁰ from the Office of the Auditor General, both invasive and exotic **plant** species in **Uganda** have been responsible for displacing the native species by competing for food, **degrading habitats** and introducing disease, as some are also poisonous to animals.

⁶ Blum, W.E.H. (1998). Basic concepts: degradation, resilience, and rehabilitation. In: Methods for Assessment of Soil Degradation, edited by Lal R, Blum WEH. Advances in Soil Science. CRC Press, Boca Raton, pp. 1-16

⁷ Asio, Victor & Asio, Luz. (2021). Properties, Fertility Status, and Sustainable Management of Degraded Tropical Soils..

⁸ UNCCD, 1993

⁹ Ziadat, Feras & Zdruli, Pandi & S., Christiansen & L., Caon & M., AbdelMonem & Fetsi, Theodora. (2021). An Overview of Land Degradation and Sustainable Land Management in the Near East and North Africa. Sustainable Agriculture Research. 11. 11-11. 10.5539/sar.v11n1p11.

¹⁰ FY 2021 report

The report also recognizes both *Lantana camara* and *Senna* species as invasive amongst other plant species¹¹.

Furthermore, invasive species are also responsible for reducing native plant biomass by competition^{12/13}, decreasing nutrient uptake of native plants¹⁴ and altering nutrient cycling. Such impacts on soil nutrient balance potentially lead to the persistence of invasive species, while hampering the recovery of disturbed native communities¹⁵.

Lantana camara is invasive in large parts of Kenya, Tanzania and Uganda (Lyons and Miller 1999)¹⁶. It is very widespread in all three countries and occurs along roadsides, in degraded lands, in riparian zones (banks of watercourses), along fence lines and in pastures and parklands, in plantations, forest edges and gaps. It is probably the most widespread terrestrial invasive plant in Africa and its rapid spread is associated with human induced disturbance. Another shrub species i.e., *Senna spectabilis*¹⁷ is also considered to be invasive in parts Tanzania (Henderson 2002) and Uganda (Mungatana and Ahimbisibwe 2010)¹⁸. Thus, it is implied that the invasive shrubs identified are known indicators of degraded or infertile lands in Uganda (project area). It has been ensured that the PP has followed the Paragraph 12 of the AR-Tool 14 to demonstrate that the biomass in the vegetation removed for land preparation may be accounted as zero.

All the conditions were assessed by the KBS Assessment Team during site visit via interviews of stakeholders and site inspection confirming there were no trees in pre- project scenario in the areas under project activity. Hence the Assessment Team validated that all the conditions mentioned in applicable tool clause 11 is fulfilled and the baseline can be accounted as zero.

Project Emission: -

¹¹ REPORT OF THE AUDITOR GENERAL TO PARLIAMENT FOR THE FINANCIAL YEAR ENDED 30TH JUNE 2021

¹² Vilà, M., Espinar, J.L., Hejda, M., Hulme, P.E., Jarošík, V., Maron, J.L., Pergl, J., Schaffner, U., Sun, Y. and Pyšek, P. (2011), Ecological impacts of invasive alien plants: a meta-analysis of their effects on species, communities and ecosystems. *Ecology Letters*, 14: 702-708. <https://doi.org/10.1111/j.1461-0248.2011.01628.x>

¹³ Vilà, M. and Weiner, J. (2004), Are invasive plant species better competitors than native plant species? – evidence from pair-wise experiments. *Oikos*, 105: 229-238. <https://doi.org/10.1111/j.0030-1299.2004.12682.x>

¹⁴ Weidenhamer, J.D., Callaway, R.M. Direct and Indirect Effects of Invasive Plants on Soil Chemistry and Ecosystem Function. *J Chem Ecol* 36, 59–69 (2010). <https://doi.org/10.1007/s10886-009-9735-0>

¹⁵ Teixeira, L.H.; Yannelli, F.A.; Ganade, G.; Kollmann, J. Functional Diversity and Invasive Species Influence Soil Fertility in Experimental Grasslands. *Plants* 2020, 9, 53. <https://doi.org/10.3390/plants9010053>

¹⁶ Factsheet - *Lantana camara* (Lantana)

¹⁷ Factsheet - *Senna spectabilis* (Spectacular Cassia)

¹⁸ Mungatana, E. and Ahimbisibwe, P.B. (2010). Quantitative impacts of invasive *Senna spectabilis* on distribution of welfare: a household survey of dependent communities in Budongo forest reserve, Uganda. Poster presented at the Joint 3rd African Association of Agricultural Economists (AAAE) and 48th Agricultural Economists Association of South Africa (AEASA) Conference, Cape Town, South Africa, September 19-23, 2010.

The ex-ante estimations make use of:

- a) **Species-specific Growth Curves:** These growth curves outline the incremental changes in Diameter at Breast Height (DBH) based on the age of each planted tree species. The project activity focuses on identifying Tier-3 information or data and may move to Tier-2 or Tier-1 only when the specific information is missing as per IPCC.
- b) **Species-Specific Allometric Equation:** The estimation process incorporates region-specific allometric equations for each tree species. Under this method, existing data such as DBH data are used in combination with tree growth models (allometric equations) to predict the growth of trees. This tree-wise data is extrapolated to the total number of trees based on planned tree planting and management.

In case, the region-specific allometric equation is missing, the equation from the same eco-region is identified. Only when the species-specific equation is missing, that the general equation of genus or general equation for trees for that particular region is identified and used for calculation purpose.

The audit team confirm that the tropical general (Biomass) equation used for ex-post (& ex-ante) estimation of carbon stocks in *Pinus caribaea* is in accordance with the guidelines of AR-TOOL 17, v1, Paragraph 6 and applicable to Uganda or project area being a tropical climate country. The audit team reviewed the publicly available data¹⁹ to confirm that the project area i.e. Uganda comes under the tropical climate.

The PP has applied the CDM Tool 17 and demonstrated the appropriateness of Allometric Equations as per the section II of the tool. As per section II, paragraph 5 “For ex ante estimation of aboveground tree biomass in project scenario any allometric equation can be used” Whereas, the paragraph 6 identifies that “For ex-post estimation an equation is considered eligible for estimation if it meets one of the following criteria.

- (a) The equation is used in the national forest inventory, or the national GHG inventory, of the host Party;
- (b) The equation has been used in commercial forestry sector of the host Party for ten years or more;
- (c) The equation was derived from a data set of at least 30 sample trees, and the value of coefficient of determination (R^2) obtained was not less than 0.85.

As per the criteria in the Tool 17, the project has applied the allometric equation to align with it. The details are given below

¹⁹ <https://www.climatestotravel.com/climate/uganda>

The tropical general (biomass) equation used for the ex-post calculation of *Pinus caribaea* under the project is sourced from page #43 of the “Sourcebook for Land Use, Land Use Change, and Forestry Projects (Timothy Pearson, Sarah Walker, and Sandra Brown, Winrock 2005)”²⁰. Thus, the equation satisfies **criteria (c)** (above), as it was developed from a dataset of more than 500 trees with a value of coefficient of determination (R^2) as 0.97.

Furthermore, the dataset²¹ collated by Sandra Brown (Winrock International) which was used for development of this tropical equation has been independently reviewed for its appropriateness w.r.t the AR-TOOL 17 v1, Paragraph 6.

On compliance with AR-TOOL 17, v1, Paragraph 6: The project applied the tropical general biomass equation from Timothy Pearson, Sarah Walker, and Sandra Brown, Winrock 2005 et al., (Winrock Sourcebook, p.43) for *Pinus caribaea*. This equation meets Paragraph 6(c) of AR-TOOL 17, v1, as it was developed from a dataset of over 500 trees with an R^2 of 0.97. The dataset compiled by Winrock International (furnished by PP) has been independently reviewed and confirmed appropriate for use under the tool.

The audit team noted that the allometric equation used for converting DBH (cm) values to biomass and subsequent GHG calculations for *Pinus caribaea* is a general equation applicable to tropical dry regions (with rainfall 900-1500mm) and not a specific equation for *Pinus taeda*. The audit team observed that this general equation is employed in the project for GHG calculations due to the absence of a species-specific allometric equation applicable to the project location. Furthermore, the audit team acknowledged that this general equation is applied as a default equation for *Pinus* sp. (i.e., *Pinus caribaea*) with a biomass expansion factor (bole to tree biomass) of 1.2, consistent with the approach used by the registered VCS CCB projects "TIST Program in Uganda, VCS-CCB 011" [Project ID: 2497] and "TIST Program in Kenya CCB-001".

The audit team further noted the default or general allometric equation used for *Pinus caribaea*: $Y = (0.2035 \times DBH^{2.3196}) \times 1.2$, where Y represents aboveground dry matter (kg/tree), DBH is the diameter at breast height (cm), and 1.2 is the expansion factor from bole biomass to tree biomass.

Regarding Eucalyptus, the audit team observed that the species planted is a Eucalyptus hybrid, developed from Eucalyptus grandis. Given the lack of a specific allometric equation for this hybrid, the audit team acknowledged the Project Proponent's conservative approach of applying the allometric equation of the parent species, Eucalyptus grandis. The audit team concurred that this approach is conservative, as Eucalyptus hybrids are generally known for their rapid growth and superior attributes compared to their parent species. This

²⁰ Sourcebook for land use, land-use change, and forestry projects by timothy Pearson, Sarah Walker and Sandra brown

²¹ Tropical General (biomass) Equation Dataset

conservatism is evident in the comparison between ex-ante and ex-post DBH values, where the Eucalyptus hybrid exhibited slightly higher values during the monitoring periods of 2021, 2022, and 2023. The audit team reviewed the provided comparison of ex-ante and ex-post DBH values across different ages, noting the small percentage difference, further supporting the conservative nature of the chosen allometric equation.

- c) **Thinning Regime:** The primary objective of the thinning regime is to manage the quantity and distribution of available growing space, which in turn affects the growth, quality, and health of remaining trees. Thinning operations within the project are intended to:
- Enhance overall plantation health and growth rates by optimizing resource use, including light, water, and nutrients.
 - Increase carbon sequestration capacity.
 - Support a more resilient and productive ecosystem by selectively removing weaker or less desirable trees.

Species	Number of thinning	Age of thinning
<i>Eucalyptus</i> hybrid	1 st	4 th year
	2 nd	6 th year
<i>Pinus caribaea</i> .	1 st	6 th year
	2 nd	12 th year

Harvesting Regime: The harvesting regime for the commercial tree plantation project emphasizes sustainable, selective harvesting practices to maintain yield continuity and ecosystem health. The Standard Operating Procedures (SOP) outline the operational planning for inputs, specific harvesting methods, systems used in the project area, and reporting procedures. Additionally, all safety considerations related to harvesting operations are comprehensively addressed in the SOP.

S.No.	Tree Species	Harvesting Age
1.	<i>Eucalyptus</i> hybrid	10 years
2.	<i>Pinus caribaea</i>	20 years

Ex-post stratification is consistent with the ex-ante estimations. Project Proponent has employed the fixed area sample plot-based monitoring and estimation of carbon stocks. The determination

of the quantity of carbon stocks and required sample size in project strata is in alignment with the specifications outlined in CDM AR-Tool14 and AR- Tool03 respectively.

Ex- ante Estimation –

Ex-ante estimation (projection) of carbon stock in tree biomass is not subjected to uncertainty control, although the Project Proponent ensures the use of the best available data and models that apply to the project site.

The project applies the equation mentioned below for the ex-ante estimation of carbon stock in tree biomass as mentioned in equation 3.2.3 of IPCC GPG LULUCF²²

EQUATION 3.2.3

ANNUAL CHANGE IN CARBON STOCKS IN LIVING BIOMASS

IN FOREST LAND REMAINING FOREST LAND (STOCK CHANGE METHOD)

$$\Delta C_{FF_{LB}} = (C_{t_2} - C_{t_1}) / (t_2 - t_1)$$

and

$$C = [V \bullet D \bullet BEF_2] \bullet (1 + R) \bullet CF$$

Where:

$\Delta C_{FF_{LB}}$ = annual change in carbon stocks in living biomass (includes above- and belowground biomass) in forest land remaining forest land, tonnes C yr⁻¹

C_{t_2} = total carbon in biomass calculated at time t_2 , tonnes C

C_{t_1} = total carbon in biomass calculated at time t_1 , tonnes C

V = merchantable volume, m³ ha⁻¹

D = basic wood density, tonnes d.m. m⁻³ merchantable volume

BEF_2 = biomass expansion factor for conversion of merchantable volume to aboveground tree biomass, dimensionless.

R = root-to-shoot ratio, dimensionless

CF = carbon fraction of dry matter (default = 0.5), tonnes C (tonne d.m.)⁻¹

The project includes harvesting in the project management plan. As per the VCS Standard v4.7, ARR project instances with harvesting activities shall not be issued GHG credits above the long-term average GHG benefit maintained by the project activity. The time period over which the long-term GHG benefit is calculated shall include at minimum one full harvest/cutting cycle, including

²² Microsoft Word - Task1_Cover_TOC_Ack_Preface_20040312_jpeg.doc (ipcc.ch)

the last harvest/cut in the cycle. The long-term average was estimated using the following equations:

$$LA = \frac{\sum_{t=0}^n PE_t - BE_t}{n}$$

Where:

- LA = The long-term average GHG benefit
- PE_t = The total to-date GHG emission reductions and removals generated in the project scenario (tCO₂e). Project scenario emission reductions and removals shall also consider project emissions of CO₂, N₂O, CH₄ and leakage.
- BE_t = The total to-date GHG emission reductions and removals projected for the baseline scenario (tCO₂e)
- t = Year
- n = Total number of years in the established time period

The assessment team has assessed the allometric equation used for calculation is based on the ecoregion and tree-wise data is extrapolated to the total number of trees based on planned tree planting and management. The stratification has also assessed by the audit team during the onsite visit.

