REFORESTATION OF DEGRADED LAND BY MTPL IN INDIA

Document Prepared by KBS Certification Services Pvt. Ltd

Project Title	Reforestation of Degraded Land by MTPL in India
Version	02
Report ID	VCS.21.VAL.003

Report Title	Reforestation of Degraded Land by MTPL in India
Client	EKI Energy Services Limited
Date of Issue	25-05-2021
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Summary:

EKI Energy Services Limited has commissioned KBS Certification Services Pvt. Ltd. to do VCS gap validation of the CDM registered project: "Reforestation of Degraded Land by MTPL in India" having UNFCCC Ref. No. 5016, with regard to the relevant VCS requirements of VCS Standard version 4.1.

The purpose of the project activity is the reforestation of 14,969.46 ha of degraded farm lands with the Eucalyptus plantation. The project area is located on discrete 12,437 parcels of land, belonging to 12,002 local farmers in the states of Orissa, Andhra Pradesh and Chhattisgarh in India. The reforestation under the proposed project activity is on degraded land which was lying barren since decades.

A risk-based approach has been followed to perform this validation. In the course of the validation 02 Corrective Action Requests (CARs) and 01 Clarification Requests (CRs) were raised and successfully closed.

The validation is based on the VCS PD, Emission reduction sheet, UNFCCC website for the CDM registered project https://cdm.unfccc.int/Projects/DB/TUEV-SUED1310638384.3/view; the subsequent background investigation, follow-up interviews and supporting documents made available to the validation team by project proponent.

As a result of the validation, the validation team confirms that:

- The project fulfils criteria of VCS Standard Version 4.1.
- The project is in line with all relevant VCS requirements.
- The project baseline is sufficiently justified in the PD.
- The calculation of the baseline and project emission reductions is carried out in a transparent and conservative manner, so that the emission reductions of 4,409,933 tCO_2e[1] is most likely to be achieved within the 30 years of first renewable crediting period.

No restrictions or uncertainties were identified related to the validation.

[1] However, emission reductions of 3307036.4 tCO_2e after Long Term Average calculation are likely to be achieved.

CONTENTS

1 INTRODUCTION

1.1 Objective

EKI Energy Services Limited has commissioned "KBS Certification Services Pvt. Ltd." (KBS) to carry out the VCS Gap Validation of the CDM registered project - "Reforestation of Degraded Land by MTPL In India" having UNFCCC Ref. No. 5016, with regard to the relevant VCS requirements of VCS Standard version 4.1 /5/; to attain real, measurable, additional and permanent emission reductions.

The purpose of validation is to ensure a thorough, independent assessment of the project description (PD), the project's description eligibility, ownership, crediting period and details regarding its compliance with the law statutes and other regulatory frameworks

- The requirements of VCS Program guide Version 4.0 /4/
- The requirements of VCS Standard Version 4.1 /5/
- To assess the project's compliance with other relevant rules, including the host legislation
- Other relevant rules are validated in order to confirm that the project description as documented is sound and reasonable and meet the stated requirements and identified criteria.

The validation is seen as necessary to provide assurance about the quality of the project and its intended generation of emission reductions over the project's crediting period without any double counting.

1.2 Scope and Criteria

The scope of the gap validation is defined as an independent and objective review of the Project description document /1//2/, where methodological deviations and the project's compliance in section 1 (i.e. Project Details) is reviewed against the requirements of VCS Standard /5/. KBS has employed a risk-based approach in the validation, focusing on the identification of significant risks for project implementation and the generation of Emission Reductions.

The items covered in the validation are described below:

- VCS Criteria
- VCS Project Description /1/
- Background investigation and follow up interviews
- Draft validation reporting with CARs & CLs
- Final validation reporting

Furthermore, the assessment team used additional documentation by third parties like reports referring to the project design or to the basic conditions and technical data available on public domain to assess the following:

- Compliance with relevant law and regulations
- LULC data, forest report 1999.
- Land title documents /20/
- Certificates of Local tehsildars
- Baseline vegetation survey records /16/
- Tri partite Agreement /12/
- Project database /10/

The assessment team has checked all the above-mentioned details and confirms that all the information provided is accurate.

The validation is not meant to provide any consulting to the project proponent. However, stated requests for clarifications and/or corrective actions may provide input for improvement of the project description. The work carried out by KBS is free from any conflict of interest.

1.3 Level of Assurance

☑ Reasonable level of assurance

The gap validation report is based on VCS-PD /2/, supporting documents made available to the validator and information collected through performing interviews. Based on the process and procedures conducted, KBS states whether the information in the PD:

- is materially correct and is a fair representation of the actual project details, and

- is prepared in accordance with VCS requirements and the applied CDM methodology for information pertaining to description, methodological deviations and reporting.

The gap validation work is carried out as per this requirement and the validation opinion is assured provided the credibility of all above. Details are presented in the Validation statement in section 4 below.

1.4 Summary Description of the Project

The project activity by MTPL involves carbon sequestration by the reforestation of 14,969.46 ha of degraded farm lands. For the purpose of reforestation, Eucalyptus, a fast-growing species has been planted in the project area for carbon sequestration. The land re-forested under the project activity is owned by small and poor farmers who do not have the capability of plantation without any external financial support and technical guidance. The project encompasses 12, 437 parcels of land measuring 14,969.46 hectares owned by 12, 002 farmers distributed in seven districts across three states of Odisha, Andhra Pradesh and Chhattisgarh. The baseline scenario for the project area is continuation of pre-project land use (degraded, abandoned agricultural lands). The start date of the project is 25-June-2001 and the estimated total amount of emission reductions over the chosen 30-year crediting period (starting from 25-June-2001 to 24-June-2031 is 4,409,933 tCO_2e[2] (acc. to the PDD). The estimated amount of emission reductions per annum are 146,998 tCO2e.

Validation team has checked the summary description of the project defined in the VCS-PD /1/ and found it to be consistent with the registered CDM-PDD[3] .Validation team has further confirmed the project description during the remote inspection and through the review of project database /10/ and GIS Files/11/ of the project area.

2 VALIDATION PROCESS

[2] However, emission reductions of 3307036.4 tCO_2e after Long Term Average calculation are likely to be achieved.

[3] https://cdm.unfccc.int/Projects/DB/TUEV-SUED1310638384.3/view

2.1 Method and Criteria

The project activity applies approved CDM methodology AR-ACM0001 - Afforestation and reforestation of degraded land - Version 4.0 /6/, categorized under sectoral scope 14 "Afforestation and reforestation". The validation consisted of the following phases:

- Completeness check and desk review of the Project Description
- Interview with project representatives and issuance of findings.
- Resolution of findings followed by preparation of the final validation report and opinion.

