




**Validation report form for post-registration changes for
CDM project activities**

(Version 02.0)

Complete this form in accordance with the instructions attached at the end of this form.

VALIDATION REPORT ON POST-REGISTRATION CHANGES (PRCs)

Title and UNFCCC reference number of the project activity	Small scale Allahabad JFM A/R CDM Project on degraded lands in Allahabad Forest Division, Uttar Pradesh, India and UNFCCC Ref No: 10181
Process track	<input type="checkbox"/> Prior approval <input checked="" type="checkbox"/> Issuance <input type="checkbox"/> Renewal of crediting period
Version number of the validation report on PRCs	Version 03
Completion date of the validation report on PRCs	29/10/2018
Type(s) of PRCs	<input checked="" type="checkbox"/> Temporary deviations from the registered monitoring plan, monitoring methodology or standardized baseline <input checked="" type="checkbox"/> Corrections <input type="checkbox"/> Changes to the start date of the crediting period <input type="checkbox"/> Inclusion of a monitoring plan to a registered project activity <input checked="" type="checkbox"/> Permanent changes from registered monitoring plan, monitoring methodology or standardized baseline <input type="checkbox"/> Changes to the project design of a registered project activity <input checked="" type="checkbox"/> Types of changes specific to afforestation and reforestation project activities
Version number of PDD to which this report applies	Not Applicable for A/R CDM project activities
Project participant(s)	Divisional Forest Officer (DFO), Allahabad Forest Division
Host Party	India
Applied methodologies and standardized baselines	CDM Methodology: AR-AMS0007: "Afforestation and reforestation project activities implemented on lands other than wetlands", Version 03.0
Mandatory sectoral scopes linked to the applied methodology	Scope: 14 (Afforestation and reforestation)
Conditional sectoral scopes linked to the applied methodologies	NA

Name and UNFCCC reference number of the DOE	TÜV NORD CERT GmbH (E022)
Name, position and signature of the approver of the validation report on PRCs	 Rainer Winter, Final Approver

SECTION A. Executive summary

Essential data of the project is presented in the following Table 2-1.

Table 1: Project Characteristics

Item	Data	
Project title	Small scale Allahabad JFM A/R CDM Project on degraded lands in Allahabad Division, Uttar Pradesh, India.	
Project type	<input checked="" type="checkbox"/> Standard	<input type="checkbox"/> PoA
Project size	<input type="checkbox"/> Large Scale	<input checked="" type="checkbox"/> Small Scale
Technical Area(s)	14.1: Afforestation	
Location	Allahabad Divisional Forest Area, Uttar Pradesh India.	
Crediting period	<input checked="" type="checkbox"/> Renewable Crediting Period (20y) <input type="checkbox"/> Fixed Crediting Period (30 y)	

For a detailed project description please refer to the the latest verification report (to which this report is attached).

SECTION B. Validation team, technical reviewer and approver

On the basis of a competence analysis and individual availabilities an assessment team, consistent of one team leader and 1 additional team members, were appointed. Furthermore also the personnel for the technical review and the final approval were determined.

The list of involved personnel, the tasks assigned and the qualification status are summarized in the following table below.

B.1. Validation team member

No.	Role	Type of resource	Last name	First name	Affiliation (e.g. name of central or other office of DOE or outsourced entity)	Involvement in			
						Desk review	On-site inspection	Interview(s)	Verification findings
1.	Team Leader /Verifier	ER	G	Ezhilarasu	TUV India Private Limited	x	x	x	x
2.	Verifier	ER	Parmar	Indrapal	TUV India Private Limited	x			x
3	External Technical Expert	OR	Padmanabha	Sudha	ETE	x			
4	External Technical Expert	OR	Hari Prasath	CN	ETE	x	x	x	

B.2. Technical reviewer and approver of the validation report on PRCs

No.	Role	Type of resource	Last name	First name	Affiliation (e.g. name of central or other office of DOE or outsourced entity)
1.	Technical reviewer	ETE	Kochaniewicz	Grzegorz	ETE for TNC

No.	Role	Type of resource	Last name	First name	Affiliation (e.g. name of central or other office of DOE or outsourced entity)
2.	Approver	IR	Winter	Rainer	TÜV NORD CERT

SECTION C. Means of validation

C.1. Desk review

The *assessment of post registration changes* consisted of the following steps:

- Appointment of team members and technical reviewers
- A desk review of the registered and revised PDD^{/PDD/} submitted by the client and additional supporting documents
- On-Site assessment (if required)
- Background investigation and follow-up interviews with personnel of the project developer and its contractors,
- Resolution of corrective actions (CARs / CLs) (if any)
- Final reporting
- Technical review
- Final approval.

A list all documents reviewed or referenced during this validation is presented in Appendix 3 below **Error! Reference source not found.** .