Leakage Emissions: -

The project activities do not lead to any displacement of agricultural production within the project boundary. Moreover, consultation with local stakeholders indicated non-dependency on the lands for cattle grazing in those areas. This is also justified as the degraded scrubland and croplands existing prior to the project did not contain any palatable vegetation to attract the livestock for grazing. The land mainly consisted of invasive shrubs such as Lantana camara. Consequently, leakage emissions are deemed to be zero or negligible throughout the project's lifespan.

$$L_{Kt} = L_{KAGRIC,t}$$

Where:

L_{Kt} = GHG emissions due to leakage, in year t; tCO₂e

L_{KAGRIC,t} = Leakage due to the displacement of agricultural activities in year t, as calculated in the tool "Estimation of the increase in GHG emissions attributable to displacement of pre-project agricultural activities in A/R CDM project activity"; tCO₂e

The pre-project activity does not get displaced by the project activity.

Therefore, L_{Kt} = 0

The Project Proponent (PP) applied AR-TOOL 15 v2.0 (Section 6, Paragraph 9 and Note 1) to assess potential leakage from the displacement of agricultural activities. The tool clarifies that displacement of agriculture does not, by itself, result in leakage emissions unless it leads to an increase in GHG emissions relative to the baseline activity.

Evidence Reviewed and Cross-Verification Conducted

Assessment of Lands Under NFA Lease (87% of Project Area)

- The PP reported that none of the NFA-leased lands were under pre-project agricultural use, as agricultural practices such as taungya are explicitly prohibited under the lease agreements.
- The audit team verified this claim by:
 - Reviewing the lease agreements issued by NFA, which explicitly restrict agricultural practices.
 - Cross-checking the Land Use and Land Cover (LULC) analysis (2011–2020), which indicated insignificant agricultural use within the leased areas.
 - Confirming through site visits that no evidence of pre-project agricultural activity existed.
 - Interaction with the stakeholders during the onsite visit vetted that there were no pre-project agriculture activities existed.
- Based on this, the audit team concludes that no displacement of agriculture occurred on these lands, and leakage is accounted as zero for 87% of the project area.

Assessment of Private Mailo and Freehold Lands (13% of Project Area / 432.12 ha)

- The PP disclosed that these lands were previously used for small-scale cropping (groundnuts, sorghum, beans, millet, sweet potatoes) which has also cross checked during the onsite visit.
- The audit team cross-verified that:
 - Baseline surveys and household questionnaires confirmed that landowners retained portions of their land for subsistence agriculture.
 - Local Stakeholder Consultation (LSC) records corroborated that communities intentionally preserved land for household food production.
 - Satellite imagery analysis clearly delineated red polygons (plantations) and yellow polygons (agriculture retained).

- Based on this evidence, the audit team confirmed that the project activity does not displace subsistence agriculture outside the project boundary and that no new land clearing has been triggered.

Drivers Supporting Land-Use Change to ARR

- The audit team reviewed supporting documentation provided by the PP on barriers faced by landowners (low agricultural profitability, declining soil fertility, climate vulnerability).
- Independent sources reviewed by the audit team (FAO, government reports, and peer-reviewed literature) corroborated the challenges of agricultural productivity and economic instability in Uganda, supporting the rationale for conversion to ARR activities.

Leakage Monitoring Provisions

- The PP has established a leakage monitoring system comprising:
 - Regular patrols and community monitoring around the project boundary.
 - Annual satellite imagery analysis of surrounding areas.
 - Ongoing community engagement and feedback mechanisms.
 - Forest fire monitoring and suppression systems.
- The audit team confirmed the existence of documented protocols for these measures, which were reviewed during the audit.

Based on the evidence, the audit team concludes that:

- No agricultural activities are displaced within the 87% of NFA-leased project area.
- For the 13% of land previously under agriculture, participating landowners retained sufficient land for household food needs, avoiding external displacement.
- No evidence of leakage-inducing land conversion was found during site verification, baseline survey review, or satellite analysis.
- The monitoring system in place provides adequate safeguards to detect and address any potential leakage in future monitoring periods.

Therefore, the audit team determines that leakage attributable to displacement of agricultural activities is insignificant and conservatively accounted as zero for the project activity, consistent with AR-TOOL 15 v2.0 and the VCS Standard v4.7.

The assessment team has verified the landuse scenario during the site visit and also from the satellite imagery it has confirmed that the pre-project land scenario is under degraded scrubland and croplands. Also while interaction with the stakeholder it has confirmed that there is no displacement of agriculture activity. Hence the leakage is accounted zero.

In the Project Activity: -

The net anthropogenic GHG removals by sinks shall be calculated by using the formula given in section 5.7 of AR-ACM0003 tool which is as follows:

$$\Delta C_{AR-CDM,t} = \Delta C_{ACTUAL,t} - \Delta C_{BSL,t} - LK_t$$

Where:

$\Delta C_{AR-CDM,t}$ = Net anthropogenic GHG removals by sinks, in year t; t CO₂-e

$\Delta C_{ACTUAL,t}$ = Net current GHG removal from reservoirs in year t; tCO₂e

$\Delta C_{BSL,t}$ = Net GHG removals by reservoirs at baseline in year t; tCO₂e

LK_t = GHG emissions due to leaks in year t, tCO₂e

Vintage period	Estimated baseline emissions (tCO ₂ e)	Estimated project emissions (tCO ₂ e)	Estimated leakage emissions (tCO ₂ e)	Estimated buffer pool allocation (tCO ₂ e)	Estimated reduction VCU (tCO ₂ e)	Estimated removal VCU (tCO ₂ e)	Estimated total VCU issuance (tCO ₂ e)
01-March-2021 to 31-December-2021	0	113,310.58	0	28,555	0	113,310.58	107,417.69
01-January-2022 to 31-December-2022	0	270,444.10	0	62,442	0	270,444.10	234,896.38
01-January-2023 to 31-December-2023	0	612,745.04	0	141,924	0	612,745.04	533,902.37
01-January-2024 to 31-December-2024	0	487,493.70	0	94,464	0	487,493.70	355,363.16
01-January-2025 to 31-	0	732,181.28	0	165,617	0	732,181.28	623,035.11

December-2025							
01-January-2026 to 31-December-2026	0	381,287.0 4	0	62,961	0	381,287.0 4	236,853.03
01-January-2027 to 31-December-2027	0	617,918.0 7	0	101,476	0	617,918.0 7	381,741.60
01-January-2028 to 31-December-2028	0	705,471.6 4	0	50,330	0	705,471.6 4	189,333.23
01-January-2029 to 31-December-2029	0	875,066.46	0	62,803	0	875,066.46	236,255.42
01-January-2030 to 31-December-2030	0	961,457.0 9	0	51,923	0	961,457.0 9	195,328.48
01-January-2031 to 31-December-2031	0	- 1,466,186.50	0	28,555	0	- 1,466,186.50	0.00
01-January-2032 to 31-December-2032	0	- 750,196.25	0	62,442	0	- 750,196.25	0.00

01-January-2033 to 31-December-2033	0	- 152,605. 85	0	141,924	0	- 152,605. 85	0.00
01-January-2034 to 31-December-2034	0	306,205. 10	0	94,464	0	306,205. 10	0.00
01-January-2035 to 31-December-2035	0	631,267.5 6	0	165,617	0	631,267.5 6	0.00
01-January-2036 to 31-December-2036	0	400,263. 48	0	62,961	0	400,263. 48	0.00
01-January-2037 to 31-December-2037	0	546,442. 02	0	101,476	0	546,442. 02	0.00
01-January-2038 to 31-December-2038	0	628,332. 82	0	50,330	0	628,332. 82	0.00
01-January-2039 to 31-December-2039	0	739,898. 42	0	62,803	0	739,898. 42	0.00
01-January-2040 to	0	818,661.1 7	0	51,923	0	818,661.1 7	0.00

31-December-2040							
01-January-2041 to 28-February-2041	0	138,380.43	0	28,555	0	138,380.43	0.00
Total	0	7,597,837	0	822,495	0	7,597,837	3,094,126

3.4.7 Methodology Deviations

Based on the review of project documentation and monitoring data, it is confirmed that the tree species planted under the project are Eucalyptus hybrids (GU7 and GU8 – clones developed from the parent species Eucalyptus grandis × Eucalyptus urophylla). As no species-specific allometric equation is available for the Eucalyptus hybrid, the Project Proponent (PP), adopting a conservative approach, has applied the allometric equation for the parent species Eucalyptus grandis. This approach is deemed conservative, as hybrid Eucalyptus varieties are generally characterized by faster growth rates and superior growth attributes compared to the parent species. The audit team has reviewed the literature²³ and found that the Eucalyptus hybrid has the values lower compared than parent species. As per the reviewed literature the Clonal eucalypt wood (6–7 years old) remains a viable fuelwood option in Uganda. Despite having lower calorific value compared to parent species, the clones compensate with significantly faster growth (high volume increment) and relatively moderate cleavage resistance, making them easy to split. While the clonal woods' calorific values were consistently lower than those of their parent species, the combination of fast growth (yield) and moderate splitting resistance makes them practical for fuelwood—especially where rapid biomass production is critical.

A comparison of ex-post DBH measurements from the first monitoring period (01 March 2021 to 31 January 2024) with ex-ante estimates indicates that the hybrid DBH values are mostly slightly lower than ex-ante projections thereby reinforcing the conservativeness of the approach.

Year of plantation	Age (yrs)	DBH values (Ex-ante)	DBH values (Ex-post)
#	#	cm	cm
2023	1	4.72	4.74
2022	2	8	8.15

²³

https://www.researchgate.net/publication/260909193_Density_Calorific_Value_and_Cleavage_Strength_of_Selected_Hybrid_Eucalypts_Grown_in_Uganda

2021	3	11.8	11.8
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The PDMR reflects a correction to the species terminology for the Data/Parameter “AGB” under section 6.2, changing it from Eucalyptus spp. to Eucalyptus hybrid to accurately reflect the species planted. However, the allometric equation applied remains that of Eucalyptus grandis, consistent with earlier versions of the monitoring report. Given that the applied equation represents a slower-growing species compared to the actual hybrids planted, the resulting biomass estimation is expected to be an underestimation. Therefore, this methodological deviation does not negatively affect the conservativeness of GHG quantification and is in alignment with the VCS requirements.

3.4.8 Monitoring Plan

The monitoring plan effectively follows the VCS Standard, v4.7 and AR-ACM0003 Methodology requirements. Key parameters monitored include DBH measurements of planted species and carbon stock changes in Above Ground Biomass (AGB) and Below Ground Biomass (BGB) pools.

Data and parameters available during validation: -

Data / Parameter	Project Zone Boundary
Data unit	Latitude and Longitude
Description	The Project Zone boundary is fixed during the validation phase which comprises the Northern, Central, and Western Regions of Uganda.
Source of data	Administrative boundary of Uganda
Value applied:	A KML file consisting of polygons highlighting the project zone boundary
Justification of choice of data or description of measurement methods and procedures applied	The Project Zone is selected such that multiple instances can be added to it, being a grouped project. The current plantation area will expand in the future with the support of carbon financing. However, future instances will be restricted inside the project zone boundary.
Purpose of data	Calculation of project emissions
Comments	None

Data / Parameter	Carbon Fraction (CF_{tree})
Data unit	t C / t.d.m.
Description	Carbon fraction of tree biomass for species or group of species
Source of data	2006 IPCC Guidelines for National GHG Inventories ²⁴
Value applied:	0.47
Justification of choice of data or description of measurement methods and procedures applied	Default value as per the IPCC report
Purpose of data	Calculation of project emissions
Comments	None

Data / Parameter	R_{tree}
Data unit	Dimensionless
Description	Root-to-shoot ratio for species
Source of data	2006 IPCC Guidelines for National GHG Inventories ²⁵
Value applied:	0.232
Justification of choice of data or description of measurement methods and procedures applied	Uganda mainly consists of the Tropical Moist Forest; thus, the applied value is taken from Table 4.4 of the 2006 IPCC Report with 2019 Refinement which is applicable to all countries of Africa having Tropical Moist Forest.
Purpose of data	Calculation of project emissions
Comments	None

Data and Parameters to be monitored:

Data / Parameter	Project Area Boundary
Data unit	3,324 Hectares
Description	The Project Area Boundary under the first verification period consists of the total plantation area which is part of the first project activity instance
Source of data	Summation of all the compartment polygon areas
Value applied:	A KML file consisting of the project area under the first project activity instance
Justification of choice of data or description of measurement methods and procedures applied	Demarcation of the project area by walking along the boundary of discrete project areas or land parcels that together create the Project Area Boundary.
Purpose of data	Calculation of project emissions
Comments	None

Data / Parameter	DBH
Data unit	Centimeters
Description	Diameter of tree at breast height
Source of data	Physical measurements
Description of measurement methods and procedures applied	Measured for all the trees falling under the Permanent Sample Plots, which cover six strata of the entire Project Area
Frequency of monitoring/recording	During the first monitoring period, measurements are taken three years after the project start date. Subsequently, measurements are conducted annually.
Value applied:	N/A
Monitoring equipment	Measuring Tape

QA/QC procedures applied	Standard operating procedures ²⁶ ensure accurate and validated data collection for monitoring parameters.
Purpose of data	Calculation of project emissions
Calculation method	The girth of the trees is measured at breast height (1.37m) which is converted to DBH by dividing it by the value of Pi (i.e. 3.14). Such that, $DBH = CBH / 3.14$
Comments	None