Timeline of Validation:

Work order signed	24/02/2021
Remote	29/04/2021
(Draft) Reporting	07/05/2021
(Final) Reporting	25/05/2021

2.2 Document Review

After the submission of the draft PD /01/ 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 4.1 /5/ requirements is reviewed. Furthermore, the validation team used additional documentation by third parties like reports referring to the project design or to the basic conditions and technical data available on public domain. A desk review is carried out to assess the following:

- the project details as per VCS PD template
- any methodological deviations applied
- compliance with relevant law and regulations
- conditions prior to project initiation/ baseline

The list of documents reviewed is included in the section 'References'.

2.3 Interviews

As a result of the COVID-19 pandemic, taking into account the rules of relevant national and local authorities (local to the VVB offices as well as to locality of the site visits), World Health Organization (WHO) recommendations, policies of the VVB, email clarification for Verra guidance on site visits, notification of Covid-19 Travel Guidance for Projects https://verra.org/covid-19-travel-guidance/ and other relevant travel restrictions and guidance (for example, a requirement to self-isolate upon return from specific countries), the VVB has skipped the on-site visit. Further

Email from VERRA dated 24/03/2020 from "Andrew Beauchamp" has been referred as per which "*The VCS Program does not explicitly mandate site visits as part of the validation and verification process, only that VVBs must achieve a reasonable level of assurance on all validations and verifications (per Section 4.1.2 of the VCS Standard, v4.1). Therefore, where a VVB can achieve a reasonable level of assurance without conducting a site visit, or through a remote site visit, this is in conformance with the VCS rules, and no request for an exemption or pre-approval from Verra is required. However, where a validation/verification has been conducted without a site visit, or through a remote site visit, please ensure that the applicable section of the validation/verification report includes a discussion of how a reasonable level of assurance was achieved without an in-person site visit*".

Hence, the VVB has used other standard auditing techniques for validation as referred to in VCS Rules/requirements, VCS Validation and Verification Manual version 3.2.

Validation team has used the following alternative means for its assessment and to justify that they are sufficient for the purpose of gap validation. Along with desk review, audit team has conducted remote audit interview as follows:

- A complete desk review of the VCS PD /2/, as well as all applicable country legal requirement and supportive evidences have been checked by the validation team.
- Validation team has performed Teams Application interview with PP in order to check implementation, project boundary, current situation, monitoring and metering equipment, monitoring procedures, calibration etc.
- Cross-check evaluation, for information received from interviews, under the scope of all information and references provided in VCS PD and supporting documents.

Details of interviewees, topics covered and additional information are presented below:

Date:	29/04/2021		
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, Conditions prior to the Project initiation, Participation under other GHG	Mohammad Moonis (Manager Operations) Supratik Dutta (DGM Operations)	Project consultant and Representative of PP	Shikha Sharma (Team Leader) Rakotonarivo Rinah Zo Nandrianina (Technical Expert) Somil Goyal (Observer- Trainee)

programs, Non-permanance risk analysis			

2.4 Site Inspections

KBS has not conducted site inspection due to COVID- for the gap validation process however Microsoft Teams interview was conducted.

2.5 Resolution of Findings

KBS applies the risk-based approach aimed at focusing on high-risk issues to the validation results whilst not omitting any part of the mandatory processes. A few discrepancies were found during the validation and the validation 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.

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 PD or provides adequate additional explanations or evidence that satisfies the concerns. If this is not completed, the project activity cannot be recommended for registration under VCS registry.

02 CARs and 01 CL were found during validation.

Forward Action Requests

No FARs raised during the validation.

3 VALIDATION FINDINGS

3.1 Project Details

- Project scope, activity, type, technologies and measures implemented, and eligibility of the project.

  The project activity by MTPL involves carbon sequestration by the reforestation of 14,969.46 ha of degraded farm lands. For the purpose of reforestation, *Eucalyptus tereticornis*, a fast-growing species has been planted in the project area for carbon sequestration. The land reforested under the project activity is owned by small and poor farmers who do not have the capability of plantation without any external financial support and technical guidance. The project encompasses 12, 437 parcels of land measuring 14,969.46 hectares owned by 12, 002 farmers distributed in seven districts across three states of Odisha, Andhra Pradesh and Chhattisgarh. The baseline scenario for the project area is continuation of pre-project land use (degraded, abandoned agricultural lands). The start date of the project is 25-June-2001 on which the first tripartite agreement was executed between the farmer, the company and the bank to undertake project activity. The estimated total amount of emission reductions over the chosen 30-years crediting period (starting from 25-June-2001 to 24-June-2031 is 4,409,933 tCO_2e[1] (acc. to the PDD). The estimated amount of available emission reductions per annum are 146,998 tCO2e.

Eligibility conditions	Justification/Description
a) Eligible ARR activities are those that increase carbon sequestration and/or reduce GHG emissions by establishing, increasing or restoring vegetative cover (forest or non-forest) through the planting, sowing or human-assisted natural regeneration of woody vegetation.	The ARR project activity is the reforestation of degraded land through *Eucalyptus tereticornis* plantation which helps in carbon sequestration of aboveground biomass, below ground biomass and soil organic carbon. The same has been confirmed during remote interview and through the review of project database/10/, tripartite

	agreement/12/ between the farmers, PP and the bank.
b) Eligible ARR projects may include timber harvesting in their management plan.	As confirmed through the remote interviews and the harvesting and replanting plan /14/ /15/ provided by PP, the plantation has been done strata wise and shall be harvested after the plantation is 5 years old and onwards.
c) The project area shall not be cleared of native ecosystems within the 10-year period prior to the project start date.	The project activity has not been cleared of any native ecosystem within 10 years prior to the project start date as confirmed from the remote interviews and through the review of satellite imageries of the project area for 1989 to 1990 period/11/, state forest report/18/ Land title document of the farmers/20/ and baseline vegetation survey/16/. This was also validated during the CDM registration of the project activity as can be checked from the validation report, wherein vegetation at the time of the project start was assessed and found to be below the forest threshold (according to the DNA definition). It was assessed that the vegetation prior to project start would not have surpassed this threshold at maturity without the project activity. During the CDM site visit a number of randomly selected parcels of land were visited. Based on these samples, it was confirmed that no forest was on the project area before project start."

Validation team has checked the summary description of the project defined in the VCS-PD /01/ and found it to be consistent with the registered CDM-PDD[4] .Validation team has further

[4] https://cdm.unfccc.int/Projects/DB/TUEV-SUED1310638384.3/view

confirmed the project description during the remote inspection and through the review of project database and GIS Files of the project area.