C.2. On-site inspection

Duration of on-site inspection: 23/12/2016 to 10/01/2017 ^{\$\$}				
No.	Activity performed on-site	Site location	Date	Team member
1.	Verification of the sample plot (sample of PP sample) interviews with monitoring team /measurement methods Counting of trees/ GBH / Height of the trees in sample plots	Sikikala and Madanpur JFMC	30/12/2016 02/01/2017	G Ezhilarasu C N Hari Prasath
2	Checking the GPS pillar readings of some sample plots GPS points of JFMC area, pillars Tree Species Forest inventories and techniques	Sikikala and Madanpur JFMC	30/12/2016 02/01/2017	G Ezhilarasu C N Hari Prasath
3	Best forest practices Status of the project Implementation Species Selection CER calculations and Monitoring Report Desk Review findings	Allahabad	01/01/2017	G Ezhilarasu C N Hariprasath
4	Document Review Consolidated Findings discussion	Jhansi	09/01/2017 to 10/01/2017	G Ezhilarasu

^{\$\$}combined site visits for ten A/R CDM projects under UP Forestry

C.3. Interviews

No.	Interviewee			Date	Subject	Team member
	Last name	First name	Affiliation			
1.	Khare	M K	UPFD, DFO Allahabad	30/12/2016 & 02/01/2017	Project Implementation Area of the project Monitoring Funding Overall support	G Ezhilarasu C N Hari Prasath
2	Yadav	K. S	UPFD, SDO Allahabad.	30/12/2016 & 02/01/2017	Plantation Schedules, sample plots marking, Monitoring and training Assistance Records keeping	G Ezhilarasu C N Hari Prasath
5	Narayan	Raj	AFMU Allahabad	02/01/2017	Data Entry and QA & QC	G Ezhilarasu C N Hari Prasath
6	JFMC President, Members and villagers		JFMC Sikikala	30/12/2016	Species selection, Level of involvement in raising the plantation, JFMC meetings and agenda	G Ezhilarasu C N Hari Prasath
7	JFMC President, Members and villagers		JFMC Madanpur	02/01/2017	Locational Guidance Forest protection measures, manual work contribution, JFMC Meetings	G Ezhilarasu C N Hari Prasath
8	Tyagi	Aparna	TERI Research Associate	01/01/2017	Monitoring Report CER Calculations Desk Review	G Ezhilarasu C N Hari Prasath
				30/12/2016 02/01/2017	Monitoring Aspects Trainings to the field enumerators Sample plot markings- Randomness Selection	G Ezhilarasu C N Hari Prasath
9				09/01/2017 10/01/2017	Data Transfers ER estimations MR Issues Site findings	G Ezhilarasu
10	Arif Wali	Syed	TERI Project Convenor	01/01/2017	Monitoring Report CER Calculations Desk Review	G Ezhilarasu C N Hariprasath
11	Negi	B S	TERI Field Co- ordinator	30-12-2016 & 02-01-2017	Field level monitoring GPS measurements, Baseline studies, Changes in stocks On field measurements Training effectiveness Data Sheets	G Ezhilarasu C N Hari Prasath
12	Adhikari	B. Singh	TERI Research Assistant			

C.4. Sampling approach

Sampling by Project Proponent

<input type="checkbox"/>	No sampling approach has been used by the PP to determine the monitored parameters				
<input checked="" type="checkbox"/>	A sampling approach has been taken for the following monitored parameter(s):				
	Parameter	Sampling approach ¹⁾	Sampling Type ²⁾	Population	Sample Size
	Height of the Tree (H)	StRS	PS	10133	88
	Diameter at Breast Height (DBH)	StRS	PS	10133	88

¹⁾ Sampling Approaches:

SiRS: Simple Random Sampling
 StRS: Stratified Random Sampling
 SS: Systematic Sampling
 CS: Cluster Sampling
 MSS: Multi-stage Sampling

²⁾ Sampling Types:

PS: Parameter Sampling

Sampling approaches during verification

<input type="checkbox"/>	No sampling approach has been used by the VT to verify the monitored parameters				
<input checked="" type="checkbox"/>	A sampling approach has been applied by the VT for the following monitored parameter(s):				
	Parameter	Sampling approach ¹⁾	Sampling Type ²⁾	Population	Sample Size
	Diameter at Breast Height (DBH) and Height of the Tree (H) within the sample plots	SiRS	AS	88	16

¹⁾ Sampling Approaches:

SiRS: Simple Random Sampling
 StRS: Stratified Random Sampling
 SS: Systematic Sampling
 CS: Cluster Sampling
 MSS: Multi-stage Sampling

²⁾ Sampling Types:

AS: Acceptance Sampling
 PS: Parameter Sampling
 COM: Full data check at higher data aggregation levels and sampling at original data levels

During the on-site verification, a sampling approach has been used by the verification team to verify the reported values for the monitored parameters of *H*, *DBH* with reasonable efforts from the original data level to the reporting level.