Data / Parameter	AGB						
Data unit	t.d.m/ha						
Description	Above Ground Biomass in tonnes dry matter (t.d.m)						
Source of data	Calculated Value in Ex-post Calculation Sheet						
Description of measurement methods and procedures applied	For calculating the above ground biomass, Project Proponent measures Diameter at Breast height (D) at 1.37-meter height from ground. The measured values are applied to the allometric equation given below to obtain Above Ground Biomass (AGB)- <table border="1"> <thead> <tr> <th>Tree Species</th><th>Allometric Equation</th></tr> </thead> <tbody> <tr> <td><i>Eucalyptus hybrid.</i></td><td> $Y(\text{Kg/tree}) = 0.4506 * DBH^{2.082}$ Where, Y= Above ground Biomass in Kg/tree DBH = Diameter at Breast Height (cm) </td></tr> <tr> <td><i>Pinus caribaea.</i> ²⁷</td><td> $Y = (0.2035 \times DBH^{2.3196}) \times 1.2$ General equation </td></tr> </tbody> </table>	Tree Species	Allometric Equation	<i>Eucalyptus hybrid.</i>	$Y(\text{Kg/tree}) = 0.4506 * DBH^{2.082}$ Where, Y= Above ground Biomass in Kg/tree DBH = Diameter at Breast Height (cm)	<i>Pinus caribaea.</i> ²⁷	$Y = (0.2035 \times DBH^{2.3196}) \times 1.2$ General equation
Tree Species	Allometric Equation						
<i>Eucalyptus hybrid.</i>	$Y(\text{Kg/tree}) = 0.4506 * DBH^{2.082}$ Where, Y= Above ground Biomass in Kg/tree DBH = Diameter at Breast Height (cm)						
<i>Pinus caribaea.</i> ²⁷	$Y = (0.2035 \times DBH^{2.3196}) \times 1.2$ General equation						

	Where, Y= Above ground Biomass in Kg/tree DBH = Diameter Breast Height (cm) The audit team conducted an independent assessment to determine the availability of species-specific allometric equations for <i>Pinus caribaea</i> in Uganda was carried out via. Systematic review which comprises the following: • Review of available National Forest Authority Uganda publications. • Consultation with local forestry expert • Review of published literature specific to Uganda (specifically Nakasongola, Jinjha etc) • Review of similar VCS projects registered in Uganda The tropical general (Biomass) equation used for ex-post (& ex-ante) estimation of carbon stocks in <i>Pinus caribaea</i> is in accordance with the guidelines of AR-TOOL 17, v1, Paragraph 6 and applicable to Uganda (or project area) being a tropical climate country²⁸. On compliance with AR-TOOL 17, v1, Paragraph 6: The project applied the tropical general biomass equation from Timothy Pearson, Sarah Walker, and Sandra Brown, <u>Winrock 2005</u> et al., (Winrock Sourcebook, p.43) for <i>Pinus caribaea</i>. This equation meets Paragraph 6(c) of AR-TOOL 17, v1, as it was developed from a dataset of over 500 trees with an R² of 0.97. The dataset compiled by Winrock International (furnished by PP) has been independently reviewed and confirmed appropriate for use under the tool. Furthermore, the default or general allometric equation²⁹ being used for <i>Pinus caribaea</i> is as follows: $Y = (0.2035 \times DBH^{2.3196}) \times 1.2$ Where, Y= aboveground dry matter, kg (tree)-1 DBH = diameter at breast height, cm and 1.2 = expansion factor to go from bole biomass to tree biomass.
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²⁸ Uganda climate

²⁹ Tim Pearson, Sandra Brown and David Shoch, in "Assessment of Methods and Background for Carbon Sequestration in the TIST Project in Tanzania," Report to Clean Air Action Corporation, (December 2004)

Frequency of monitoring/recording	During each verification
Value applied:	Please refer the Ex-post Emission Removal Sheet
Monitoring equipment	N/A
QA/QC procedures applied	CDM Tool i.e. 'Demonstrating appropriateness of allometric equations for estimation of aboveground tree biomass in A/R CDM project activities' is used in the project which ensures that the allometric equations used for the calculation purpose meet the following criteria- The equation was derived from a data set of at least 30 sample trees, and the value of the coefficient of determination (R^2) obtained was not less than 0.85.
Purpose of data	Calculation of actual project emissions
Calculation method	N/A
Comments	No comments

Data / Parameter	BGB
Data unit	t.d.m/ha
Description	Below Ground Biomass in tonnes dry matter (t.d.m)
Source of data	Calculated Value in Ex-post Calculation Sheet
Description of measurement methods and procedures applied	The root-shoot ratio is used to determine the proportion of belowground biomass in relation to the aboveground biomass.
Frequency of monitoring/recording	During each verification
Value applied:	Please refer to the Ex-post Emission Removal Sheet
Monitoring equipment	N/A
QA/QC procedures applied	Standard operating procedures ³⁰ ensure accurate and validated data collection for monitoring parameters.

Purpose of data	Calculation of actual project emissions
Calculation method	Multiplying AGB with Root-to-Shoot ratio.
Comments	No comments

Data / Parameter	Total CO₂e
Data unit	Tonnes
Description	Total CO ₂ e sequestered by the trees
Source of data	Calculations
Description of measurement methods and procedures applied	Allometric equations are meant for the estimation of the Above-ground biomass of trees. DBH values are applied to the allometric equations subsequently. The average biomass is calculated for each of the Permanent Sample Plots which is then converted to per hectare Biomass. The per-hectare biomass value is used to calculate the total biomass in a particular stratum. The Biomass of all the stratum is summed up and converted to CO ₂ e which helps to calculate the vintage-wise Voluntary Carbon Units (VCUs).
Frequency of monitoring/recording	Calculation takes place with each monitoring report
Value applied:	Sum of Above and Below-Ground Biomass which is converted to Carbon Stock with the help of Carbon Fraction, and the Carbon Stock value is subsequently converted to CO ₂ e by multiplying it with 44/12.
Monitoring equipment	Computer and database
QA/QC procedures applied	Part of overall QA/ QC procedures
Purpose of data	Calculation of project emissions
Calculation method	N/A
Comments	None

The monitoring plan adheres to VCS Standard v4.7 requirements, utilizing the AR-ACM0003 Methodology (*Afforestation and Reforestation of Lands Except Wetlands*, version 02.0) and associated tools. The primary objectives are to:

1. Establish procedures and assign responsibilities for verifying project activities.
2. Quantify greenhouse gas (GHG) removals from the project.
3. Monitor and verify carbon stock changes across selected pools and strata.
4. Define data collection, management, and record-keeping procedures.

Monitoring Approach

Frequency and Scope

- **Initial Monitoring:** Conducted during the first verification period for the entire project area.
- **Annual Monitoring:** Ensures ongoing accuracy of tree parameters.
- Saplings are included once they reach a survival threshold, as per AR-TOOL14 V4.2.
- The plantations from 2021, 2022, and 2023 were validated for the first verification.

Steps in Carbon Stock Assessment

1. Delineation of Project Boundaries

- Project boundaries are defined by plantation sites, aggregating discrete areas under the first project instance.

2. Stratification and Sampling

- Land parcels are mapped and divided into six strata based on species planted and year of plantation:

Stratum	Species	Age
1	Eucalyptus	3 years old
2	Pine	3 years old
3	Eucalyptus	2 years old
4	Pine	2 years old
5	Eucalyptus	1 year old
6	Pine	1 year old

- Permanent Sample Plots (PSPs) are distributed using stratified random sampling. GPS coordinates of PSPs are recorded, and KML files are generated for spatial accuracy.

3. Sample Plot Estimation

- Sample plots are calculated using AR-TOOL03 (Version 02.1.0).
- A pilot study across strata informed biomass estimates. Using the Winrock Sample Plot Calculator Tool, 35 PSPs were established for the project area.

4. Laying Out PSPs

- PSPs are positioned using GIS-based randomization, with field coordinators marking plot centers using high-accuracy GPS devices.
- Measurements include Circumference at Breast Height (CBH) for all trees within plots, marked with unique serial numbers to prevent duplication.

5. Data Collection and QA/QC

- Data is transcribed into spreadsheets upon collection.
- 25% of PSPs are re-measured for quality assurance, with randomly selected plots covering various strata.

4 Monitoring Team Structure

Team/Unit	Roles/Responsibilities
Inventory Manager	Finalizes sampling plans, oversees data analysis, and monitors QC activities.
QC Team	Trains field teams and conducts quality control checks on measurements.
Data Analysis Team	Ensures data plausibility, consistency, and completeness, generating reports.
Field Team (Coordinators)	Executes field plans, ensures data accuracy, and supervises temporary assistants.

5 Data Archiving

- All documentation, GIS files, and monitoring reports are securely stored and periodically updated to maintain compatibility with evolving technology.
- Documentation will be retained until February 28, 2063, two years post-project completion.

6 Tools and Methodologies

- Monitoring procedures align with AR-TOOL14 and AR-TOOL03.
- GIS tools and the Winrock Sample Plot Calculator ensure precision in sampling and stratification.

This structured plan ensures accurate and transparent monitoring of GHG removals while maintaining rigorous data quality and compliance standards. The assessment team has reviewed the project SOP to validate the monitoring plan and also during the onsite audit the PP has demonstrated the monitoring procedure which confirms that the project has adhere the monitoring SOP.

3.5 Non-Permanence Risk Analysis

Based on the audit team's review, the project has utilized the AFOLU Non-Permanence Risk Tool, Version 4.2, for its non-permanence risk analysis. The Project Proponent (PP) has submitted the non-permanence risk report for the project activity as a stand-alone document, with an updated version provided to the Validation/Verification team. According to the latest VCS update, the PP is now required to complete the digital Non-Permanence Risk Tool (NPRT). The updated version, along with supporting documentation to justify the identified risks, has been submitted to the Validation/Verification team.

Different risks to be considered as per the tool: -

- Internal risk
- External risk
- Natural risk

Sub-categories of these risks include: -

- Project management
- Financial viability
- Stakeholder engagement

The tool also provides mitigation measures for minimizing these risks: -

Risk Factor	Risk Rating	Assessment
Internal Risks		
Project Management	0	Audit team verified all the indicators mentioned i.e. species planted, preventing encroachment by outside

		factors, management team experience, etc. All these indicators were verified via documents including but not limited to SOPs and, training manual for species, training records for management, information management systems, etc.
Financial Viability	0	Audit team verified all the indicators mentioned i.e. project's payback period, percentage of funding the project secured to cover the total cash out. Both these indicators were verified via documents including but not limited to SOPs and training manual for species, etc. A declaration by the PP is submitted of 5 years secured funding that demonstrates that project has secured at least 80% of the total cash out before reaching breakeven point.
Opportunity Cost	0	Audit team verified the indicator mentioned i.e. the baseline activities are subsistence-driven- as verified there is no such impacts that are demonstrated by PP.
Project Longevity	15	The project has a project management plan for the project longevity of 40 years. The assessment team has reviewed the project management plan also had a interaction with the project management team during the on-site visit which confirms the project longevity of 40 years hence the selection of risk score is deemed valid.
External Risks		
Land Tenure and Resource Access/Impact	0	The project proponent has authentic evidence for the landownership of the project area. The Government of Uganda has given the land on a lease to farmer for 99 years, though the ownership right of

		the project is with the landowners, So the legal right to control and operate project activity over the entire project area is with the landowners with carbon ownership to OYU green. The project proponent is also involved in the stakeholder consultation in which the local community is involved to understand their rights and accessible resources. The project proponent also shares the project details in form of FPIC so that any possibility of dispute can be identified and mitigated.
Stakeholder Engagement	0	Local stakeholders were identified by the PP through mapping exercise between the communities, community-based organisation and local councils.
Political Risk	2	The project is in a country that: • Is party to the Paris agreement and has submitted an NDC to the UNFCCC secretariate in the last 5 years. • Includes AFOLU commitments in its NDC. • It has a documented and active climate change plan that includes the project activity. The PP has met all the requirement as per the conditions mentioned above to meet the Country NDC commitment.
Natural Risks		
Natural Risk Assessment	4	Assessment Team verified all the indicators mentioned i.e. Fire, Pest and disease outbreaks, etc. PP has submitted documents like- Fire Protection Plan, Integrated Pest Management, Emergency Preparedness Response Plan and same

		has been verified by the Assessment Team to confirm all the indicators.
Overall risk rating [Internal Risk(a)+ External Risk (b)+ Natural Risk (c)]		21 %
Total number of credits to be deposited in the AFOLU pooled buffer account		90,284

4 VERIFICATION FINDINGS

4.1 Project Implementation Status

Implementation Status of the Project Activity:

The project "Reforestation Uganda for a better Tomorrow" was implemented degraded scrubland and croplands across the Northern, Central, and Western regions of Uganda with timber-producing tree species i.e. Eucalyptus spp. and Pinus spp. The project activities aim to benefit landowners, the local community, and biodiversity during the project's lifetime and beyond.

Plants were planted strategically to revegetate degraded scrubland and croplands, resulting in significant increases in aboveground and belowground biomass. Field coordinators ensured proper monitoring with adherence to quality assurance and control (QA/QC) protocols, and stakeholders were engaged throughout the process. The assessment team has confirmed through onsite interview with Field coordinators and other stakeholders that the adherence of QA/QC protocol. A significant increment in the AGB VGB was noted over the three years for different year of plantation established in 2021,2022 and 2023 respectively.

Overall, there were no material deviations or misstatements between the actual project implementation and the Project Description. The project activity was in full conformance with the VCS Program requirements, meeting its carbon sequestration and restoration goals without any significant changes that would affect greenhouse gas (GHG) emissions or the monitoring plan.

Monitoring Plan Assessment:

The monitoring plan was implemented completely as per the project description and methodology. Monitoring of the growth and biomass of the planted different tree species was undertaken in accordance with the schedule and processes outlined in the plan, ensuring accurate data collection on carbon sequestration. No material discrepancies were found between the actual monitoring system and the one described in the project plan. The process for recording, compiling, and analyzing data was well-suited to ensure that all monitoring parameters were met.