- Project proponent

  The project activity is a project that has been developed by Mangalam Timber Products Limited

  As per the registered CDM-PDD /07/, Mangalam Timber Products Limited (MTPL) is the project proponent. Validation team has checked the Letter of Approval /9/ provided by the DNA to the PP to confirm the same. Hence, the Project proponent has been verified and accepted to the validation team.

  Other entities involved in this project are:

Organization name	Role in the project
EKI Energy Services Ltd.	Project consultant responsible for gap validation process

  EKI Energy Services Ltd. is the Project developer for development of emission reduction through the Voluntary Carbon Standard which is also verified during the remote inspection.

- Project start date

  As per the project description (PD) /02/, the start date of the project activity is stated as 25-June-2001 which is the date of the contract between the farmer, bank and the MTPL. The start date of the project was found to not be in accordance with the AFOLU project crediting period requirements mentioned in section 3.8.6 of the VCS Standard version 4.1, which states that the *"earliest project crediting period start date for AFOLU projects shall be 1 January 2002"*. Following this, CL 01 was raised, wherein it was confirmed that the project has been provided with the exemption through letter dated 22/01/2021.

- Project crediting period

  The crediting period of the project activity is non- renewable and fixed for the duration of 30 years 00 months, starting from 25-June-2001 and ending on 24-June-2031. The crediting period of the project activity is in compliance with the section 3.8.7 of the VCS Standard version 4.1 /5/, "Projects registered under other GHG programs are not eligible for VCU issuance beyond the end of the total project crediting period under those programs".

- Project scale and estimated GHG emission reductions or removals

The validation team confirms that the project activity falls under the category 1 'Projects' as per para 3.9.1 of the VCS standard version 4.1 /5/, as it does not have the potential to reduce GHG emission more than 300,000 tCO_2e/year.

The estimated available annual average and the total CO_2e emission reduction by the project activity over the crediting period of 30 years are expected to be 146,998 tCO2e and 4,409,933 tCO_2e[1] tCO_2e respectively. The validation team confirmed that emission reduction forecast is reasonable if the underlying assumptions do not change.

- Project location

The project is located in 3 states of India i.e., Orissa, Andhra Pradesh and Chhattisgarh. The location of the project activity was confirmed by the validation team during the remote audit, in addition digital boundary information for the entire project area provided in GIS (shapefiles) and overview maps based on the GIS files/11/ have been checked by the validation team.

Finding: CL 01, CAR 01 and CAR 02 has been raised during the gap validation process. Refer to appendix 2 for further details.

Conditions Prior to Project Initiation

Prior to the project activity, the land was degraded due to severe soil erosion without considerable flora, which was evidenced through the ecological survey conducted in the year 2000 - 2001 in the project area, in order to understand different floral and faunal composition of the existing ecosystem. Based on the evidence provided and the discussion held with the project participants during the remote interview, it is clear that the continuation of the current and historical land use is the most likely scenario in the absence of the project activity. Validation team has checked this scenario with the registered CDM-PDD /07/ and found it to be consistent.

Compliance with Laws, Statutes and Other Regulatory Frameworks

The validation team by its document review and remote interview confirmed that the project activity is in compliance with all the applicable laws, statutes and other regulatory frameworks. The legislations applicable to the project activity are as follows:

1. Water (Prevention and Control of Pollution) Act, 1974 with Rules: This act is not applicable to the project activity as the species planted in the project activity is *Eucalyptus tereticornis (*project database/10/), which is a native of Australia and well-adapted to the Indian edapho-climatic conditions. As per the studies/17/, eucalyptus is the most adapted species under agro-forestry

in India due to its high economic value, resistance to pest attack and adaptation to dry and stressed climatic conditions. It has been confirmed through various studies and articles that these plantations do not have any adverse impact on the ground water table, *"as it consumes less water per kg of total biomass generated versus many tree and agricultural crops"*[5]. Also, the species is very efficient in water consumption and therefore changes its water consumption according to the soil moisture availability[6].

2. Biological Diversity Act, 2002: This act is not applicable as is no mention of reforestation in the context of biodiversity. Also,

3. The Indian Forest Act (1927): The act is not applicable to the project activity as the objective of the act is to secure exclusive state control over forests to meet the demand for timber, the transit of forest produce, the duty leviable on timber and other forest produce.

4. Forest (Conservation) Act, 1980: This act is the nodal legislation that regulates deforestation in India. This law in force prohibits felling of forest trees for non-forestry purposes without the approval of the Union government. However, in case of the project activity reforestation is being carried out on degraded land. The land was degraded due to severe soil erosion without considerable flora, which was evidenced through the ecological survey conducted in the year 2000 - 2001 in the project area. Hence, this act is also not applicable.

5. Environment (Protection) Act, 1980: This act covers all forms of pollution - air, water, soil and noise pollution. It also makes sure that the safe standards are practiced which prohibit the use of hazardous material. This act is not applicable to the project activity as the species planted in the project activity is *Eucalyptus tereticornis (*project database/10/), which is a native of Australia and well-adapted to the Indian edapho-climatic conditions. As per the studies/17/, eucalyptus is the most adapted species under agro-forestry in India due to its high economic value, resistance to pest attack and adaptation to dry and stressed climatic conditions. The plantations do not have any adverse impact on the environment or ground water table, *"as it consumes less water per kg of total biomass generated versus many tree and agricultural crops"*[7]. Also, the species is very efficient in water consumption and therefore changes its water consumption according to the soil moisture availability[8].

[5] https://www.downtoearth.org.in/blog/water/why-eucalyptus--60275

[6] https://www.downtoearth.org.in/blog/water/why-eucalyptus--60275#:~:text=However%2C%20there%20are%20no%20concrete,impact%20on%20the%20water%20table.

[7] https://www.downtoearth.org.in/blog/water/why-eucalyptus--60275

[8] https://www.downtoearth.org.in/blog/water/why-eucalyptus--60275#:~:text=However%2C%20there%20are%20no%20concrete,impact%20on%20the%20water%20table.

All the above-mentioned acts were compared with the project description, and it was concluded that none of the acts are applicable to the project activity, further the project is in compliance with the state specific acts[9][10] & policies[11] based on which the project was implemented. The validation team has also confirmed that the baseline scenario presented in the VCS PD/2/ is also in compliance with the laws and regulations of India.

Ownership and other programs:

As per the registered CDM-PDD /07/, Mangalam Timber Products Limited is the PP of the project. Validation team has checked the Letter of Approval/9/ provided by the DNA to the PP to confirm the same. Hence, the Project proponent has been verified by the validation team.