The following sampling approach as per IAF Guidance on the Application of ISO/IEC Guide 66 - G.5.3.12. : $x = \sqrt{y}$ Where x =sample and y =sample group is used. So the minimum required is 10 but verification team visited 16 sample plots. To minimise the travel and prevalent climatic conditions (fog) the verification team selected two JFMC and visited the sample plots. The area of the sample plot is checked along with the GPS pillar readings.

Also in each JFMC the diameter and height of the all the trees are checked in one sample plots of each JFMC and in other sample plots the number of trees were counted and randomly picked some trees and crossed checked the height and DBH with the provided data.

Also the verification team crossed randomly selected a sample plot of 5mX 5m within the JFMCS and counted the trees and measured the Height and GBH and found that the average number of trees, Average height of the trees and average GBH of trees are well within the average values provided by the PP.

Thus sampling approach is conducted according with "Guidelines for Sampling and Surveys for CDM Project Activities and Programme Activities" and the "Standard for Sampling and Surveys for CDM Project Activities and Programme Activities". As the population is relatively homogeneous with respect to the object of the sampling effort, simple random sampling method with accepted sampling is adopted for verification of the parameters

C.5. Clarification requests (CLs), corrective action requests (CARs) and forward action requests (FARs) raised

Areas of validation findings	No. of CL	No. of CAR	No. of FAR
Compliance with PDD form	-	-	-
Temporary deviations from the registered monitoring plan, monitoring methodology or standardized baseline	-	-	-
Corrections	-	-	-
Changes to the start date of the crediting period	-	-	-
Inclusion of a monitoring plan	-	-	-
Permanent changes to the registered monitoring plan, or permanent deviation of monitoring from the applied methodologies, standardized baselines, or other applied standards or tools	-	-	-
Changes to the project design	-	-	-
Types of changes specific to afforestation and reforestation project activities	-	-	-
Others (please specify)	-	-	-
Total	-	-	-

SECTION D. Validation findings

D.1. Compliance with PDD form

Means of validation	As per the mail communication to the DOE from UNFCCC a revised PDD is not required to be submitted for the changes related to A/R CDM projects
Findings	
Conclusion	Updated PDD not required for A/R CDM projects.

D.2. Temporary deviations from the registered monitoring plan, monitoring methodologies or standardized baselines

Means of validation	Type of change(s):	<input checked="" type="checkbox"/>	Temporary Deviation from Monitoring Plan	
		<input type="checkbox"/>	Temporary Deviation from Monitoring Methodology	
	Description of post registration change			
	Start Date: Please provide the start date of the change	01/01/2012	End Date: Please provide the end date of the change, if applicable	05/02/2018
	Description: Please give a detailed description of the change(s)	The monitoring of the parameters was supposed to take place in 2017 instead PP monitored the same in mid of 2016		
	Accuracy: Please give a detailed assessment whether the deviation is likely to lead to a reduction in the accuracy of the ER calculation.	The advance of Monitoring will not result in the increase of estimated emission removals		

	Conservative-ness: Please give a detailed assessment whether conservative assumptions or discount factors have been applied to ensure that ER will not be overestimated.	Not Applicable as no discount factors or assumptions are used.
	Appendix 1 PS: Check if the changes fall under one of the scenarios of appendix 1 of the PS.	It falls under appendix 1 of the PS Appendix 1 paragraph 1 (f) and also it is in line with EB 66 Annex 24 para (p).
Findings	CAR B1 is raised	
Conclusion	The rainfall data for IMD website http://www.imd.gov.in is checked and there deficient rainfall of 45% is reduced to 17% in 2015-2016 period. So the anticipation of agricultural activities was expected. During the site visit the validation team also observed this phenomenon (participation of community members in the morning period was very less and absence of women members) and community members are involved in agri activities. During winter it was observed lesser duration of sunlight. Hence the advancement of the monitoring for this verification is accepted. However the next verification will happen in five year cycle period as mentioned in the registered PDD.	

D.3. Corrections

Means of validation	Description of post registration change: Not applicable.			
	Start Date: Please provide the start date of the change	01/05/2016	End Date: Please provide the end date of the change, if applicable	31/12/2031
	Description: Please give a detailed description of the change(s)	1. The Spelling mistakes for the species names were corrected 2. The notation for Number of tree in the baseline is wrongly marked as B _{TREES} , which now correctly marked as N _{BSL Trees} .		
	Assessment of post registration change – Corrections			
	Accuracy: Please give a detailed assessment whether the deviation is likely to lead to a reduction in the accuracy of the ER calculation.	1. The typo errors in the species names corrected are presented in section B.2.2 of the MR. The corrections are mainly to the Botanical name of the species and it will not affect the accuracy of the Emission removal calculation. 2. The notation is typo error and now this is correctly used in the MR and it will not affect the Emission removal calculation.		
	Conservative-ness: Please give a detailed assessment whether conservative assumptions or discount factors have been applied to ensure that ER	Not Applicable as no discount factors or assumptions are used.		