AFOLU-Specific Implementation:

No new activities were initiated in the current monitoring period. However, the previously implemented project activities continued successfully. The revegetation and restoration of degraded scrublands were ongoing, covering an area of 3,324 hectares. No loss of carbon stock was reported during this period.

Implementation Status	Assessment Steps	Evidence Checked	Conclusion
Project implementation	Verified alignment between actual activities and project description.	VCS PDMR, Field reports, QA/QC protocols, stakeholder Consultation report.	No material misstatements were found; project implemented as described in the PDMR.
Monitoring plan	Reviewed the monitoring system, schedule, Data collection & storage and data analysis processes.	Project Management Plan, SOPs, Monitoring data, QA/QC protocols, Ex-Post sheet for GHG removals.	The monitoring system was fully implemented and fit for purpose. No material discrepancies.
AFOLU-specific project implementation	Confirmed ongoing activities and absence of new implementations or carbon stock loss.	NDVI, Monitoring reports, land-use data and GIS assessment report.	Project activities continued as planned with no new activities and no reported loss of carbon stock.

This summary confirms that the project activities and monitoring were carried out as per the VCS standards, with all necessary safeguards and processes in place.

4.2 Accuracy of Reduction and Removal Calculations

The data and parameters utilized for calculating GHG emission reductions and carbon dioxide removals during this validation and verification period include Project area, Carbon fraction, root shoot ratio, height, AGB (Allometric equation), BGB and Total CO₂ e. These were sourced from field measurements, IPCC guideline and GIS & Remote sensing in accordance with the monitoring plan specified in the VCS PDMR.

Steps Taken for Assessment:

Accuracy of Reductions and Removals: The assessment team conducted a thorough review of the data used for the calculations, focusing on:

- **Spreadsheet Formulae, Conversions, and Aggregations:** The team cross-verified the spreadsheet formulae to ensure they were accurate and correctly applied. Special attention was given to any unit conversions, aggregations, and summations to confirm that they were free of errors.
- **Data Consistency:** Consistent use of data and parameters was verified by comparing them with the project description and monitoring report. The team checked for alignment between the original data sources, monitoring data, and the values used in calculations.

Methodology Compliance: The project description outlines the methods and formulae for calculating baseline emissions, project emissions, and leakage emissions. The assessment team verified that these methods were adhered to during the verification period by:

- Comparing the applied formulae and methodology in the monitoring report with those defined in the PDMR.
- Checking for compliance with the VCS methodologies and ensuring that the procedures for calculating emission reductions and removals were followed as prescribed.

Appropriateness of Default Values: The use of default values provided in the monitoring report was reviewed to determine their appropriateness and conformance with VCS Program rules. The team ensured that these default values were match with the data source used

The assessment team concludes that the GHG emission reductions and carbon dioxide removals reported in the project's GHG statement have been quantified accurately and in full accordance with the monitoring plan and applied methodology. No significant discrepancies were identified, and the data, parameters, and methods used are consistent with VCS Program requirements. The emission reductions and removals are correctly calculated, and the report meets the necessary standards for verification.

4.3 Quality of Evidence to Determine Reductions and Removals

The assessment team conducted a comprehensive verification of the information flow from data generation and aggregation to the recording, calculation, and final presentation in the monitoring report. The assessment identified several essential raw data sources, both internal and external, including default values from methodologies, applied methodological tools, IPCC guidelines, field data from permanent sampling plots, and KML files of project. The PP recorded this raw data and transferred it into the carbon calculation spreadsheet before finalizing the monitoring report. The supporting documents provided by the PP were adequate, as the field data sheets aligned with the data in the carbon calculation spreadsheet.

Interviews with project management personnel and inspections of the data and results demonstrated that the PP possessed the necessary skills to report GHG emissions reductions accurately. Competent personnel managed and operated the project, and the evidence submitted to the assessment team was sufficient and verifiable. The audit team examined field data sheets,

and other documents related to monitoring standard operating procedures to confirm their authenticity and the accuracy of calculations. The audit team discussed the detailed information flow, including roles and responsibilities, and found it appropriate. Based on this review and the interviews, the assessment team confirmed the quality of evidence provided by the PP as sufficient and appropriate for determining GHG removals.

Furthermore, the audit team scrutinized the supporting documents provided by the PP, concluding that the assumptions and data sources were conservatively and appropriately selected, as outlined in the Project Description, Monitoring Report, and the applied methodology. The evidence deemed adequate in both quantity and quality ensures compliance with the established materiality for the project, allowing for the reproducibility of calculations.

5 VALIDATION AND VERIFICATION OPINION

5.1 Validation and Verification Summary

KBS Certification Services Ltd. has been contracted by “OYU green Pvt. limited” to undertake VCS Validation & first verification of ‘OYU-Reforestation Uganda for a Better Tomorrow’ project for the crediting period of 20 years (01-March- 2021 to 28-February-2041), in the PDMR version 2.2 dated 28-November-2025, about the relevant requirements of VCS Standard Version 4.7. The project falls under the Afforestation, Reforestation, and Revegetation (ARR) categories. The project correctly applies the approved CDM A/R Methodology: Afforestation and reforestation of lands except wetlands” (AR-ACM0003 Version 02.0). The project will sequester an estimated 7,597,837 tCO₂e over a period of 20 years and the average annual emission removal is 379,891 tCO₂e. Also, the total GHG emission removals generated (ex-post) in the first monitoring period (i.e. from 01-March-2021 to 31-Jan-2024) are calculated as 429,924 tCO₂e including buffer pool allocation.

The emission reduction forecast has been checked and it is deemed likely that the stated amount is achievable given the underlying assumptions do not change. The project will hence be recommended by KBS to request registration of the project activity (Validation & first verification) with the VCS.

The management of the ‘OYU green Pvt. Limited’ is responsible for the preparation of the GHG emissions data and the reported GHG emissions reductions on the basis set out within the final Project Description Version 2.2 and dated 28 -November- 2025. The calculation and determination of GHG emission reductions from the project is the responsibility of the management of the ‘OYU green Pvt. limited’. The development and maintenance of records and reporting procedures are in accordance with the VCS PDMR.

It is the responsibility of KBS to provide an independent validation and verification opinion on the GHG emissions and the calculation of GHG emission reductions generated by the project. This includes assessing the accuracy, consistency, and conformance of the project’s GHG data with the VCS Program requirements and applied methodology, ensuring that the emission reductions are properly quantified and reported.

The validation & verification is based on the VCS PDMR, additional documents related to baseline and monitoring methodology; the subsequent background investigation, follow-up interviews and supporting documents made available to the assessment team by project proponent.

A risk-based approach has been followed to perform this validation & verification. During the validation and first verification 06 Corrective Action Request (CAR) and 19 Clarification Request (CL) were raised and successfully closed. Apart from CL & CAR 01 FAR were also raised.

As a result of the validation & verification, the assessment team confirms that:

- The project fulfills the criteria of VCS Standard Version 4.7.
- The project is in line with all relevant VCS requirements.
- The project baseline is sufficiently justified in the PDMR.

The project targets a total grouped project area of 10,000 hectares over its lifetime and has been underway since March 1, 2021. The first project activity instance involves the reforestation of 3,324 hectares of land across the designated plantation sites, namely Northern, Central and Western region of Uganda. The reforestation focuses on fast-growing, timber-producing tree species such as Eucalyptus spp. And Pinus caribaea. The pre-project land use scenario consisted of degraded scrubland and croplands predominantly consisting of invasive species such as Lantana camara with declining soil fertility. No restrictions or uncertainties were identified related to the validation & verification.

5.2 Validation Conclusion

The audit team provides reasonable assurance on the quantity of GHG emission reductions and carbon dioxide removals achieved by the project during the validation period, as reported in the project's GHG statement. the total GHG emission removals generated (ex-ante) in the crediting period i.e. from 01-March-2021 to 28-February-2041 are calculated as 7,597,837 tCO₂e including of buffer pool allocation.

The breakdown of these reductions and removals by calendar year is as follows:

Crediting Period: From 01-March 2021 to 28-February 2041

Validated estimated GHG emission reductions and carbon dioxide removals for the project crediting period:

Table:-Project permanence risk:

The non-permanence risk rating (%)	21%
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If applicable, the Long-term Average (LTA), whether it has been properly updated, and if it has been reached.

The long-term average (LTA) has included in the project after the first verification.

ii) Table: - GHG quantification for the project crediting period

Vintage period	Estimated baseline emissions (tCO ₂ e)	Estimated project emissions (tCO ₂ e)	Estimated leakage emissions (tCO ₂ e)	Estimated buffer pool allocation (tCO ₂ e)	Estimated reduction VCU (tCO ₂ e)	Estimated removal VCUs (tCO ₂ e)	Estimated total VCU issuance (tCO ₂ e)
01-March-2021 to 31-December-2021	0	113,310.58	0	28,555	0	113,310.58	107,417.69
01-January-2022 to 31-December-2022	0	270,444.10	0	62,442	0	270,444.10	234,896.38
01-January-2023 to 31-December-2023	0	612,745.04	0	141,924	0	612,745.04	533,902.37
01-January-2024 to 31-December-2024	0	487,493.70	0	94,464	0	487,493.70	355,363.16
01-January-2025 to 31-December-2025	0	732,181.28	0	165,617	0	732,181.28	623,035.11
01-January-2026 to 31-December-2026	0	381,287.04	0	62,961	0	381,287.04	236,853.03

01-January-2027 to 31-December-2027	0	617,918.07	0	101,476	0	617,918.07	381,741.60
01-January-2028 to 31-December-2028	0	705,471.64	0	50,330	0	705,471.64	189,333.23
01-January-2029 to 31-December-2029	0	875,066.46	0	62,803	0	875,066.46	236,255.42
01-January-2030 to 31-December-2030	0	961,457.09	0	51,923	0	961,457.09	195,328.48
01-January-2031 to 31-December-2031	0	- 1,466,186.50	0	28,555	0	- 1,466,186.50	0.00
01-January-2032 to 31-December-2032	0	-750,196.25	0	62,442	0	-750,196.25	0.00
01-January-2033 to 31-December-2033	0	-152,605.85	0	141,924	0	-152,605.85	0.00
01-January-2034 to	0	306,205.10	0	94,464	0	306,205.10	0.00

31-December-2034							
01-January-2035 to 31-December-2035	0	631,267.56	0	165,617	0	631,267.56	0.00
01-January-2036 to 31-December-2036	0	400,263.48	0	62,961	0	400,263.48	0.00
01-January-2037 to 31-December-2037	0	546,442.02	0	101,476	0	546,442.02	0.00
01-January-2038 to 31-December-2038	0	628,332.82	0	50,330	0	628,332.82	0.00
01-January-2039 to 31-December-2039	0	739,898.42	0	62,803	0	739,898.42	0.00
01-January-2040 to 31-December-2040	0	818,661.17	0	51,923	0	818,661.17	0.00
01-January-2041 to 28-February-2041	0	138,380.43	0	28,555	0	138,380.43	0.00

Total	0	7,597,837	0	822,495	0	7,597,837	3,094,126

5.3 Verification conclusion

The audit team provides reasonable assurance on the quantity of GHG emission reductions and carbon dioxide removals achieved by the project during the verification period, as reported in the project's GHG statement. the total GHG emission removals generated (ex-post) in the first monitoring period (i.e. from 01-March-2021 to 31-January-2024) are calculated as 429,924 tCO₂e (including buffer).

The breakdown of these reductions and removals by calendar year is as follows:

Verification Period: From 01-March 2021 to 31-January 2024

The project has undergone a risk assessment in accordance with NPRT version 4.2, resulting in a calculated risk buffer of 21%. As no harvesting activities are included in the project, the long-term average has not been factored into the assessment.

The non-permanence risk rating (%)	21%
If applicable, the Long-term Average (LTA), whether it has been properly updated, and if it has been reached.	The long-term average (LTA) has included in the project and will be updated after first verification. The LTA is 1,017,275 tCO ₂ e.
Whether a loss has been appropriately accounted for, in accordance with the VCS Program rules, if applicable.	Not applicable, no loss event occurred during this first monitoring period.

ii) GHG quantification for the project the first monitoring period

Vintage period	Baseline emissions (tCO ₂ e)	Project emissions (tCO ₂ e)	Leakage emissions (tCO ₂ e)	Buffer pool allocation (tCO ₂ e)	Reductions VCUs (tCO ₂ e)	Removal VCUs (tCO ₂ e)	Total VCU issuance (tCO ₂ e)
01-March-2021 to 31-December 2021	0	44,850	0	9,419	0	44,850	35,431
01-January-2022 to 31-December-2022	0	119,747	0	25,147	0	119,747	94,600

01-January-2023 to 31-December-2023	0	243,221	0	51,077	0	243,221	192,144
01-January-2024 to 31-January-2024	0	22,106		4,643		22,106	17,463
Total	0	429,924	0	90,286	0	429,924	339,638

5.4 Ex-ante vs Ex-post ERR Comparison

Vintage period	Ex-ante estimated reductions/removals	Achieved reductions/removals	Percent difference	Explanation for the difference
01-March-2021 to 31-December 2021	45,774	44,850	-2.02%	There is a varying percent difference (-/+) between the achieved emission reductions and the Ex-ante emission reductions for respective vintage years since the achieved emissions reductions are calculated based on the monitored growth parameters whereas the Ex-ante emission reductions are simply estimated projections, made using a scientific research study.
01-January-2022 to 31-December-2022	119,248	119,747	0.42%	
01-January-2023 to 31-December-2023	242,816	243,221	0.17%	
01-January-2024 to 31-January-2024	54,821	22,106	-59.68%	
Total				
Total	462,659	429,924	-7.08%	