The project was registered under CDM program with the CDM Registration number 5016, for a 30-year fixed crediting period (from 25-June-2001 to 24-June-2031), the details of which can be checked from the links: https://cdm.unfccc.int/Projects/DB/TUEV-SUED1310638384.3/view . The information is transparently described under section 1.15.1 and 1.15.2 of the VCS PD /01/ which is acceptable to the validation team. Project has not been rejected by any other GHG Programs which is verified during remote interview.

Net GHG emission reductions or removals generated by this project will not be used for compliance with any emissions trading program or to meet binding limits on GHG emissions as the project activity is an ARR project activity and is located in non-Annex I country, which is not a participant in any emission trading programs or nor does it have any binding limits.

Additional Information Relevant to the Project

Eligibility Criteria

This is not a grouped project activity. Thus, this section is not applicable for this project.

Leakage Management

As confirmed during the remote interviews, leakage due to the displacement of grazing and cultivation is unlikely to occur as there are sufficient existing grazing lands under the control of

[9] The Orissa Forest Act, 1972

[10] Andhra Pradesh Water, Land and Trees Rules, 2004

[11] Chhattisgarh State Forest Policy 2001

the animal owners that can adopt displaced animals even if all pre-project animals are displaced to existing lands outside the project boundary.

Commercially Sensitive Information

No commercially sensitive information has been excluded from the project description.

Sustainable Development

The project contributes to sustainable development through Eucalyptus plantation, which increases the forest cover, and leads to carbon sequestration in the above ground biomass, below ground biomass and the soil organic carbon. Further, the project activity involves sustainable harvesting, through its project management plan by allowing plantation to be maintained for a 5-year period before harvesting/14/, which maintains the stability of natural functions, populations, successional patterns and carbon storage in the forest. The project allows a better valuing the lands which are degraded and would remain to be so without any human intervention.

Based on the above-mentioned details of the project, the validation team concludes that the project description is accurate, complete, and provides an understanding of the nature of the project.

3.2 Safeguards

3.2.1 No Net Harm

According to section 3.19.5 of the VCS Standard version 4.1 /05/, this section is not required for completion for the gap validation. However, details corresponding to this section have been validated and are available under the CDM validation report.

3.2.2 Local Stakeholder Consultation

According to section 3.19.5 of the VCS Standard version 4.1 /05/, this section is not required for completion for the gap validation.

3.2.3 Public Comments

According to section 3.19.5 of the VCS Standard version 4.1 /05/, this section is not required for completion for the gap validation.

3.2.4 AFOLU-Specific Safeguards

According to section 3.19.5 of the VCS Standard version 4.1 /05/, this section is not required for completion for the gap validation.

3.3 Application of Methodology

3.3.1 Title and Reference

According to section 3.19.5 of the VCS Standard version 4.1 /05/, this section is not required for completion for the gap validation.

3.3.2 Baseline Scenario

According to section 3.19.5 of the VCS Standard version 4.1 /05/, this section is not required for completion for the gap validation.

3.3.3 Additionality

According to section 3.19.5 of the VCS Standard version 4.1 /05/, this section is not required for completion for the gap validation.

3.3.4 Quantification of GHG Emission Reductions and Removals

According to section 3.19.5 of the VCS Standard version 4.1 /05/, this section is not required for completion for the gap validation.

As confirmed through the review of project database/10/, tripartite agreement/12/, the ARR project has been developed on the degraded lands. The crediting period of the project activity is non- renewable and fixed for the duration of 30 years 00 months, starting from 25-June-2001 and ending on 24-June-2031. Further verified during the remote interviews and through the harvesting and replanting plan /14/ /15/ provided by PP, the plantation has been done strata wise as per the 7-year plantation program and shall be harvested after the plantation is 5 years old and onwards. Therefore, the entire crediting period shall cover almost six harvesting cycle, with replanting taking place after harvesting operations, in the same year.

The entire land included in the project activity has been stratified into 7 project strata based on planting year as given in Table below:

Plantation year	Strata	Area (in hectares)
2001	Strata 1	520.58
2002	Strata 2	1000.88
2003	Strata 3	1201.34
2004	Strata 4	2163.71
2005	Strata 5	3023.61
2006	Strata 6	3400.43

2007	Strata 7	3658.91
	Total	**14969.46 (hectares)**

PP has calculated the Long-Term Average (LTA) as per guidelines of Section 3.2.21 of VCS Program Standard v4.1[12] and AFOLU Guidance: Example for Calculating the Long-Term Average Carbon Stock for ARR Projects with Harvesting[13]."

The long term average was therefore calculated by undertaking the following steps:

1. The expected total GHG benefit of the project was determined for each year of the established time period. For each year, the total GHG benefit was the to-date GHG emission reductions or removals from the project scenario minus baseline scenario.
2. The sum of the total GHG benefit of each year over the established time period was obtained.
3. The LTA of the project over the established time period was obtained.

Long-term average GHG benefit has been accurately calculated as per the below equation:

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

Although the project will deliver on 4,409,933 tCO_2e over the 30-year crediting period, because sustainable harvesting will occur, the long-term average achieved is reduced to 3,307,036.4 tCO_2e.

3.3.5 Methodology Deviations

The project activity has used the CDM methodology "AR-ACM0001 - Afforestation and reforestation of degraded land" (version 4.0) /6/ and the PP has completely followed the methodology for the development of the PD /2/. The validation team has confirmed that, the PP does not make any deviations from the applied methodology.

3.3.6 Monitoring Plan

According to section 3.19.5 of the VCS Standard version 4.1 /05/, this section is not required for completion for the gap validation.

[12] https://verra.org/wp-content/uploads/2021/04/VCS-Standard_v4.1.pdf

[13] https://verra.org/wp-content/uploads/2018/03/VCS-Guidance-Harvesting-Examples_0.pdf

3.4 Non-Permanence Risk Analysis

A non-permanence risk analysis was carried out following the provisions of the AFOLU Non-Permanence Risk tool v4.0: VCS Version 4.0 /5/and submitted to the audit team. The findings and conclusion regarding the non-permanence risk analysis undertaken for the project are summarized below for each risk category and factor. Unless noted otherwise, the audit team agrees with the conclusion stated in the non-permanence risk report. The findings of the validation team regarding the risk scores applied for each factor are as follows.