	will not be overestimated.	
	Appendix 1 PS: Check if the changes fall under one of the scenarios of appendix 1 of the PS.	It falls under appendix 1 of the PS Appendix 1 paragraph 1 (f) and also it is in line with EB 66 Annex 24 para (p).
Findings	CAR B1 raised in Final Verification report as part of the verification	
Conclusion	Based on the above stated the corrections to the registered PDD are in accordance with applicable validation requirements related to the corrections in the VVS.	
	Revised PDD	
	Rev. of PDD: Check whether the changes have been fully addressed in a revised PDD.	<input type="checkbox"/> The changes have correctly been reflected in the revised PDD. <input checked="" type="checkbox"/> A revision of the PDD is not required (in case of temp. changes). <input type="checkbox"/> The revised PDD has been forwarded in (i) track-change and (ii) clean version.
	Prior Approval	
	Prior approval: Assess whether the change requires prior approval of the board	<input type="checkbox"/> The post registration change requires prior approval <input checked="" type="checkbox"/> The post registration change does not require prior approval

D.4. Changes to the start date of the crediting period

Means of validation	Description of post registration change: Not applicable.			
	Start Date: Please provide the registered start date of the CP.	DD/MM/YYYY	Revised Start Date: Please provide the proposed revised start date of the CP	DD/MM/YYYY
	Description: Please give a detailed description /reasoning of the requested revision of CP starting date:			
	LDC: Please check if the host country is an LDC. In case of LDCs the timeframes of the below defined categories are to be doubled.	<input type="checkbox"/> The host country is a LDC <input type="checkbox"/> The host country is not a LDC		
	Categories: Please check under which category - as defined below – the requested changes fall. In case of LDCs the timeframes are to be doubled.	<input type="checkbox"/> Category A: $> \pm 2$ a <input type="checkbox"/> Category B: $< \pm 1$ a; not before registration date <input type="checkbox"/> Category C: $(SD_{old} \pm 1 \text{ a}) \leq SD_{new} \leq (SD_{old} \pm 2 \text{ a})$		
	Assessment of post registration change			
	Cat. A: $> \pm 2$ a Changes of start date of more than 2 years (4 years for LDCs) are not allowed as per the PS.	<input type="checkbox"/>	The change is a cat. A case. The change of the CP start date as requested by the PP is not allowed as per the PS. Thus a corresponding CAR has been raised.	
	Cat. B: $< \pm 1$ a Prior notification is not	<input type="checkbox"/>	The change is a cat. B case. The proposed new CP start date differs less than ± 1 year (2 years in case of	

	required if changes of less than 1 year are requested. The CP start date shall not be earlier than the date of the project registration.		LDCs) from the registered CP start date. Furthermore it is confirmed that the proposed new CP start date is not before the registration date of the PA. Thus a prior approval is not required.
	Cat. B: $\pm 1a < SD < \pm 2a$ Check whether the project falls under this category. If yes prior approval is required. The assessment team shall assess on the basis of a demonstration by the PPs whether the conservativeness of the baseline is not affected by changes that have occurred in-between. Further it has to be assessed, whether substantive progress has been made by the PPs to start the project activity.	<input type="checkbox"/>	The change is a cat. C case.
		<input type="checkbox"/>	The PPs have provided the assessment team with a sufficient demonstration regarding (i) potential effects on the baseline and (ii) progress made to start the project.
		<input type="checkbox"/>	On the basis of a detailed analysis of the PP's demonstration as well as background investigation (incl. on-site inspection) the assessment team confirms that no changes have occurred to the PA which would result in a less conservative baseline. This assessment is based on the following considerations: < further details >
	<input type="checkbox"/>	On the basis of a detailed analysis of the PP's demonstration as well as background investigation (incl. on-site inspection) the assessment team confirms that substantive progress has been made by the PPs to start the PA. This assessment is based on the following considerations: < further details >	
Findings			
Conclusion			
Based on the assessment above the changes to the start date of the crediting period are in accordance with applicable validation requirements related to the changes to the start date of the crediting period in the VVS.			
Revised PDD			
Rev. of PDD: Check whether the changes have been fully addressed in a revised PDD.	<input type="checkbox"/>	The changes have correctly been reflected in the revised PDD.	
	<input type="checkbox"/>	A revision of the PDD is not required (in case of temp. changes).	
	<input type="checkbox"/>	The revised PDD has been forwarded in (i) track-change and (ii) clean version.	
Prior Approval			
Prior approval: Assess whether the change requires prior approval of the board	<input type="checkbox"/>	The post registration change requires prior approval	
	<input type="checkbox"/>	The post registration change does not require prior approval	