Location: Faridabad

Date: 04-December-2025



Authorised Signatory: Kaushal Goyal

Designation: Managing Director

APPENDIX 1: COMMERCIALLY SENSITIVE INFORMATION

Section	Information	Justification	Assessment method conclusion
2.1.4	Landowners consent form	The 'Landowners consent form' contains commercially sensitive information w.r.t the project commitments such as a 40-year project participation term and carbon rights transfer – that, if disclosed, could prejudice ongoing or future negotiations. It includes information w.r.t the transfer of carbon rights for registering, generating and trading of the carbon credits, public disclosure of which may result in financial disputes.	The audit team acknowledged that the 'Landowners consent form' contains commercially sensitive information regarding project commitments, such as a 40-year participation term and carbon rights transfer, the disclosure of which could prejudice ongoing or future negotiations. The audit team noted that this form includes information concerning the transfer of carbon rights for the registration, generation, and trading of carbon credits, and that its public disclosure may lead to financial disputes
1.8	Landownership documents	The 'Landownership documents' contain personal data (e.g. name, signature, address etc.), landholding figures, and lease terms and conditions that if disclosed, could breach privacy of the landowner and affect contractual negotiations and may lead to financial loss. Furthermore, public disclosure of the land holding figures contained in the documents, which are part of project's financial plans and/or carbon credits estimations may result in financial disputes and affect the project implementation.	The audit team observed that the 'Landownership documents' contain personal data, including names, signatures, and addresses, as well as landholding figures and lease terms and conditions, the disclosure of which could breach the privacy of the landowners and affect contractual negotiations, potentially leading to financial loss. Furthermore, the audit team noted that public disclosure of the landholding figures within these documents, which are integral to the project's financial plans and carbon credit estimations, may result in financial disputes and negatively impact project implementation.
5.2	Landowner project registration agreement	The 'Landowner project registration agreement' includes the use of legally binding terms on carbon rights transfer, credit trading, and project participation. Public disclosure of the same may prejudice future contractual negotiations and result in financial disputes. Moreover, the agreement contains	The audit team determined that the 'Landowner project registration agreement' incorporates legally binding terms regarding carbon rights transfer, credit trading, and project participation, the public disclosure of which could prejudice future contractual negotiations and lead to

		internal operational protocols, such as audit consent and restrictions on chemical fertilizer application, which are proprietary. Furthermore, it contains personal and legal information (names, addresses, signatures etc.) that may breach the privacy of landowners.	financial disputes. The audit team also noted that the agreement contains proprietary internal operational protocols, such as audit consent and restrictions on chemical fertilizer application. Furthermore, the audit team observed that it includes personal and legal information (names, addresses, signatures, etc.) that may breach the privacy of the landowners.
1.12	VCS_4888_Risk Mitigation SOP	The 'Risk Mitigation SOP' document contains the identified project-specific risks and mitigation measures, which, if disclosed publically, may expose project vulnerabilities and prejudice future financial negotiations and affect the implementation of the project activity.	The audit team determined that the 'Risk Mitigation SOP' document contains identified project-specific risks and associated mitigation measures. The audit team concluded that public disclosure of this information may expose project vulnerabilities, prejudice future financial negotiations, and negatively affect the implementation of the project activity.
1.4.2	VCS_4888_Project Management Plan	The 'Project Management Plan' includes sensitive information w.r.t the project internal strategies, timelines, resource allocation, and operational roles and responsibilities. Public disclosure of the same may affect the project implementation and reveal proprietary (as it includes operational planning) management approaches which may influence financial negotiations by exposing management gaps or risks in the future.	The audit team observed that the 'Project Management Plan' includes sensitive information regarding the project's internal strategies, timelines, resource allocation, and operational roles and responsibilities. The audit team concluded that public disclosure of this information may affect project implementation and reveal proprietary management approaches (including operational planning), which could influence financial negotiations by exposing potential management gaps or risks in the future.
2.3.5	Carbon-benefit sharing plan	The carbon-benefit sharing plan is a sensitive document as it contains terms and conditions w.r.t the distribution of carbon-revenue as a part of internal project financial plan. Public disclosure of the same may affect the contractual negotiations with the landowners along with disputes, renegotiation demands, or stakeholder dissatisfaction. Competitors may use the information to attract the stakeholders with better terms.	The audit team determined that the carbon-benefit sharing plan is a sensitive document due to its inclusion of terms and conditions regarding the distribution of carbon revenue as part of the internal project financial plan. The audit team concluded that public disclosure of this plan may negatively affect contractual negotiations with the landowners, potentially leading to disputes, renegotiation demands, or stakeholder dissatisfaction. Furthermore, the audit team noted that competitors could potentially use this

			information to attract stakeholders with more favorable terms.
1.18.2	Workers payment records	The 'workers payment records' (e.g. bank statements, payment receipts, invoices, payment logbooks etc.) contains financial and personal data of the workers and the landowner, disclosure of which may lead to privacy violations. It also shows project operational costs and payments given to the workers by respective landowner which if disclosed publically may result in disputes amongst the workers w.r.t to difference in wages. The disputes may hinder the project progress or implementation.	The audit team observed that the 'workers payment records' (e.g., bank statements, payment receipts, invoices, payment logbooks, etc.) contain financial and personal data of the workers and the landowners, the disclosure of which may lead to privacy violations. The audit team also noted that these records detail project operational costs and payments made to the workers by the respective landowners, and that their public disclosure may result in disputes among the workers regarding wage differences, potentially hindering the project's progress or implementation.

APPENDIX 2: REFERENCES

/1/	/1.1/VCS PDMR, Version 01, dated 05-October-2024 /1.1/VCS PDMR, Version 02.1, dated 28-November-2025
/2/	/2.1/ Emission Reduction calculation sheet (Ex ante) /2.2/ Emissions Reduction Calculation Sheet, (Ex post)
/3/	AFOLU non-permanence risk report, version 4.2
/4/	VCS Standard v4.7 VCS Validation and Verification Manual v3.2
/5/	Methodology- AR – ACM0003 Afforestation and reforestation project activities implemented on lands other than wetlands- Version 2.0
/6/	Tools:

	- AR-AM-TOOL-14- Methodological tool for the Estimation of carbon stocks and change in carbon stocks of trees and shrubs in A/R CDM project activities (Version 04.1). - AR-TOOL02- Combined tool to identify the baseline scenario and demonstrate additionality in A/R CDM project activities (Version 01) - AR-TOOL17- Demonstrating appropriateness of allometric equations for estimation of aboveground tree biomass in A/R CDM project activities 9 (Version 01) - AR-TOOL03- Calculation of the number of sample plots for measurements within A/R CDM project activities (Version 2.1.0)
/7/	AFOLU Requirements, version 4.4
/8/	VCS Program Guide version 4.4
/9/	VCS Program Definitions Version 4.4
/10/	On-site inspection & Desk review - Onsite inspection (04-June-2024 to 06-June-2024) for Validation and First Verification. - Video recordings & snapshots of the project site of sample plots - Interviews and data/log review - Attendance sheet for stakeholder's engagement - Attendance sheet of KBS meeting audit list
/11/	Training and workshop
/12/	Geographical locations as KML file and satellite maps and drone maps
/13/	Forest management plan
/14/	Baseline socio economic survey report
/15/	Consent to participation agreement
/16/	Signed participation agreements
/17/	Land ownership agreement
/18/	Implementation partner description and stakeholder mapping
/19/	On site Grevance procédures

APPENDIX 3: ATTENDANCE SHEET

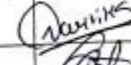
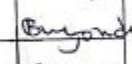
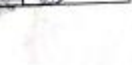


KBS Ref No: Choose an item.YY.VAL/VER.XXX

Attendance sheet (Annex to Audit plan)

Project Title:	OYU - REFORESTING UGANDA FOR BETTER TOMORROW		
Date:	DD/MM/YYYY	Scheme Ref No:	VCS 4888
Location:	Kampala, Uganda		

27/05/24

Name of the Participant	Designation	Organization	Opening Meeting	Closing Meeting	Signature
SHUBHAM PRAJAPATI	Assistant Manager	OYU GREEN	10		
Vandana Mishra	Asst Prog. Manager	OYU GREEN			
G.S. Patel	Country Manager	OYU Green			
KULUBYA BRIAN	Local Govt	KBS			
Srijan Gupta	Director	OYU Green			(Virtual)
Shankar	Auditor	KBS			
Madhusudhan	Team leader	KBS			
① ALEX KAKOZA	OWNER		27/05/24		
(HARRIETH KACAGO Sister)					
			28/05/24		
① JOSEPHAT JOSE		NALONGO Village			
BYAMUKAMA	Director	Green Superba Hf			
② ALEX BUYONDO	Manager	"			
③ Iwimatsiiko	mercy	woked "			
Kafungu	Teacher	woked "			
Byamukama	M	woked "			

The team visiting the site shall enter their details in the list without fail



KBS Ref No: Choose an item.YY.VAL/VER.XXX

Attendance sheet (Annex to Audit plan)

Project Title:	OYU GREEN	Scheme Ref No:	4888
Date	DD/MM/YYYY 28/01/2014		
Location:			

Name of the Participant	Designation	Organization	Opening Meeting	Closing Meeting	Signature
① ADAM PRABASH	Plantation manager	Nature Savers Africa Ltd			
② A. SBA ARON	Plantation manager	Nature Savers Africa Ltd			
③ KIRAN R	CEO	Nature Savers Africa Ltd			
Location: KASAGALA					
MUSIKUZI GEORGE	SOLDIER	UPDF			
ALAN JOSEPH	UPDF	UPDF			
Ashimunda					
KAINAMULA					
Higilo JA					
Mwakunda					
CHAMONKES DENU		UPDF			
TWOSEM TONY		UPDF			
GESCA SELWICK					
ALEX		WORKER			
BUCHEBO EMMA					

The team visiting the site shall enter their details in the list without fail



KBS Ref No: Choose an item.YY.VAL/VER.XXX

Attendance sheet (Annex to Audit plan)

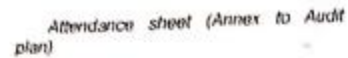
Project Title: VCS 4113

Date: DD/MM/YYYY 30/05/2024 Scheme Ref No: VCS 4113

Location: Mubale
Kawewi

Name of the Participant	Designation	Organization	Opening Meeting	Closing Meeting	Signature
30/5/2023					
Obad Geoffrey Tugumisiriza Manager		Ainebyona hilly basket plantation (friend)			Obad
Tumukunde	Rugyara	-d-			Sd
HAPPINESS Aritu		-d-			AS
BOYABELY AMBROSE		-d-			AS
MUULEN GIZI BRACE		-d-			me
TURATO	GENCI	-d-			AS
Obad Geoffrey Tugumisiriza	Director	Precision Sprinkler Limited			Obad
SENJUKU RAVOCHI					Senjuku
Ndeerekanwa					Ndeerekanwa
Byamugaba					Byamugaba
TURACHAMBE					TURACHAMBE
NANTABA-PHOEBE		Nantaba-phoebe			Nantaba-phoebe
CHOWENDEKE		phoebe Nantaba			CHOWENDEKE
KASACKYA		Nantaba phoebe			KASACKYA
Muhangana Lambert	Teacher	Uganda Martyrs University			Muhangana Lambert

The team visiting the site shall enter their details in the list without fail



Name of the Participant	Designation	Organization	Opening Meeting	Closing Meeting	Signature
Nakandi Geoffrey	SSD	Nakandi 1			<i>[Signature]</i>
Gordon Mwasigwa	SSD	Nakandi			<i>[Signature]</i>
Gumbira Othman	SSD	Worker			<i>[Signature]</i>
Safari Simeon		Worker			<i>[Signature]</i>
Mwambi Othman					<i>[Signature]</i>
<u>Date: 6/06/2024</u>					
		<u>Jos. Ky</u>			
Mwambi Geoffrey	Manager	Worker			<i>[Signature]</i>
Nakandi Othman	Owner				<i>[Signature]</i>
Kyemba Enoch					<i>[Signature]</i>
KALULTA	MOSES				<i>[Signature]</i>
Geoffrey Kyemba					
Kyemba Enoch	Manager				<i>[Signature]</i>
Kidanduka A.	Worker				<i>[Signature]</i>
Terminator					<i>[Signature]</i>
Peter					<i>[Signature]</i>

The team visiting the site shall enter their details in the list without fail

APPENDIX 4: FINDINGS LOGS

Audit Findings

Summary of findings	CL	CAR	FAR
	19	06	01

Table 1.: CL from this validation/verification

CL ID	CL 01.	Section no.	Section 1.4.1 of PD-MR	Date: 29/07/2024				
Description of CL								
In PD-MR section 1.4.1, it is not clear how PP demonstrated that the project meets requirements related to the pipeline listing deadline, the opening meeting with the validation/verification body, and the validation deadline.								
Project participant response		Date: 10/09/2024 (Please mention the date of your response to KBS)						
The PD-MR section 1.4.1 has been updated to clarify that the project meets all requirements related to the pipeline listing deadline, the opening meeting with the validation/verification body (VVB), and the validation deadline. The project was listed within three years of its start date (01-March-2021). Additionally, the validation and first verification has been completed within five years of the project start date. These actions align with Section 3.8.2 of the VCS Standard Version 4.7, ensuring compliance with all relevant deadlines. The adherence to pipeline listing deadline can be verified from the below screenshot of the registry:								
VCS PIPELINE DOCUMENTS <table><thead><tr><th>Document Name</th><th>Date Updated</th></tr></thead><tbody><tr><td>VCS 4888 Listing representation_2201.pdf</td><td>22/01/2024</td></tr></tbody></table>					Document Name	Date Updated	VCS 4888 Listing representation_2201.pdf	22/01/2024
Document Name	Date Updated							
VCS 4888 Listing representation_2201.pdf	22/01/2024							
VCS REGISTRATION DOCUMENTS <table><thead><tr><th>Document Name</th><th>Date Updated</th></tr></thead><tbody><tr><td>VCS_PROJ_DESC_PCP_4888_28DEC2023.pdf</td><td>23/01/2024</td></tr></tbody></table>					Document Name	Date Updated	VCS_PROJ_DESC_PCP_4888_28DEC2023.pdf	23/01/2024
Document Name	Date Updated							
VCS_PROJ_DESC_PCP_4888_28DEC2023.pdf	23/01/2024							
Documentation provided by project participant								
Registry (as attached above), VVB contract								

DOE assessment	Date: 11/11/2024
The VVB has reviewed the justification in the PD and the registry, and determined that the project has met all the requirements for pipeline listage. Therefore, the finding is closed.	