INTERNAL RISK:

Project Management		
Risk Factor	**Validation Findings**	**Risk Rating**
a)	As confirmed during the remote interviews and through the project database/10/, the species planted in the project activity is *Eucalyptus tereticornis*, which is a native of Australia and well-adapted to the Indian edapho-climatic conditions. As per the studies/17/, eucalyptus is the most adapted species under agro-forestry in India due to its high economic value, resistance to pest attack and adaptation to dry and stressed climatic conditions. Further, it has been confirmed through various studies and articles that these plantations do not have any adverse impact on the ground water table, *"as it consumes less water per kg of total biomass generated versus many tree and agricultural crops"*[14]. Also, the species is very efficient in water consumption and therefore changes its water consumption according to the soil moisture availability[15].	0
b)	As confirmed during the remote interview and through the Tripartite agreement/12/ between the farmer, the bank and MTPL, each participating farmer is bound to manage and protect the tree plantations from illegal felling. Further, the	0

[14] https://www.downtoearth.org.in/blog/water/why-eucalyptus--60275

[15] https://www.downtoearth.org.in/blog/water/why-eucalyptus--60275#:~:text=However%2C%20there%20are%20no%20concrete,impact%20on%20the%20water%20table.

	title deed of the land/20/ is deposited with bank as security till the entire loan with accrued interest is paid back.	
c)	As confirmed through the remote interviews and certificates awarded /19/ to the PP, the project management team has an extensive experience in the field as it is a leading wood processing company of India, established in 1982 and certified to international standards /19/ such as ISO 9001:2000 for quality, ISO 14001:2004 for environment and OHSAS 18001:2007 for occupational health and safety. Further, it has its own set of procedures for implementation and monitoring of the project activity, through staff trainings, Data collection recoding and archiving, Quality control and assurance, as confirmed during the remote interviews. Therefore, there is no risk due to lack of management and skills.	0
d)	The project activity, as confirmed from the project database /10/ and GIS files of the project area/11/ is implemented in the 7 districts as follows: • Nabarangpur, Koratpur & Malkangiri in the state of Orrisa. • Vishakhapatnam, Vizianagaram & Srikakulum in Andhra Pradesh. • Bastar in Chhattisgarh. During the remote interviews, it was confirmed that the management team has offices across the project sites with a maximum of 2 hours of travel by road, required to reach the farthest site.	0
e)	As discussed in the point c) above, management team consists of individuals with significant experience in the AFOLU project design and implementation. Further, the remote interviews carried out by the validation team confirmed that the project consultant team holds significant experience in carbon accounting under VCS program.	0

f)	Adaptive management plan of the project includes risk management for the risks identified through the implementation of project activity. The risks identified for the project have been addressed as follows: 1. Risk: commercial risks involved in reforestation of degraded land Tripartite agreement /12/ signed by the farmer, PP and the bank wherein the obligation of all the parties are clearly stated. The agreement ensures that the PP provides technical assistance, services relating to planting and maintenance and also provides buy back guarantee for timber proceeds at the prevailing market price. Further, survival checking of the plantation is conducted at intervals, wherein initial plantation is counted after 3 months and re-planting is conducted if survival rate is lower than 90%. Final checking of plantation is conducted after 3 years using permanent sampling plots. 2. Risk: Reforestation sites are mostly in remote areas where road connectivity is poor, roads are undeveloped, putting major barrier in the transportation of crops. As confirmed during the remote inspection, management team has branch offices across the project sites with a maximum of 2 hours of travel by road, required to reach the farthest site. Therefore, risk has been mitigated as the reforestation sites are accessible to branch offices.	0

Financial viability		
Risk Factor	**Validation Findings**	**Risk Rating**

a)	Project cash flow breakeven point is greater than 10 years from the current risk assessment Not applicable	0
b)	Project cash flow breakeven point is greater than7 and up to 10 years from the current risk assessment Not applicable	0
c)	Project cash flow breakeven point greater than 4 and up to 7 years from the current risk assessment	0
d)	Project has secured less than 15% of funding needed to cover the total cash out before the project reaches breakeven Not applicable	0
e)	Project has secured 15% to less than 40% of funding needed to cover the total cash out required before the project reaches breakeven Not applicable	0
f)	Project has secured 40% to less than 80% of funding needed to cover the total cash out required before the project reaches breakeven Not applicable	0
g)	Project has secured80% or more of funding needed to cover the total cash out before the project reaches breakeven Not applicable	0
h)	Mitigation: Project has available as callable financial resources at least 50% of total cash out before project reaches breakeven Eucalyptus plantation with bank finance is carried out on degraded land under the Farm Forestry Scheme approved by NABARD. As discussed during the remote interview and checked through the invoice, direct expenses of more than 1,000,000	-2

	were incurred by the company in the very first year of plantation which shall increase every year due to inflation and increase in the project area. The services by PP are provided free of charge to the plantation farmers as per the Article 1.3 of the tripartite agreement /12/.	

Opportunity Cost		
Risk Factor	**Validation Findings**	**Risk Rating**
a)	NPV from the most profitable alternative land use activity is expected to be at least 100% more than that associated with project activities; or where baseline activities are subsistence-driven, net positive community impacts are not demonstrated Not Applicable	0
b)	NPV from the most profitable alternative land use activity is expected to be between 50% and up to100% more than from project activities Not Applicable	0
c)	NPV from the most profitable alternative land use activity is expected to be between 20% and up to 50% more than from project activities Not Applicable	0
d)	NPV from the most profitable alternative land use activity is expected to be between 20% more than and up to 20% less than from project activities; or where baseline activities are subsistence-driven, net positive community impacts are demonstrated Assessment in accordance with section 2.2.3.2 of the AFOLU Non-Permanence Risk Tool has been conducted, wherein it has been confirmed in the	0

	section 3.1 (of this report) that the land prior to the project activity was degraded and left barren with little farming activities. Implementation of the project activity leads to sustainable development in the area. The same has also been validated during the CDM registration of the project.	
e)	NPV from project activities is expected to be between 20% and up to 50% more profitable than the most profitable alternative land use activity Not Applicable	0
f)	NPV from project activities is expected to be at least 50% more profitable than the most profitable alternative land use activity Not Applicable	0
g)	Mitigation: Project proponent is a non-profit organization Not Applicable	0
h)	Mitigation: Project is protected by legally binding commitment (see Section 0) to continue management practices that protect the credited carbon stocks over the length of the project crediting period As confirmed during the remote interviews, a tripartite agreement is signed by the farmer, PP and the bank wherein the obligation of all the parties are clearly stated. The agreement ensures that the PP provides technical assistance, services relating to planting and maintenance and also provides buy back guarantee for timber proceeds at the prevailing market price.	0
i)	Mitigation: Project is protected by legally binding commitment (see Section 0) to continue	

	management practices that protect the credited carbon stocks over at least 100 years Not Applicable	

Project longevity: The estimated operation lifetime of the project activity is 50 years, which Is acceptable based on the review of the tripartite agreement/12/ and sectoral expertise of the validation team.		
Risk Factor	**Validation Findings**	**Risk Rating**
a)	Without legal agreement or requirement to continue the management practice As confirmed during the remote interviews, a tripartite agreement is signed by the farmer, PP and the bank wherein the obligation of all the parties are clearly stated. Copy of the agreement /12/ has been checked by the validation team.	0
b)	With legal agreement or requirement to continue the management practice The project has a legal tripartite agreement to continue operation for 50 years. The copy of agreement /12/ has been reviewed by the team.	= 30- (50/2) = 5

The total internal risk has been defined on the basis of project longevity, which is identified as 5.