D.5. Inclusion of a monitoring plan

Means of validation	Description of post registration change: Not applicable.			
	Start Date: Please provide the start date of the change	DD/MM/YYYY	End Date: Please provide the end date of the change, if applicable	DD/MM/YYYY
	Description: Please give a detailed description of the change(s)			
	Assessment of post registration change – Inclusion of a MP			
	MM compliance: Please check in case of changes to the registered MP, whether they are in			

	compliance with the MM.		
	Later version of MM: Please check in cases where compliance with a later version of the MM is demonstrated that the conservativeness of the monitoring and verification is not affected.		
	Accuracy: Please give a detailed assessment whether the deviation is likely to lead to a reduction in the accuracy of the ER calculation.		
	Conservative-ness: Please give a detailed assessment whether conservative assumptions or discount factors have been applied to ensure that ER will not be overestimated.		
	Appendix 1 PS: Check if the changes fall under one of the scenarios of appendix 1 of the PS.		
Findings			
Conclusion			
Based on the above stated the inclusion of a monitoring plan to the registered project activity is in accordance with applicable validation requirements related to the inclusion of a monitoring plan to a registered project activity in the VVS.			
Revised PDD			
Rev. of PDD: Check whether the changes have been fully addressed in a revised PDD.		<input type="checkbox"/>	The changes have correctly been reflected in the revised PDD.
		<input type="checkbox"/>	A revision of the PDD is not required (in case of temp. changes).
		<input type="checkbox"/>	The revised PDD has been forwarded in (i) track-change and (ii) clean version.
Prior Approval			
Prior approval: Assess whether the change requires prior approval of the board		<input type="checkbox"/>	The post registration change requires prior approval
		<input type="checkbox"/>	The post registration change does not require prior approval

D.6. Permanent changes to the registered monitoring plan, or permanent deviation of monitoring from the applied methodologies, standardized baselines, or other applied standards or tools

Means of validation	Type of change(s):	<input checked="" type="checkbox"/>	Permanent Change from Monitoring Plan	
		<input type="checkbox"/>	Permanent Change from Monitoring Methodology	
	Description of post registration change-1			
	Start Date: Please provide	01/05/2016	End Date: Please provide the	31/12/2031

	the start date of the change		end date of the change, if applicable	
	Description: Please give a detailed description of the change(s)	The tree height is not measured using ravi altimeter because most of the trees are around 5m (anticipated growth not present). So, for this monitoring period the tree heights are measured using graduated poles. Also the project participants plan to use the graduated poles for the trees upto 7m height even for the next verifications. The trees with more than 7m height will be measured using ravi altimeter or any other sophisticated accurate measuring instrument as per the best forest practices available at the time of monitoring.		
	Assessment of post registration change – Permanent changes from MP or MM			
	MM compliance: Please check in case of changes to the registered MP, whether they are in compliance with the MM.	The use of graduated poles is one of the best practices as per the global forest practices http://fennergchool-associated.anu.edu.au/mensuration/height.htm . Thus the usage of graduated poles instead of Ravi altimeter is accepted for tree height measurements.		
	Later version of MM: Please check in cases where compliance with a later version of the MM is demonstrated that the conservativeness of the monitoring and verification is not affected.	The monitoring Methodology requirements as given in version 3.1 of the methodology AR-AMS0007 are stated in table 1 and table 2 but PP is estimating carbon pool related to above ground biomass and below ground biomass only. In order to estimate that the tree height and GBH are required to be monitored. The usage of graduated poles and digital sophisticated height measurements will result in conservative estimations only and it comparable with the accuracy of ravi altimeter. As the PP intends to usage the rounded down nearest 0.5 m height of the tree for volume calculations it is deemed conservative. Thus the changes proposed in the monitoring plan is in line with the version 3.1 of the methodology AR- AMS0007 and conservative Hence accepted.		
	Accuracy: Please give a detailed assessment whether the deviation is likely to lead to a reduction in the accuracy of the ER calculation.	The PP had taken the conservative approach rounded down values for tree height for ER calculations, i.e., if the measured height is 4.1 or 4.4 m the height is taken as 4 m and for 4.6 or 4.9 m it is taken as 4.5 m. Hence this change will not have any adverse impact on the overall emission removals estimation.		
	Conservativeness: Please give a detailed assessment whether conservative assumptions or discount factors have been applied to ensure that ER will not be overestimated.	As above and moreover no discount factors or assumptions are used.		
	Appendix 1 PS: Check if the changes fall under one of the scenarios of	It falls under appendix 1 of the PS Appendix 1 paragraph 1 (f) and also it is in line with EB 66 Annex 24 para (p).		