CL ID	CL 02	Section no.	Section 1.4.2 of PD-MR	Date: 29/07/2024
Description of CL				
In PD-MR section 1.4.2, it is not clear that how PP provided the GIS assessment evidence to demonstrate that there has been no clearance of the native ecosystem within the 10 years prior to the project start date for each instance.				
Project participant response		Date: 10/09/2024 (Please mention the date of your response to KBS)		
To demonstrate that no native ecosystems were cleared, a comparative analysis of satellite images from different plantation sites was conducted over four-year intervals: 2011, 2014, 2018, and 2020.				
Section 1.4.2 of the PD-MR (also see Section 3.4) has been updated to include a comparison of satellite images from two specific years, 2010 and 2020, within the project area. This comparison shows that no native ecosystems were cleared within the 10 years prior to the project start date. Additionally, an NDVI assessment has been done on the project zones to identify the vegetation cover in the past 10 years. A report furnished from the assessment has been shared with the VVB.				
Documentation provided by project participant				
1) PD-MR (Version 2.0) 2) VCS 4888_NDVI Assessment				
DOE assessment			Date: 11/11/2024	
The PP conducted a comparative analysis of satellite images from 2011, 2014, 2018, and 2020 to confirm that no native ecosystems were cleared. Section 1.4.2 of the PD-MR now includes a comparison of images from 2010 and 2020, showing no ecosystem clearing in the 10 years before the project began. Additionally, an NDVI assessment of vegetation cover in the project zones over the past decade was completed, and the report has been shared with the VVB and same was assessed, found to be sufficient.				
The finding is closed.				

CL ID	CL 03	Section no.	Section 1.7. of PD-MR	Date: 29/07/2024
Description of CL				

PP to clarify the roles and responsibilities of other entities in the project. Specifically, the local entity (Uganda) involved in the management of project activities?	
Project participant response	Date: 10/09/2024 <i>(Please mention the date of your response to KBS)</i>
Clarification on the roles and responsibilities of other entities is provided in Section 1.7. The local entity in Uganda is not involved in the development, management, or implementation of the project. OYU Green India has a ground presence through locally hired field coordinators and a country manager, who are responsible for the entire execution and implementation of the project on the ground.	
Documentation provided by project participant	
1. PD-MR (version 2.0) 2. VCS_4888_PMP	
DOE assessment	Date: 11/11/2024
Audit team reviewed the documents and confirmed that Section 1.7 clarifies the roles and responsibilities of other entities. The local entity in Uganda is not involved in the development, management, or implementation of the project. OYU Green India oversees the project on the ground through locally hired field coordinators and a country manager, who are responsible for its execution and implementation. The finding is closed	

CL ID	CL 04	Section no.	Section 1.8. of PD-MR	Date: 29/07/2024
Description of CL				
In PD-MR section 1.8, it is not clear about the land ownership type in the country and applicable ownership of this project by providing reference to country laws related to land regulations (VCS standard v4.7, section 3.7). Additional clarification required from the PP regarding the validation and documentation of land documents and contractual agreements. Accordingly submit the copies of contracts and land ownership documents of all the landowners. The KML files of all land units required as per "VCS 4888_Landowner Database" excel sheet.				
Project participant response	Date: 10/09/2024 <i>(Please mention the date of your response to KBS)</i>			
In PD-MR section 1.8, it is clarified that the land ownership type in Uganda for this project falls under Freehold, and Leasehold land tenure categories. Thus, the land ownership of this project rest upon all the landowners involved in this project. Landownership documents along with the Sheet of Landowner database are shared with the VVB.				
Documentation provided by project participant				

1. PD-MR (version 2.0) 2. Landownership Documents 3. VCS 4888_Landowner database 4. VCS 4888_Project area KML	
DOE assessment	Date: 11/11/2024
The audit team reviewed the Section 1.8 of the PD-MR clarifies that the land for the project in Uganda is classified as Freehold and Leasehold, with ownership shared among all involved landowners. Landownership documents and the Landowner Database Sheet were reviewed and confirmed that meetins the said requirement. The finding is closed	

CL ID	CL 05	Section no.	Section 1.11. of PD-MR	Date: 29/07/2024
Description of CL				
Format for Calendar year of crediting period is not clear as per template.				
Project participant response		Date: 10/09/2024(Please mention the date of your response to KBS)		
The format for the calendar year of the crediting period has been clearly defined in the PD-MR (version 2.0) in relevant sections. It includes a year-wise bifurcation, starting from the month the plantation began, and extending up to the 20th year.				
Documentation provided by project participant				
PD-MR (version 2.0)				
DOE assessment			Date: 11/11/2024	
Audit team reviewed the format of calender year in PD-MR and found to be correct as per template requirement,				
The finding is closed.				

CL ID	CL 06	Section no.	Section 1.12. of PD-MR	Date: 29/07/2024
Description of CL				
Project activities and a description of how the various organizations, communities and other entities are involved is not clear.				

Project participant response	Date: 10/09/2024
Section 1.12 has been updated in the latest version of the PD-MR Version 2.0 that provide detailed information about the involvement of various organizations and other entities in the project activity. This update specifically addresses and clearly defines their roles and includes a description of the project activities.	
Documentation provided by project participant	
PD-MR (version 2.0)	
DOE assessment	Date: 11/11/2024
The audit team reviewed that the Section 1.12 of PD-MR Version 2.0 has been updated to provide detailed information on the involvement of various organizations and entities in the project. This update clearly defines their roles and outlines the project activities. The finding is closed.	

CL ID	CL 07	Section no.	Section 1.14. of PD-MR	Date: 29/07/2024
Description of CL				
The explanation is not clear about “Where the baseline scenario is the same as the conditions existing prior to the project initiation, there is no need to repeat the description of the scenarios; state that this is the case and refer the reader to Section 3.4 (Baseline Scenario).” As per the template requirements. PP to clarify the presence of swamps in the project area and if present how PP ensures that project activities won’t affect them, state any govt guidelines if applicable.				
Project participant response		Date: 10/09/2024		
Section 1.1.4 and Section 3.4 of the PD-MR have been updated in the latest version to address the conditions prior to project initiation and the baseline scenario, which was classified as unused lands comprising scrublands. In accordance with template requirements, the description of the scenarios has not been repeated in the latest version. No swamp areas have been identified within the project area based on the GIS wetland analysis.				
Documentation provided by project participant				
1. PD-MR (version2.0) 2. VCS 4888_NDWI Assessment				

DOE assessment	Date: 11/11/2024
The audit team reviewed the documents and confirmed that in the latest version of the PD-MR, Sections 1.1.4 and 3.4 have been updated to address conditions prior to the project initiation and the baseline scenario, which was classified as unused scrublands. As per template requirements, the description of the scenarios has not been repeated. Additionally, GIS wetland analysis shows that no swamp areas have been identified within the project area. The finding is closed.	

CL ID	CL 08	Section no.	Section 1.18. of PD-MR	Date: 29/07/2024
Description of CL				
In PD-MR section 1.18.2, SDG indicators are not clear with quantitative data for specific parameters identified. PP to provide quantified information of the impact throughout the monitoring period and the project's duration.				
Project participant response		Date: 10/09/2024		
Section 1.18.2 of the PD-MR has been updated in the latest version to include quantitative data for specific parameters. Supporting evidence for this data is available and can be provided to auditors for verification. The Project Proponent has detailed the quantitative impact observed throughout the monitoring period and over the course of the project's duration. There are seven indicators that are used to assess the impact of project activities on six different SDGs.				
Documentation provided by project participant				
1) PD-MR (version 2.0) 2) VCS 4888_SDG evidence				
DOE assessment			Date: 11/11/2024	
The audit team reviewed and confirmed that in the latest version of the PD-MR, Section 1.18.2 includes quantitative data for specific parameters, with supporting evidence available for auditor verification. The PP has detailed the quantitative impacts observed during the monitoring period and throughout the project's duration. Seven indicators assess the impact of project activities on six different SDGs. The finding is closed.				

CL ID	CL 09	Section no.	Section 2.1. of PD-MR	Date: 29/07/2024
Description of CL				

In PD section 2.1, the report lacks sufficient details to effectively demonstrate the stakeholder engagement process's effectiveness. Specifically, it is unclear whether consultations respect local customs, values, and institutions. Additionally, the report does not clarify if communication and consultation methods were culturally appropriate, gender-sensitive, and inclusive of marginalized or vulnerable groups. Furthermore, it remains uncertain if consultations occurred at locations agreed upon by all stakeholders. There is no clear evidence presented on whether any grievances have been formally registered under the project. PP is requested to provide the evidence.

Dates are not clear in the attendance sheet.

Project participant response

Date: 10/09/2024 *(Please mention the date of your response to KBS)*

Section 2.1 has been updated in the latest version of the PD-MR to provide detailed information on the effectiveness of the stakeholder consultation process. The section now includes evidence demonstrating that consultations were conducted in a manner that respected local customs, values, and institutions. It has also been clarified that communication and consultation methods were culturally appropriate, gender-sensitive, and inclusive of marginalized or vulnerable groups, with consultations held at locations agreed upon by all stakeholders (section 2.1.2).

Regarding grievances, the section 2.1.4 includes a division of grievance types based on the different parties involved, ensuring effective resolution. The collected grievances have been successfully addressed, and the outcomes are documented in the relevant section.

A legible record of attendance sheet is shared with the auditors.

Documentation provided by project participant

- 1) PD-MR (version 2.0)
- 2) VCS 4888_Local Stakeholder Consultation Report

DOE assessment

Date: 11/11/2024

The audit team reviewed and confirmed that the Section 2.1 of the PD-MR has been updated to include details on the stakeholder consultation process, showing that it respected local customs and was culturally appropriate, gender-sensitive, and inclusive. Consultations were held at agreed-upon locations. Section 2.1.4 addresses grievances, categorizing them by parties involved and ensuring effective resolution, with outcomes documented. A legible attendance record has been shared with the auditors.

The finding is closed

CL ID	CL 10	Section no.	Section 2.2. of PD-MR	Date: 29/07/2024
Description of CL				

In section 2.2 of the PD, the justification for "Risks to Stakeholders and the Environment" is unclear. PP needs to clarify how these applicable risks have been mitigated and outline the preventive measures that have been implemented. Additionally, the NPRT 4.2 report lacks clear justification for each identified risk.

Project participant response	Date: 10/09/2024 <i>(Please mention the date of your response to KBS)</i>
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Section 2.2 has been updated in the latest version of PD-MR by identifying all the applicable risks and their respective prevention or mitigation measures.

A new NPRT has been created, which is shared with the VVB with supporting evidence to determine the justification for each identified risk and their respective mitigation measures.

Documentation provided by project participant

1. PD-MR (version 2.0)
2. VCS 4888_NPRT 2.0

DOE assessment

Date: 11/11/2024

The audit team reviewed and confirmed that Section 2.2 of the latest PD-MR version now identifies all applicable risks and outlines their prevention or mitigation measures. A new NPRT has been created and shared with the VVB, along with supporting evidence, to justify each identified risk and its corresponding mitigation measure.

The finding is closed.

CL ID	CL 11	Section no.	Section 2.2. of PD-MR	Date: 29/07/2024
Description of CL				
In PD section 2.2, Justification for “Risks to Stakeholders and the Environment” is not clear.				
Project participant response		Date: 10/09/2024		
Section 2.2 has been updated in the latest version of PD-MR by identifying all the applicable risks and their respective prevention or mitigation measures.				
A new NPRT has been created, which is shared with the VVB with supporting evidence to determine the justification for each identified risk.				
Documentation provided by project participant				
1. PD-MR (version 2.0) 2. VCS 4888_NPRT 2.0				

DOE assessment	Date: 11/11/2024
The audit team reviewed that confirmed that the Section 2.2 of the latest PD-MR version identifies all applicable risks and their corresponding prevention or mitigation measures. A new NPRT has been created and shared with the VVB, along with supporting evidence to justify each identified risk. The finding is closed.	

CL ID	CL 12	Section no.	Section 2.3. of PD-MR	Date: 29/07/2024
Description of CL				
In PD section 2.3, Justification for “Respect for Human Rights and Equity” is not clear.				
Project participant response		Date: 10/09/2024		
In the latest version of the PD, Section 2.3 has been updated to provide justification for "Respect for Human Rights and Equity."				
- The section now clearly details the project's strong commitment to upholding human rights, including specific measures to prevent discrimination and sexual harassment. - It highlights the project's adherence to gender equality and the rejection of human trafficking, forced labor, and child labor. - Additionally, it confirms that no elements of Uganda’s cultural heritage are impacted, as all activities occur on lands owned or leased from the NFA by landowners. Respect for territories and property rights is maintained. - An updated benefit-sharing mechanism is included to ensure fairness and equity among all stakeholders.				
Documentation provided by project participant				
PD-MR (version 2.0)				
DOE assessment			Date: 11/11/2024	
The audit team reviewed and confirmed that Section 2.3 of the latest PD version has been updated to justify the project's commitment to "Respect for Human Rights and Equity." It outlines measures to prevent discrimination and sexual harassment, ensures adherence to gender equality, and rejects human trafficking, forced labor, and child labor. The section also confirms that no aspects of Uganda’s cultural heritage are impacted, as all activities occur on lands owned or leased from the NFA. Additionally, an updated benefit-sharing mechanism is included to ensure fairness and equity among stakeholders.				
The finding is closed.				