EXTERNAL RISK:

Land Tenure and Resource Access Impacts		
Risk Factor	**Validation Findings**	**Risk Rating**
a)	Ownership and resource access/use rights are held by same entity(s)	0

	The project encompasses 12, 437 parcels of land measuring 14,969.46 hectares owned by 12, 002 farmers distributed in seven districts across three states of Odisha, Andhra Pradesh and Chhattisgarh as confirmed from the project database /10/.	
b)	Ownership and resource access/use rights are held by different entity(s) (e.g.,land is government owned and the project proponent holds a lease or concession) The project encompasses 12, 437 parcels of land measuring 14,969.46 hectares owned by 12, 002 farmers distributed in seven districts across three states of Odisha, Andhra Pradesh and Chhattisgarh as confirmed from the project database /10/.	2
c)	In more than 5% of the project area, there exist disputes over land tenure or ownership Clear title is ensured through land title document issued by land revenue authorities of respective state government, locally known as “Land Patta” in Odisha & Chhattisgarh and “Land Passbook” in Andhra Pradesh. Nil encumbrance certificate (NEC) and No-dues certificate (NDC) is also obtained from land revenue officials in respect of each land parcel to ensure that the land is free from any burden and that the title is clear.	0
d)	There exist disputes over access/use rights (or overlapping rights) No disputes as ensured through land title document/20/.	0
e)	WRC projects unable to demonstrate that potential upstream and sea impacts that could undermine issued credits in the next 10 years are irrelevant or	0

	expected to be insignificant, or that there is a plan in place for effectively mitigating such impacts. Not applicable	
f)	Mitigation: Project area is protected by legally binding commitment (e.g., a conservation easement or protected area) to continue management practices that protect carbon stocks over the length of the project crediting period The project encompasses 12, 437 parcels of land measuring 14,969.46 hectares owned by 12, 002 farmers distributed in seven districts across three states of Odisha, Andhra Pradesh and Chhattisgarh as confirmed from the project database /10/.	-2
g)	Mitigation: Where disputes over land tenure, ownership or access/use rights exist, documented evidence is provided that projects have implemented activities to resolve the disputes or clarify overlapping claims Not applicable.	0

Community Engagement:		
Risk Factor	**Validation Findings**	**Risk Rating**
a)	Less than 50 percent of households living within the project area who are reliant on the project area, have been consulted The project encompasses 12, 437 parcels of land measuring 14,969.46 hectares owned by 12, 002 farmers distributed in seven districts across three states of Odisha, Andhra Pradesh and Chhattisgarh as confirmed from the project database. As per the	0

	tripartite agreement signed by the farmer, PP and the bank, the obligation of all the parties are clearly stated. The agreement ensures that the PP provides technical assistance, services relating to planting and maintenance and also provides buy back guarantee for timber proceeds at the prevailing market price. As confirmed during the remote interviews, the company started plantation in 2001-2002 and engaged 14 dedicated personnel for technical demonstration and consultation to farmers to motivate their participation by providing training for monitoring of the activity.	
b)	Less than 20 percent of households living within 20 km of the project boundary outside the project area, and who are reliant on the project area, have been consulted As confirmed during the remote interviews, stakeholders mainly include farmers participating in the project activity along with nearby villagers, local panchayat members, forest officials and employees of MTPL. Regular stakeholder consultations are conducted to take the views and comments of the stakeholders.	0
c)	Mitigation: The project generates net positive impacts on the social and economic well-being of the local communities who derive livelihoods from the project area As confirmed through the sectoral expertise of the validation team, the project activity will generate the following benefits: 1. Reforestation on degraded lands will improve soil structure, soil stabilization and soil fertility, and increase soil organic carbon.	-5

	2. The implementation of the project activity will generate income opportunities for the farmers. 3. Silviculture activities like raising nursery, site preparation, seeding, transportation etc will generate employment opportunities for the locals. 4. As confirmed through the remote interviews, carbon revenues generated from the project activities will be shared with the participating farmers through the carbon contract.	

Political score:		
Risk Factor	**Validation Findings**	**Risk Rating**
a)	Governance score of less than -0.79 Not Applicable	0
b)	Governance score of -0.79 to less than -0.32 Not Applicable	0
c)	Governance score of -0.32 to less than 0.19 Political score of -0.147 as calculated by the PP based on the world bank Institute's Worldwide Governance Indicators (WGIs), has been assessed correct by the validation team.	2
d)	Governance score of 0.19 to less than 0.82 Not Applicable	0
e)	Governance score of 0.82 or higher Not Applicable	0
f)	Mitigation: Country is implementing REDD+ Readiness or other activities, as set out in this Section 2.3.3.	--2

	a) The country is receiving REDD+ Readiness funding from the FCPF, UN-REDD or other bilateral or multilateral donors b) The country is participating in the CCBA/CARE REDD+ Social and Environmental Standards Initiative c) The jurisdiction in which the project is located is participating in the Governors' Climate and Forest Taskforce d) The country has an established national FSC or PEFC standards body e) The country has an established DNA under the CDM and has at least one registered CDM A/R project India has developed ambitious National Redd-plus strategy[16] and shared the same with UNFCCC. Under this strategy, following objectives will be covered: a) Reducing degradation of forest ecosystems b) Reducing deforestation c) Conservation of existing carbon stocks d) Sustainable forest management e) Enhancement of forest carbon stocks	

NATURAL RISK:

Political score:				
Risk Factor	**Validation Findings**	**Likelihood score**	**Mitigation Score**	**Risk Rating**
a)	Fire (F) The project encompasses 12, 437 parcels of land measuring	0 Due to the scattered	0.5 As confirmed during the	0

[16] https://redd.unfccc.int/files/india_national_redd__strategy.pdf

	14,969.46 hectares owned by 12, 002 farmers distributed in seven districts across three states of Odisha, Andhra Pradesh and Chhattisgarh as confirmed GIS files.	nature of the project, risk of travel of fire from one parcel to another is reduced and therefore, the likelihood of fire is reduced.	remote interviews and through the review of literature /17/, the planted species of Eucalyptus is fire resistant to a moderate extent and the tripartite agreement /12/ ensures that farmers protect the plantation from fire and other forest related hazards.	
b)	Pest and Disease Outbreaks (PD)	0 There have been no pest and disease outbreak till date as confirmed during remote interviews.	0.25 As confirmed during the remote interviews and through the review of literature /17/, the planted species of Eucalyptus is resistant to many pest and beetles and	0

			the tripartite agreement /12/ ensures that farmers protect the plantation from pests	
c)	Extreme Weather (W)	0 Project is not located near coastal parts of the state, however, the plantation areas are drought prone.	0.5 The species considered for the plantation is a drought resistant /17/ species due to its deep root network which is capable of extracting water during dry months.	0
d)	Geological Risk (G)	0 The project area is located in a low-risk zone and therefore, does not have catastrophic events.	0.25	0
e)	Other natural risk (ON1)	0	0.25	0

In summary, the overall risk rating that was determined for the project, in accordance with the VCS Non-Permanence Risk Tool, is 5. The audit team has concluded that the above risk rating is in conformance with the VCS rules.