	appendix 1 of the PS.			
	Type of change(s):	<input checked="" type="checkbox"/>	Permanent Change from Monitoring Plan	
		<input type="checkbox"/>	Permanent Change from Monitoring Methodology	
	Description of post registration change-2			
	Start Date: Please provide the start date of the change	01/05/2016	End Date: Please provide the end date of the change, if applicable	31/12/2031
	Description: Please give a detailed description of the change(s)	The shrub biomass estimation requires the monitoring of the parameter shrub crown cover CC_{SHRUBi} however the same was not included at the time of registration. The same is now included as paramenant change to the monitoring plan.		
	Assessment of post registration change – Permanent changes from MP or MM			
	MM compliance: Please check in case of changes to the registered MP, whether they are in compliance with the MM.	As the methodology and as per the AR Tool shrub crown cover CC_{SHRUBi} should be monitored to estimate the shrub biomass. The PP proposed ocular estimation of shrub crown cover as per the AR tool 14. Hence inclusion of this parameter in the monitoring plan is in compliance with the monitoring methodology.		
	Later version of MM: Please check in cases where compliance with a later version of the MM is demonstrated that the conservativeness of the monitoring and verification is not affected.	The monitoring Methodology requirements as given in version 3.1 of the methodology AR-AMS0007 refer AR tool 14 for the estimation of the shrub biomass. Hence it is in line with latest methodological requirments.		
	Accuracy: Please give a detailed assessment whether the deviation is likely to lead to a reduction in the accuracy of the ER calculation.	The estimation of the of the shrub biomass is based on the tool for the “Estimation of carbon stocks and change in carbon stocks of trees and shrubs in A/R CDM project activities” version 04.2. The tools itself refers to the ocular method for estimation of crown cover of the shrub. Hence the accuracy will not reduce for the ER estimation.		
Conservative-ness: Please give a detailed assessment whether conservative assumptions or discount factors have been applied to ensure that ER will not be overestimated.	As above and moreover no discount factors or assumptions are used.			
Appendix 1	It falls under appendix 1 of the PS Appendix 1 paragraph 1 (f)			

	PS: Check if the changes fall under one of the scenarios of appendix 1 of the PS.	and also it is in line with EB 66 Annex 24 para (p).
Findings	Refer CAR B1 of the verification report.	
Conclusion	Based on the above stated the permanent changes from the registered monitoring plan, applied monitoring methodology and/or applied standardized baseline are in accordance with applicable validation requirements related to the permanent changes from the registered monitoring plan, monitoring methodology and/or standardized baseline in the VVS.	
	Revised PDD	
	Rev. of PDD: Check whether the changes have been fully addressed in a revised PDD.	<input type="checkbox"/> The changes have correctly been reflected in the revised PDD. <input checked="" type="checkbox"/> A revision of the PDD is not required (in case of temp. changes) for A/R CDM Projects <input type="checkbox"/> The revised PDD has been forwarded in (i) track-change and (ii) clean version.
	Prior Approval	
	Prior approval: Assess whether the change requires prior approval of the board	<input type="checkbox"/> The post registration change requires prior approval <input checked="" type="checkbox"/> The post registration change does not require prior approval

D.7. Changes to the project design

Means of validation	Type of change(s):	<input type="checkbox"/>	Changes to the project design	
		<input type="checkbox"/>	Changes to the PoA design	
	Description of post registration change			
	Start Date: Please provide the start date of the change	DD/MM/YYYY	End Date: Please provide the end date of the change, if applicable	DD/MM/YYYY
	Description: Please give a detailed description of the change(s)			
	Applicability and application of the Approved Baseline Methodology			
	Description: Please give a detailed description on how the changes affect the applicability and application of the approved Baseline Methodology. Check if the actual changes would adversely affect the conclusions during validation.			
	Additionality assessment			
Description: Please give a detailed description re-assessment of additionality, Check whether the actual changes would adversely affect the				

	conclusions during validation. If required please make use of the assessment tables in the annex.		
	Scale of the Project activity		
	Description: Please give a detailed regarding the effect of the changes on the scale of the PA (i.e. LSC or SSC).		
	Revised PDD		
	Rev. of PDD: Check whether the changes have been fully addressed in a revised PDD. In this context pl. refer to <ul style="list-style-type: none"> - Changes in the effective output capacity. - Addition of components or extension of technology - In case of multiple site projects: Removal or addition of sites - Operational parameters under the control of PPs differing from expected parameters - Changes to the baseline Meth (e.g. addition of a new Meth or change of the BL scenario. - Effects with regards to B, C and D above incl. compliance with the MP and level of accuracy and completeness of monitoring. 	<input type="checkbox"/>	The post registration change has correctly been reflected in the revised PDD. This assessment is based on the following considerations: < further details >
Findings			
Conclusion		Based on the above the changes to the project design of a registered project activity are in accordance with applicable validation requirements related to the changes to the project design of a registered project activity in the VVS.	
Traceability: Check if the PPs have provided a revised PDD in both clean and track-change version.		<input type="checkbox"/>	The revised PDD has been forwarded in (i) track-change and (ii) clean version.
Prior approval: Assess whether the change requires prior approval of the board		<input type="checkbox"/>	The changes do not raise concerns with respect to aspects outlined in the PS: <ol style="list-style-type: none"> applicability and application of the Approved Baseline Methodology under which the project activity has been registered. additionality of the project

			c. scale of the CDM project activity and Prior Approval by the Board is not required.
		<input type="checkbox"/>	The post registration change requires prior approval.