CL ID	CL 13	Section no.	Section 3.1 & 3.2. of PD-MR	Date: 29/07/2024
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Description of CL	
In PD section 3.2, PP to clarify that why the following tools were not documented in PD-MR section 3.1 & 3.2. - Demonstrating appropriateness of allometric equations for estimation of aboveground tree biomass in A/R CDM project activities - The uncertainty tool for samples (refer Tool 14 v4.2) - Long term average calculation - VCS-Guidance-Harvesting-Examples_0.pdf (verra.org)	
Project participant response	Date: 10/09/2024 <i>(Please mention the date of your response to KBS)</i>
The tools as mentioned above, have been incorporated in the updated PD-MR, as mentioned in section 3.1. They have been applied in the respective sections as mentioned below- 'Demonstrating appropriateness of allometric equations for estimation of aboveground tree biomass in A/R CDM project activities' has been applied in section 6.2 of the PD-MR - The uncertainty tool for samples (Tool 14 v4.2) has been used in section 6.3 and 7.3 of the PD-MR - Long-term average calculation – 'VCS-Guidance-Harvesting-Examples_0.pdf' has been applied in sections 5.2 and 7.3 of the PD-MR	
Documentation provided by project participant	
PD-MR (version 2.0)	
DOE assessment	Date: 11/11/2024
The audit team reviewed and confirmed that the updated PD-MR incorporates several tools, as detailed in Section 3.1. These include the allometric equations tool in Section 6.2, the uncertainty tool (Tool 14 v4.2) in Sections 6.3 and 7.3, and the long-term average calculation tool in Sections 5.2 and 7.3. The finding is closed.	

CL ID	CL 14	Section no.	Section 3.4 of PD-MR	Date: 29/07/2024
Description of CL				
In PD section 3.4. Baseline Scenario explanation is not clear.				
Project participant response		Date: 10/09/2024 <i>(Please mention the date of your response to KBS)</i>		

In the latest version of the PD, Section 3.4 has been updated to provide a clearer explanation of the Baseline Scenario.

- The baseline scenario has been identified following the procedure outlined in the A/R Methodological tool, "Combined tool to identify the baseline scenario and demonstrate additionality in A/R CDM project activities" (Version 01).
- The pre-project land use primarily consisted of unused lands, largely scrublands, which were left unmanaged by private landowners due to specific barriers. These lands remained vacant without any management activities or additional inputs.

Documentation provided by project participant

PD-MR (version 2.0)

DOE assessment

Date: 11/11/2024

The audit team reviewed and confirmed that the Section 3.4 of the latest PD version clarifies the Baseline Scenario, identified using the A/R Methodological tool. The pre-project land use primarily consisted of unused scrublands, left unmanaged by private landowners due to specific barriers.

The finding is closed.

CL ID	CL 15	Section no.	Section 4.1 of PD-MR	Date: 29/07/2024
Description of CL				
In PD section 4.1. The monitoring period is unclear, and the statements and explanation do not adhere to the template requirements.				
Project participant response		Date: 10/09/2024		
In the latest version of the PD, Section 4.1 has been updated to clarify the monitoring period and ensure alignment with template requirements. The first monitoring period covers the Commercial tree species plantations established in 2021, 2022, and 2023 across 3,324.62 hectares, including <i>Eucalyptus spp.</i> and <i>Pinus spp.</i> The stratum-wise breakdown of the planted area for each year is detailed in the Ex-Post ER Sheet that is submitted to the VVB for verification.				
Documentation provided by project participant				
1. PD-MR (version 2) 2. VCS_4888_Ex-post V2.0				

DOE assessment	Date: 11/11/2024
The audit team reviewed and confirmed that Section 4.1 of the latest PD version clarifies the monitoring period, covering commercial tree plantations established in 2021, 2022, and 2023 across 3,324.62 hectares. The Ex-Post ER Sheet, detailing the stratum-wise breakdown of the planted area. The finding is closed.	

CL ID	CL 16	Section no.	Section 5 of PD-MR	Date: 29/07/2024
Description of CL				
In PD section 5. The long-term average (LTA) calculation is unclear. Some equation numbers do not meet the template requirements. The vintage period does not conform to the template specifications. PP to justify how the “Project trees” parameter is relevant? And also, PP to clarify the following: The Ex-ante values used for ER sheet calculation: - Why the latest version of IPCC guidelines was not used for the default values. - It is unclear how the thinning numbers were determined for each species. - What are the thinning and harvest cycles for each species planted in the project.				
Project participant response		Date: 10/09/2024		
In the latest version of the PD, Section 5 has been revised to clarify the Long-Term Average (LTA) calculation and ensure that all equation numbers meet the template requirements. The vintage period has been refined to conform to the specified template guidelines. The Ex-ante clarifications: - The Ex-ante ER Sheet has been updated to incorporate the guidelines of the ‘2006 IPCC Guidelines for National GHG Inventories with its refinement in 2019’. 1) - The determination of thinning numbers for each species was based on a combination of historical data, expert consultations, and specific project conditions, as outlined in the VCS_4888_Plantation Management SOP. This SOP, along with the updated document, will be provided to the VVB for verification. The thinning regime is clarified in Section 5.2 of the latest PD-MR, as well as in the VCS_4888_Ex-ante sheet and relevant SOP. - The thinning regime for Eucalyptus includes the first thinning at 4 years of age and the second at 6 years, while for Pinus, the first thinning occurs at 6 years and the second at the completion of 12 years. The harvesting age is set at 10 years for Eucalyptus and 20 years for Pinus.				
Documentation provided by project participant				

1. PD-MR (version 2.0)
2. VCS_4888_Ex-ante Sheet V 2.0
3. VCS_4888_Plantation Management SOP

DOE assessment
Date: 11/11/2024

The audit team reviewed and confirmed that Section 5 of the latest PD version clarifies the Long-Term Average (LTA) calculation and aligns with template requirements. The Ex-ante ER Sheet has been updated to follow the 2006 IPCC Guidelines, with refinements from 2019. Thinning numbers for each species are based on historical data and expert consultations, as outlined in the VCS_4888_Plantation Management SOP. The thinning regime is clarified in the PD-MR and Ex-ante sheet: Eucalyptus is thinned at 4 and 6 years, while Pinus is thinned at 6 and 12 years, with harvesting at 10 years for Eucalyptus and 20 years for Pinus.

The finding is closed.

CL ID
CL 17
Section no.

Section 6.3 of PD-MR

Date: 29/07/2024

Description of CL

PP to clarify the difference in the number of sample plots listed in the sample plot calculator and those included in the Carbon calculation sheets.

It is not clear how PP has ensured that the 5% remeasurement of inventory plots has been conducted for quality assurance purposes as stated during onsite visit. Additional documents are requested to substantiate the statement.

Though the thinning was executed in the project activity as demonstrated by PP during the onsite visit, it is unclear how PP is monitored and has incorporated the thinning concept into project documents such as PD-MR and ER calculation excel sheet.

Project participant response
Date: 10/09/2024

Clarifications -

1. Section 6.3 has been updated in the PD-MR to demonstrate that 8 additional plots were added to the 32 plots which were calculated with the help of Winrock Sample Plot Calculator Tool as a good practice i.e. 10% buffer increment. So, a total of 40 Permanent Sample Plots were created within the Project Area with the help of which Ex-Post Emission Removals have been calculated.
2)
2. The plantation site that was visited during the onsite visit was not eligible for thinning, as it completed 3 years of age in March 2024. As per the Thinning Regime mentioned in section 5.2 of the PD-MR, Eucalyptus spp. and Pinus spp. are eligible for thinning when they are 4 and 6 years old respectively. The thinning concept has been duly incorporated into the latest PD-MR, VCS_4888_Plantation Management SOP, and the VCS_4888_Ex-ante Sheet, ensuring that all aspects of thinning are accurately reflected in the project documentation.

Documentation provided by project participant

1. PD-MR (version 2.0)
2. VCS_4888_Ex-ante Sheet V2.0
3. VCS_4888_Ex-post Sheet V2.0
4. VCS_4888_Plantation Management SOP

DOE assessment
Date: 11/11/2024

The audit team reviewed and confirmed that Section 6.3 of the PD-MR has been updated to include 8 additional plots, bringing the total to 40 Permanent Sample Plots used for calculating Ex-Post Emission Removals. The plantation site visited during the onsite inspection was not eligible for thinning, as the trees were only 3 years old. Thinning eligibility is set at 4 years for Eucalyptus and 6 years for Pinus, as outlined in the PD-MR, VCS_4888_Plantation Management SOP, and the VCS_4888_Ex-ante Sheet.

The fining is closed.

CL ID
CL 18
Section no.

Section 7 of PD-MR

Date: 29/07/2024

Description of CL

In PD section 5. The description of ex-post quantification lacks clarity. The long-term average (LTA) calculation is also unclear. Some equation numbers do not meet the template requirements. The vintage period does not conform to the template specifications. The whole section is not clear and incomplete.

In the ER sheet the allometric equation reference for Pinus spp. For determining wood density is not appropriate. (Refer: ER excel sheet "Parameter" tab, cell address "F!6"). It has been referred to "registered VERRA project", PP is required to mention the primary reference.

The Ex-Post values calculation and reporting is not clear as explained below:

- It is unclear how the values in the project emission & removal column of the ER-Summary sheet were calculated.
- There is inconsistency in the Ex-post emission reduction/removal values compared to the Ex-post excel sheet.
- Why the latest version of IPCC guidelines was not used for Root shoot ratio and carbon fraction.
- Detailed information and suitability of DBH growth model was used to estimate the EX-post value.
- It is unclear how the DBH value was estimated from the collected data (GBH was measured from field).
- The vintage period is not clear as per the template requirements.

Project participant response
Date: 10/09/2024 *(Please mention the date of your response to KBS)*

In the latest version of the PD, Section 5 has been updated to address the clarity issues regarding ex-post quantification and the long-term average (LTA) calculation. The description now provides a detailed and clear explanation of the ex-post quantification process. Additionally, the LTA calculation has been clarified, and all equation numbers have been revised to meet the template requirements. The vintage period has been adjusted to conform with the template specifications.

The Parameter tab of the ER sheet has been updated to include the correct value of wood density along with the relevant reference. The primary source of the allometric equation has been clearly mentioned to ensure accuracy and compliance.

Ex-post Clarifications-

1. The first monitoring of Permanent Sample Plots (PSPs) took place for the entire project area during the validation and verification of the first monitoring period, thus the 'Total Project emission removals' were calculated for 2 years and 11 months since the start of the project date (i.e. from 01-March-2021 to 31-January-2024). This has to be converted into the vintages and therefore the proportion in which Ex-ante emission removal was calculated for 2 years and 11 months has been used to calculate the Ex-Post emission removals for the following Vintage period-
 - A. 01-March-2021 to 31-December-2021 (10 months)
 - B. 01-January-2022 to 31-December-2022 (12 months)
 - C. 01-January-2023 to 31-December-2023 (12 months)
 - D. 01-January-2024 to 31-January-2024 (1 month)
2. The Ex-Post values have been updated in the Ex-Post ER sheet which is consistent with the values mentioned in the updated PD-MR.
3. The Ex-Post ER Sheet has been updated to incorporate the guidelines of the '2006 IPCC Guidelines for National GHG Inventories with its refinement in 2019'. Thus, the reference to Root Shoot Ratio and Carbon Fraction has been updated.
4. The Growth Model has been used only in the Ex-Ante ER sheet and has been removed from the Ex-Post ER sheet. The parameters recorded from the Permanent Sample Plots during the first monitoring have been used to calculate the project emission removals.
5. GBH (Girth at Breast Height) has been converted to Diameter at Breast Height (DBH) in the Ex-Post ER Sheet. The same has been demonstrated in the updated Ex-Post ER sheet.
6. The Vintages have been updated across the ER Excel sheet and PD-MR

Documentation provided by project participant

1. PD-MR (version 2.0)
2. VCS_4888_Ex-ante Sheet (Updated)
3. VCS_4888_Ex-post Sheet (Updated)

DOE assessment	Date: 11/11/2024
The audit team reviewed and confirmed that the latest version of the PD has updated Section 5 to clarify ex-post quantification and LTA calculations, with revisions to meet template requirements. The Parameter tab of the ER sheet now includes the correct wood density value and source references for the allometric equation. Ex-post clarifications include the calculation of emission removals for the first monitoring period (2 years and 11 months), broken down into specific vintages. The Ex-Post ER sheet has been updated to align with IPCC guidelines, removing the Growth Model and incorporating data from Permanent Sample Plots. Additionally, Girth at Breast Height (GBH) has been converted to Diameter at Breast Height (DBH), and vintages have been updated across the ER sheet and PD-MR. The finding is closed.	

CL ID	CL 19	Section no.	Training	Date: 29/07/2024
Description of CL				
It is unclear how the training is conducted for conducting inventory for the farmers and what evidence is provided for these trainings. The procedures for conducting the trainings are not well defined, and the documentation or proof of how the trainings are implemented is not clear.				
Project participant response		Date: 10/09/2024(Please mention the date of your response to KBS)		
The training sessions conducted for the landowners on inventory procedures are detailed in the VCS_4888_Training and Capacity Building Report. This report outlines the training protocols and includes documentation as evidence of the training implementation. The report is shared with the VVB for verification.				
Documentation provided by project participant				
VCS_4888_Training and Capacity Building Report				
DOE assessment			Date: 11/11/2024	
The audit team reviewed and confirmed that the VCS_4888_Training and Capacity Building Report provides details on the training sessions conducted for landowners on inventory procedures. The report outlines the training protocols and includes documentation as evidence of the training's implementation . The finding is closed.				