Political score:		
Risk Category		**Risk Rating**
a)	Internal Risk (from Table 5)	5
b)	External Risk (from Table 9)	0
c)	Natural Risk (from Table 10)	0
Overall Risk Rating (a+b+c)		5

The validation team confirmed that the non-permanence assessment has been carried out adequately and applying conservative assumptions where needed. However, the minimum risk rating shall be 10, regardless of the risk rating calculated. Therefore, 10% of the total credits (**4,409,933** tCO2e) are allocated for buffer stock.

4 VALIDATION CONCLUSION

EKI Energy Services Limited has commissioned "KBS Certification Services Pvt. Ltd." (KBS) to carry out the VCS Gap Validation of the CDM registered project - "Reforestation of Degraded Land by MTPL In India" having UNFCCC Ref. No. 5016, with regard to the relevant VCS requirements of VCS Standard version 4.1 /5/; to attain real, measurable, additional and permanent emission reductions.

The purpose of the project activity is the reforestation of 14,969.46 ha of degraded land with the Eucalyptus plantation. The project area is located on discrete 12,437 parcels of land, belonging to 12,002 local farmers in the states of Orissa, Andhra Pradesh and Chhattisgarh in India. The reforestation under the proposed project activity is on degraded land which was lying barren since decades. The estimated total amount of emission reductions over the chosen 30-year crediting period (starting from 25-June-2001 to 24-June-2031 is 4,409,933 tCO2e[1] (acc. to the PDD and ER calculation sheet). The estimated amount of emission reductions per annum are 146,998 tCO2e.

A risk-based approach has been followed to perform this validation. In the course of the validation 01 Corrective Action Requests (CAR) and 02 Clarification Requests (CL) were raised and successfully closed out.

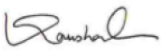
The validation is based on the VCS PD, proof of title, proof of right, additional documents related to baseline and monitoring methodology; the subsequent background investigation, follow-up interviews and supporting documents made available to the validation team by project proponent.

As a result of the validation, the validation team confirms that:

- The project fulfils criteria of VCS Standard Version 4.1 /5/.
- The project is in line with all relevant VCS requirements.
- The project baseline is sufficiently justified in the PD /2/.
- The calculation of the project emission reductions is carried out in a transparent and conservative manner, so that the calculated emission reductions of 146,998 tCO2e/year is most likely to be achieved within the 30 years of first renewable crediting period.
- No qualifications or limitations related to the validation were identified.

Location: Faridabad, Haryana, India

Date: 25/05/2021



Kaushal Goyal

Managing Director

KBS Certification Services Pvt. Ltd.

APPENDIX 1: REFERENCES

S. No.	Name of document (Validation Process)
/1/	VCS PD version 01 dated 12/03/2021
/2/	VCS PD Version 04 dated 11/05/2021
/3/	/3.1/ ER spread-sheet corresponding to PD Version 01 /3.2/ ER spread-sheet corresponding to PD Version 02
/4/	VCS Program Guide Version 4.0
/5/	VCS Standard Version 4.1
/6/	AR-ACM0001 (Afforestation and reforestation of degraded land) version 4.0 https://cdm.unfccc.int/methodologies/DB/X4VOLW3Y7IJCH9WXSBXBC2Q0JKG9UZ
/7/	CDM registered PDD latest version 9.0, dated 14/06/2011
/8/	1. Validation Report No:1286200– by TUV SUD dated 08/07/2011 2. Validation Report No:8108367257– by TUV NORD dated 27/06/2013
/9/	Letter of Approval by Ministry of Environment and Forests dated 17/02/2010
/10/	Project database, including planting year and coordinates
/11/	GIS Files of project Area
/12/	Tripartite agreement between the farmer, the bank and MTPL
/13/	Exemption letter for Start date dated 22/01/2021 from Andrew Beauchamp
/14/	Harvesting and replantation Plan
/15/	Harvesting Plan excel sheet containing data of strata wise plantation and estimated harvesting period
/16/	Baseline Survey
/17/	Eucalyptus in India - R.M. Palanna (fao.org) , https://krishi.icar.gov.in/jspui/bitstream/123456789/23456/1/IJAS%202019%20%281091-1095%29.pdf
/18/	State forest report 1999
/19/	Awards and Certificates of MTPL http://www.mangalamtimber.com/index.php/awards?abt_act=1
/20/	Land title document
/21/	AFOLU Non-Permanence Risk Tool v4.0

APPENDIX 2: FINDINGS

Table 1: CLs from this validation

CL ID	01	Section no.	3.1	Date: 10/04/2021
Description of CL				
In accordance with the AFOLU project crediting period requirements mentioned in section 3.8.6 of the VCS Standard version 4.1, which states that the *"earliest project crediting period start date for AFOLU projects shall be 1 January 2002"*, PP shall clarify how the start date of crediting period has been considered from 25/06/2001, as mentioned in section 1.8 of the submitted MR.				
Project participant response				**Date:** 20/04/2021
The query on the start date was raised in 2011 to the Verra Board which was clarified by the Verra Board on 26th January,2021. The project proponent requested an exemption in 2011 under section 3.7.5 of the VCS Standard v3, which permits the registration of projects with a start date before 1 January 2002.				
Documentation provided by project participant				
Exemption Letter is provided.				
VVB assessment				**Date:** 02/05/2021
The letter dated 22/01/2021 from Andrew Beauchamp has been checked and it has been confirmed that the project has been provided with the exemption and therefore, the start date of crediting period, as considered by the PP to be 25/06/2021, is acceptable to the validation team. Hence, CL is closed				