D.8. Changes specific to afforestation and reforestation project activities

Means of validation	The volume equations of some species have been changed as mentioned below		
	S.No	Species name	Old Formula
	1	<i>Butea monosperma</i>	$(2.95525 \cdot D - 0.24276)^2$
	2	<i>Acacia leucophloea</i>	$(-0.00142 + 2.61911 \cdot D - 0.54703 \cdot D^{1/2})^2$
	3	<i>Cassia siamea</i>	$0.05159 - 0.53331D + 3.46016 D^2 + 10.18473 D^3$
	4	<i>Tectona grandis</i>	$0.006 + 2.661999 \cdot D^2 + 0.280538 \cdot D^2 \cdot H$
	5	<i>Acacia catechu</i>	$0.00855 + 0.4432 \cdot D^2 + 0.28813 \cdot D^2 \cdot H$
	6	<i>Butea monosperma</i>	$(2.95525 \cdot D - 0.24276)^2$
	7	<i>Acacia catechu</i>	$0.00855 + 0.4432 \cdot D^2 + 0.28813 \cdot D^2 \cdot H$
	8	<i>Diospyros melanoxylon</i>	$0.00855 + 0.4432 \cdot D^2 + 0.28813 \cdot D^2 \cdot H$
<p>The volume equation in the registered PDD does not give the linear correlation between DBH and volume. Thus the estimation of tree volume is not reliable and consistent. The revised volume equations used by the PP are either the conservative alternate equations available in the forest survey of India 1996 for the forest region (Volume equations for India Nepal and Bhutan) or the general volume equations of the rest of the species.</p> <p>In the registered PDD the main species with more economic benefits were exhaustively listed and some minor species are not listed. However in the project area 36 species were planted and the general volume equations of the rest of the species is taken for those species where volume equations were not mentioned in the registered PDD or for those species which was not mentioned in the PDD.</p> <p>The volume equations for all the species are sourced from the Indian State of Forest Report, 2011 and Forest Survey of India-Volume Equations for forests of India, Nepal and Bhutan (1996). (national forestry inventory).</p> <p>As per the A/R Tool "Demonstrating appropriateness of volume equations for estimation of aboveground tree biomass in A/R CDM project activities" (Version 01.0.1). The equations are used in the national forest inventory, or the national GHG inventory, of the host Party; hence it is acceptable.</p> <p>Also the equations in Registered PDD was also taken from the same source but those equations are applicable only for certain range.</p> <p>Hence, the use of the above revised volume equations do not result in a decrease in precision of the estimated tree biomass as conservative volume equations are taken and</p>			

	will not increase the the Emission removals calculated. The Wood densities are revised and corrected as per the FAO data and where wood density values are not available for particular species, 0.67 is taken as default value as per the registered PDD. This is in line EB 66 Annex 24 para (p). Hence acceptable
Findings	CAR B2 is raised in the verification report
Conclusion	Based on the above the changes specific to afforestation and reforestation project activities are in accordance with applicable validation requirements related to the types of changes specific to afforestation and reforestation project activities in the VVS.

SECTION E. Internal quality control

Before submission of the final assessment report a technical review is carried out. The technical reviewer is a competent GHG auditor being appointed for the scope this project falls under. The technical reviewer is not considered to be part of the verification team and thus not involved in the decision making process up to the technical review.

As a result of the technical review process the assessment opinion as prepared by the validation team leader may be confirmed or revised. Furthermore reporting improvements might be achieved.

SECTION F. Validation opinion

The below listed changes have occurred after the registration of the project / PoA.

<i>Type of Change occurred</i>	<i>Total No. of changes</i>	<i>No. of changes which require prior approval</i>
<input checked="" type="checkbox"/> Temporary deviations from the MP	1	0
<input type="checkbox"/> Temporary deviations from the MM	-	-
<input checked="" type="checkbox"/> Corrections that do not affect the project	2	0
<input type="checkbox"/> Change to the start date of the crediting p.	-	-
<input checked="" type="checkbox"/> Permanent changes from the MP	2	0
<input type="checkbox"/> Permanent changes from the MM	-	-
<input type="checkbox"/> Design changes to the project activity / PoA	-	-
<input checked="" type="checkbox"/> Changes specific to AR projects	1	0

Non of the changes requires prior approval of the Board.