Table 2.CAR from this validation/verification

CAR ID	CAR 01	Section no.	Section 1.1 of PD-MR	Date: 29/07/2024
Description of CAR				
In PD-MR section 1.1, the following details are not documented as per the template requirements: - The project area and consistent with the supplementary documents. (VCS 4888_Landowner Database excel sheet). - The implementation status and relevant implementation dates (e.g., dates of construction, commissioning, and continued operation periods). - The location of the project: it is not clear which part of the country. - An estimate of annual average and total reductions and removals. - The total GHG emission reductions or removals generated in the monitoring period.				
Project participant response		Date: 10/09/2024 (Please mention the date of your response to KBS)		
The latest version of PD-MR has incorporated all the information required as per the clarification. The supporting evidence for the same has been shared with the VVB. - All the supplementary documents is shared and revised VCS 4888_landowner database is shared to check the consistency - Please refer section 1.1 and 1.12, 1.9 and section 4 to understand the project activity implementation status and Start date - Please refer section 1.13 for the project location - Please refer section 1.11 in the PDMR V2.0 and Ex-ante sheet V2.0 - Please refer section 7.5 in the PDMR V2.0 and Ex-post sheet V2.0				
Documentation provided by project participant				
1. PD-MR (version 2.0) 2. VCS_4888_Ex-ante Sheet V2.0 3. VCS_4888_Ex-post Sheet V2.0				
DOE assessment				Date: 11/11/2024
The VVB has reviewed the updated PDMR and also the ER sheet and accept the modification. The finding is closed.				

CAR ID	CAR 02	Section no.	Section 1.9 of PD-MR	Date: 29/07/2024
Description of CAR				

The PP must substantiate the project start date in accordance with VCS Standard 4.7, Section 3.8, supported by relevant evidence. According to VCS Standard version 4.7, Section 3.8.2, AFOLU projects are required to commence the pipeline listing process within three years of the project start date.

Project participant response
Date: 10/09/2024 *(Please mention the date of your response to KBS)*

The project start date of March 1, 2021, aligns with the requirements of VCS Standard version 4.7, Section 3.8.2, which mandates that AFOLU projects initiate the pipeline listing process within three years of the start date. The listing process was completed within this timeframe. Relevant evidence, including nursery and land preparation bills, is provided to the VVB for verification to substantiate the project start date.

Documentation provided by project participant

1. PD-MR (version 2.0)
2. Evidence of Project start date (Nursery and land preparation bills)

DOE assessment
Date: 11/11/2024

The audit team has checked the dates with the verra registry and also reviewed the nursery & land preparation bills to validate the same which audit has accepted.

The finding is closed.

CAR ID

CAR 03
Section no.

Section 1.13 of PD-MR

Date: 29/07/2024

Description of CAR

PP has not submitted the evidence for project location as below:

VCS std ver. 4.7 section 3.11.1. 3)For grouped projects (see Section 3.6.10),

b) Geodetic polygon(s) provided in a KML file that:

i)Encompass all instances in the project, and

ii)Delineate the smallest administrative division of land for the local

government (e.g., if the activity takes place within six villages, the six villages must each have their own polygon).

VCS std ver. 4.7 section 3.11.2 : The description of the project location shall include the following information:

1) Name of the project area (e.g., compartment number, allotment number and local name).

2) Maps of the project zone.

3) A KML file with geodetic polygons that precisely delineates the project zone of the AFOLU project where reductions and removals occur, in accordance with the following:

a) Where the project zone is comprised of multiple polygons (parcels), the project location details of each polygon/parcel shall be included in the project description.

b) Grouped projects shall provide geodetic polygons showing the boundary of each instance included in the project. Non-contiguous project activity instances shall be reflected in the polygons in the KML file.

c) KML files shall exclude at the project start:

i)Any non-eligible areas (e.g., if a project activity relates to improved crop management, the KML file should only be for the participating croplands and should exclude any surrounding land that may be part of the property), and

ii)Areas not part of the project area, as defined by the applied methodology (e.g., roads, water bodies, water ways, settlements).

4) Total size of the project zone.

Project participant response

Date: 13/08/2024 *(Please mention the date of your response to KBS)*

Please refer section 1.13 of the PDMR V2.0 for the detail understanding of the project location. Relevant GIS files has been shared.

Documentation provided by project participant

1. PD-MR (version 2.0)
2. VCS 4888_Total project area KML file (Project location)

DOE assessment	Date: 11/11/2024
The VVB has reviewed the KML files on the random sample basis and found it align with the VCS requirement. Hence the finding is closed.	

CAR ID	CAR 04	Section no.	Section 3.3 of PD-MR	Date: 29/07/2024
Description of CAR				
PP has not provided a diagram or map of the project boundary, clearly showing the physical locations of the various installations or management activities taking place as part of the project activity based on the description provided in Section 1.12 (Description of the Project Activity) above. For AFOLU projects, include in the diagram or map the locations of where the various measures are taking place, any reference areas and leakage belts.				
Project participant response		Date: 10/09/2024		
Section 1.12 of the latest version of PDMR has incorporated all the information required as per the clarification.				
Documentation provided by project participant				
PD-MR (version 2.0)				
DOE assessment				Date: 11/11/2024
The VVB has reviewed the section 1.12 and found that the PP has updated the project boundary map. Hence the CAR is closed.				

CAR ID	CAR 05	Section no.	Section 3.5 of PD-MR	Date: 29/07/2024
Description of CAR				
PP has not provided a comprehensive analysis demonstrating how the alternative land use scenario and barrier analysis validate the additionality, backed by pertinent documentation. When employing barrier analysis or similar methods to establish additionality, PP has not focused on the most pertinent barriers. PP has not justified the credibility of these barriers using essential facts, assumptions, and logical reasoning, while citing all relevant references. Additionally, PP has not provided the common practice analysis with robust supporting evidence. It is crucial to include sufficient information, encompassing all pertinent data and parameters along with their sources, to enable readers to replicate the additionality analysis and achieve consistent outcomes.				
Project participant response		Date: 10/09/2024 <i>(Please mention the date of your response to KBS)</i>		

The latest version of PD-MR has incorporated all the information required as per the clarification. The supporting evidence for the same has been shared with the VVB.	
Documentation provided by project participant	
1. PD-MR (version 2.0) 2. VCS 4888_Additionality	
DOE assessment	Date: 11/11/2024
The PP has elaborate the additionality section with the supportive document which is acceptable and hence the finding closed.	

CAR ID	CAR 06	Section no.	Section 6 of PD-MR	Date: 29/07/2024
Description of CAR				
In PD section 6. The sub sections numbering is not as per template. 6.1 section refers to Data and Parameters Available at Validation not Data and Parameters Monitored.				
Project participant response		Date: 10/09/2024		
The latest version of PD-MR has incorporated all the information required as per the clarification.				
Documentation provided by project participant				
PD-MR (version 2.0)				
DOE assessment				Date: 11/11/2024
The sub sections numbers in the main section 6.1 have updated by the PP. Hence the CAR is closed.				

Table 3. FAR from this validation/verification

FAR ID	FAR 01	Section no.	Thinning	Date: 29/07/2024
Description of FAR				
During subsequent verification, the VVB should verify the data of thinning.				
Project participant response				Date: DD/MM/YYYY
NA.				

Documentation provided by project participant	
NA.	
DOE assessment	Date: DD/MM/YYYY
NA.	

APPENDIX 5: CERTIFICATES OF COMPETENCE



Certificate of Competence
CDM-D-43 (Version 1.1, Jan 2023)

Certificate of Competence

Personnel Name		Madhusudhana Reddy B			
Schemes	☐ CDM	☐ GCC	☒ GS	☒ VCS	☒ Other GHG Schemes (VCS Plastic Program, VCS SD Vista)
Qualified to work as					
Team Leader			☒	Technical Expert	☒
Validator/Verifier			☒	Financial Expert	☐
Technical Reviewer			☐	Local Expert (India)	☒
Area(s) of Technical Expertise					
Sectoral Scope			Technical Area		
SS-14 – Afforestation and Reforestation			TA- 14.1 Afforestation and Reforestation		
SS- 15 - Agricultural			TA -15.1 – Agricultural		
Approved by (Manager Competence & Training)			Dushyant Parashar		
Approval date			09-05-2024.		

History of the document

Version	Date	Nature of revision	Reviewed by QM (Date)	Approved by MD (Date)
1.0	XX Dec 2011	Initial adoption.	XX Dec 2011	XX Dec 2011
1.1	05-01-2023	Revised to include name of the schemes	05-01-2023	06-01-2023

Personnel Name		Dr D Siddaramu			
Schemes	☒ CDM	☒ GCC	☒ GS	☒ VCS	☐ Other GHG Schemes (mention here)
Qualified to work as					
Team Leader			☒	Technical Expert	
Validator/Verifier			☒	Financial Expert	
Technical Reviewer			☒	Local Expert (India)	
Area(s) of Technical Expertise					
Sectoral Scope			Technical Area		
SS 01: Energy industries (renewable/non-renewable sources)			TA 1.2: Energy generation from renewable energy sources		
SS 3: Energy demand			TA 3.1. Energy Demand		
SS 14: Afforestation and reforestation			TA 14.1 Afforestation and reforestation		
Approved by (Manager Quality)			Sapana Pednekar		
Date of Approval			15-11-2022		



Certificate of Competence
CDM-D-43 (Version 1.1, Jan 2023)

Certificate of Competence

Personnel Name	Mr. Shankar Shan Patro				
Schemes	☒ CDM	☒ GCC	☐ GS	☒ VCS	☒ Other GHG Schemes (VCS CCB, Cercarbono, SDVista)
Qualified to work as					
Team Leader	☐			Technical Expert	☒
Validator/Verifier	☒			Financial Expert	☐
Technical Reviewer	☐			Local Expert (India)	☒
Area(s) of Technical Expertise					
Sectoral Scope			Technical Area		
SS 14: Afforestation and reforestation			TA 14.1. Afforestation and reforestation		
SS 15: Agriculture			TA 15.1. Agriculture		
Approved by (Manager Competence & Training)			Dr. Rajesh Monga		
Approval date			12-02-2024		

History of the document

Version	Date	Nature of revision	Reviewed by QM (Date)	Approved by MD (Date)
1.0	XX Dec 2011	Initial adoption.	XX Dec 2011	XX Dec 2011
1.1	05-01-2023	Revised to include name of the schemes	05-01-2023	06-01-2023



Certificate of Competence
CDM-D-43 (Version 1.1, Jan 2023)



Certificate of Competence

Personnel Name		Satyam Singh			
Schemes	☒ CDM	☒ GCC	☐ GS	☒ VCS	☒ Other GHG Schemes (VCS CCB, Cerrcarbono, SDVista)
Qualified to work as					
Team Leader			☐	Technical Expert	☒
Validator/Verifier (Trainee)			☒	Financial Expert	☐
Technical Reviewer			☐	Local Expert (India)	☒
Area(s) of Technical Expertise					
Sectoral Scope			Technical Area		
SS 14: Afforestation and reforestation			TA 14.1. Afforestation and reforestation		
Approved by (Manager Competence & Training)			Dr. Rajesh Monga		
Approval date			27-02-2024		



History of the document

Version	Date	Nature of revision	Reviewed by QM (Date)	Approved by MD (Date)
1.0	XX Dec 2011	Initial adoption.	XX Dec 2011	XX Dec 2011
1.1	05-01-2023	Revised to include name of the schemes	05-01-2023	06-01-2023



Certificate of Competence
CDM-D-43 (Version 1.1, Jan 2023)



Certificate of Competence

Personnel Name		Mr. Akhilesh Joshi			
Schemes	☒ CDM	☐ GCC	☒ GS	☒ VCS	☒ Other GHG Schemes (ISO 14064)
Qualified to work as					
Team Leader			☒	Technical Expert	
Validator/Verifier			☒	Financial Expert	
Technical Reviewer			☒	Local Expert (India)	
Area(s) of Technical Expertise					
Sectoral Scope			Technical Area		
SS 01: Energy industries (renewable/non-renewable sources)			TA 1.2: Energy generation from renewable energy sources		
SS 3: Energy Demand			TA 3.1: Energy Demand		
SS 4: Manufacturing industries			TA 4.1: Cement and lime production		
SS 10: Fugitive emissions from fuels (solid, oil and gas)			TA 10.1: Fugitive emissions from oil and gas		
Approved by (Manager Competence & Training)			Dushyant Parashar		
Approval date			20-06-2024		

History of the document

Version	Date	Nature of revision	Reviewed by QM (Date)	Approved by MD (Date)
1.0	XX Dec 2011	Initial adoption.	XX Dec 2011	XX Dec 2011
1.1	05-01-2023	Revised to include name of the schemes	05-01-2023	06-01-2023



Certificate of Competence
CDM-D-43 (Version 1.1, Jan 2023)

Certificate of Competence

Personnel Name	Mr. Pradeep Kumar				
Schemes	☐ CDM	☐ GCC	☐ GS	☐ VCS	☐ Other GHG Schemes
Qualified to work as					
Team Leader	☐			Technical Expert	☒
Validator/Verifier (Trainee)	☒			Financial Expert	☐
Technical Reviewer	☐			Local Expert (India)	☒
Area(s) of Technical Expertise					
Sectoral Scope			Technical Area		
SS 14: Afforestation and reforestation			TA 14.1. Afforestation and reforestation		
SS 15: Agriculture			TA 15.1: Agriculture		
Approved by (Manager Competence & Training)			Dushyant Parashar		
Approval date			14-02-2025		

History of the document

Version	Date	Nature of revision	Reviewed by QM (Date)	Approved by MD (Date)
1.0	XX Dec 2011	Initial adoption.	XX Dec 2011	XX Dec 2011
1.1	05-01-2023	Revised to include name of the schemes	05-01-2023	06-01-2023

APPENDIX 6: ONSITE AUDIT PHOTOGRAPH