Table 2.CAR from this validation & verification

CAR ID	01	Section no.	3.1	Date: 10/04/2021
Description of CAR				

- In accordance with the VCS template Version 4.0 filling instructions, PP shall provide an estimate of annual average GHG emission reductions and removals in section 1.1 of the submitted VCS PD.
- Under section 1.2 of the submitted VCS PD, PP shall mention the sectoral scope applied.
- In accordance with the project scale requirements mentioned in section 3.9.1 of the VCS Standard version 4.1, projects having greater than 300,000 tonnes of CO2e per year have been characterized as large-scale projects, however as per section 1.10 of the submitted VCS PD, the project activity estimates an annual average of 146,997.77 tonnes of CO2e and therefore is not a large-scale activity. PP shall revise the section.
- In section 1.10 of the submitted VCS PD, rounded down values of Estimated GHG emission reductions or removals shall be represented.
- In section 1.11 of the submitted VCS PD, following the requirements of VCS template, PP shall "state if the project is located within a jurisdiction covered by a jurisdictional REDD+ program".
- Under section 1.12 of the submitted VCS PD, following the requirements of VCS template, PP shall "Indicate the project location and geographic boundaries (if applicable) including a set of geodetic coordinates. For AFOLU projects, coordinates may be submitted separately as a KML file".
- In section 1.13, PP shall "describe the conditions existing prior to project initiation and demonstrate that the project has not been implemented to generate GHG emissions for the purpose of their subsequent reduction, removal or destruction." Along with that, the details of the topography of the project area to be added as per VCS template instructions.

Project participant response	**Date:** 20/04/2021

1. The estimate of annual average GHG emission reductions and removals in section 1.1 is added in the VCS PD.

2. In section 1.2 of VCS PD, sectoral scope is now mentioned.

3. The section 1.10 is now revised from large-scale activity to small-scale one.

4. In the section 1.10, the values of estimated GHG emission value are now rounded down.

5. In section 1.11, it is now mentioned - "the project is not located within a jurisdiction covered by a jurisdictional REDD+ program".

6. The coordinates of the project location will be submitted as a separate KML file.

7. In section 1.13, the conditions existing prior to project initiation is described now and also mentioned that project has not been implement to generate GHG emissions for the purpose of their subsequent reduction, removal or destruction. The details of the topography of the project area are now added as per the VCS template instructions.

Documentation provided by project participant

1. Revised VCS PD including changes made according to point no. 1, 2, 3, 4, 5, 6 and 7 *2. KML file for project location as a part of section 1.12*
VVB assessment **Date:** 02/05/2021
1. VVB confirms that the estimate of annual average GHG emission reductions and removals has been added in the section 1.1 of VCS PD and is consistent with the ER calculation sheet. 2. The applied sectoral scope 14 has been accurately mentioned in the section 1,2 of the revised VCS PD. 3. PP has accurately revised the scale of the project activity to small scale as per the requirements of section 3.9.1 of the VCS standard version 4.1. 4. Rounded down values have been duly presented in section 1.10 of the revised VCS PD. 5. The information that the project is not located within a jurisdiction covered by a jurisdictional REDD+ program" has been now mentioned in section 1.1 of the revised VCS PD and was confirmed during the remote interview and through the review of REDD+ projects database. 6. The KML file of coordinates of the project activity were submitted and have been checked by the validation team 7. The requested information has been added and was confirmed during the remote interview. Hence, the CAR is closed.

CAR ID	02	**Section no.**	3.1	**Date:** 10/04/2021
Description of CAR				
PP shall revise the following formatting errors throughout the VCS PD- 1. In section 1.10 and 1.12 of the VCS PD, VCS template instructions shall be removed from the section specific data. 2. Refer to VCS PD for other minor comments.				
Project participant response				**Date:** 20/04/2021
1. In section 1.10 and 1.12 of the VCS PD, VCS template instructions has been removed from the section specific data. 2. The minor comments in the VCS PD are addressed and can be seen in the revised version with track changes function on.				
Documentation provided by project participant				
1. Revised VCS PD including changes made according to point no. 1 and 2				
VVB assessment				**Date:** 02/05/2021

Validation team confirms that all the template filling instructions as well as the minor comments throughout the VCS PD has been appropriately addressed by the PP. Hence, the CAR is closed.

Table 3.FAR from this validation

~~FAR ID~~		~~Section no.~~		~~Date:~~
~~Description of FAR~~				
~~Project participant response~~				~~Date:~~
~~Documentation provided by project participant~~				
~~VVB assessment~~				~~Date:~~

APPENDIX 3: COMPETENCE OF TEAM MEMBERS

Personnel Name:		**Ms. Shikha Sharma**	
Qualified to work as:			
Team Leader	☒	Technical Expert	☒
Validator/Verifier	☒	Financial Expert	☐
Technical Reviewer	☐	Local Expert	☐
Area(s) of Technical Expertise			
Sectoral Scope	**Technical Area**		
Energy industries (renewable/non-renewable sources)	TA 1.2: Energy generation from renewable energy sources		
Waste Handling and Disposal	TA 13.1 Waste Handling and Disposal		
Approved by (Manager C & T)	Sanjay Kandari		
Approval date:	14/01/2021		

Personnel Name:		**Ms. Rinah Zo Nandrianina**	
Qualified to work as:			
Team Leader	☐	Technical Expert	☒
Validator/Verifier	☐	Financial Expert	☐
Technical Reviewer	☐	Local Expert (Madagascar)	☒
Area(s) of Technical Expertise			
Sectoral Scope	**Technical Area**		

Energy industries (renewable/non-renewable sources)	TA 1.1: Thermal energy generation from fossil fuels and biomass including thermal electricity from solar
Energy Demand	TA 3.1. Energy demand
Afforestation and reforestation	TA 14.1 Afforestation and reforestation
Approved by (Manager C & T)	Sanjay Kandari
Approval date:	11/07/2019

Personnel Name:		**Sanjay Kandari**	
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**	
Energy Industries (renewable/non-renewable sources)		TA 1.1: Thermal energy generation from fossil fuels and biomass including thermal electricity from solar	
Energy industries (renewable/non-renewable sources)		TA 1.2: Energy generation from renewable energy sources	
Waste Handling and Disposal		TA 13.1 Waste Handling and Disposal TA 13.2 Manure	
Approved by (Manager C & T)		Gagandeep Kakkar	
Approval date:		03/11/2015	

Personnel Name:		**ANDRIANARIVELO Ny Aina**	
Qualified to work as:			
Team Leader	☐	Technical Expert	☐

Validator/Verifier	☐	Financial Expert	☐
Technical Reviewer	☐	Local Expert (Madagascar)	☒
Area(s) of Technical Expertise			
Sectoral Scope		**Technical Area**	
SS 14: Afforestation and reforestation		14.1	
SS 15: Agriculture		15.1	
Approved by (Manager C & T)		Sanjay Kandari	
Approval date:		11/01/2018	