Coimbatore, 29/10/2018



G Ezhilarasu
TÜV NORD JI/CDM CP
Assessment Team Leader

Essen, 29/10/2018



Rainer Winter
TÜV NORD JI/CDM CP
Final Approval

Appendix 1. Abbreviations

Abbreviations	Full texts
A/R	Afforestation and Reforestation
CA	Corrective Action / Clarification Action
CAR	Corrective Action Request
CDM	Clean Development Mechanism
CER	Certified Emission Reduction
CL	Clarification Request
CO ₂	Carbon dioxide
CO _{2eq}	Carbon dioxide equivalent
DBH	Diameter at breast height
DVerR	Draft Verification Report
DFO	Divisional forest Officer
ER	Emission Reduction
FAR	Forward Action Request
GBH	Girth at breast height
GHG	Greenhouse gas(es)
GIS	Geographical Information System
GPS	Global Positioning System
Ha	Hectare
IM	Interview Memo
ICER	long term certified emission reductions
JFMC	Joint Forest Management Committees
LULUCF	Land use, land use change and forestry
MP	Monitoring Plan
MR	Monitoring Report
PA	Project Activity

PDD	Project Design Document
PP	Project Participant
QA/QC	Quality Assurance / Quality Control
tCER	temporary certified emission reductions
UNFCCC	United Nations Framework Convention on Climate Change
VVS	Validation and Verification Standard
XLS	Emission Removal Calculation Spread Sheet

Appendix 2. Competence of team members and technical reviewers

 Statement of Competence <small>Appointment and authorization according to the procedures of the TUV NORD JI/CDM Certification Program</small>		
Mr. Ezhilarasu G.		
SCHEME	STATUS	VALID UNTIL
CDM	Senior Assessor (Validation, Verification)	2020-02-06
VCS / ISO 14064-2	Senior Assessor	2020-02-06
<small>Authorization status for technical areas within sectoral scopes:</small>		
CODE	TECHNICAL AREA	
1.2	Renewables	
3.1	Energy demand	
13.1	Solid waste and wastewater	
13.2	Manure	
<small>130 – Rev. 5, Date: 2018-01-04</small>		
<small>130_S01-VA060-F20_2018-01-04_rev5.doc</small>		

 Statement of Competence <small>Appointment and authorization according to the procedures of the TUV NORD JI/CDM Certification Program</small>		
Mr. Indrapal Parmar		
SCHEME	STATUS	VALID UNTIL
CDM	Lead Assessor (Validation, Verification)	2018-01-06
VCS / ISO 14064-2	Lead Assessor	2018-01-06
<small>Authorization status for technical areas within sectoral scopes:</small>		
CODE	TECHNICAL AREA	TR SUBCATEGORIES
1.2	Renewable Energies	
<small>191 - Rev. 4, Date: 2015-01-07</small>		
<small>191_S01-VA060-F20_2015-01-07_rev4.doc</small>		



Statement of Competence
Appointment and authorization according to the procedures
of the TUV NORD JUCDM Certification Program

Ms. Sudha Padmanabha

Authorization status for technical areas within sectoral scopes:

CODE	TECHNICAL AREA	TR SUBCATEGORIES
14.1	Forestry	

345 - Rev. 1 Date: 2015-01-07

345_S01-VA050-F20_rev_1_2015-01-05.doc

S01-VA050-F20 rev3 / 2013-10-25



Statement of Competence
Appointment and authorization according to the procedures
of the TUV NORD JUCDM Certification Program

Mr. Hariprasath C N

Authorization status for technical areas within sectoral scopes:

CODE	TECHNICAL AREA
14.1	Afforestation and reforestation

365 - Rev. 0, Date: 2016-12-20

365_S01-VA050-F20_2016-12-20_rev0.doc

S01-VA050-F20 rev3 / 2013-10-25



Statement of Competence
Appointment and authorization according to the procedures
of the TUV NORD JUCDM Certification Program

Mr. Grzegorz Kochaniewicz

SCHEME	STATUS	VALID UNTIL
CDM	Senior Assessor (Validation, Verification) Technical Reviewer	2019-02-08
VC S / ISO 14064-2	Senior Assessor	2019-02-08

Authorization status for technical areas within sectoral scopes:

CODE	TECHNICAL AREA
1.2	Renewables
3.1	Energy Demand
14.1	Afforestation and Reforestation

173 - Rev. 7, Date: 2016-02-09

173_S01-VA050-F20_2016-02-09_rev7.doc

S01-VA050-F20 rev3 / 2013-10-25



Statement of Competence
Appointment and authorization according to the procedures
of the TUV NORD JUCDM Certification Program

Mr. Rainer Winter

SCHEME	STATUS	VALID UNTIL
CDM	Senior Assessor (Validation, Verification) Technical Reviewer	2019-07-01
J1	Senior Assessor Technical Reviewer	2019-07-01
VC S / ISO 14064-2	Senior Assessor Technical Reviewer	2019-07-01

Authorization status for technical areas within sectoral scopes:

CODE	TECHNICAL AREA
1.1	Thermal Energy Generation
1.2	Renewables
4.1	Cement and lime production
4.2	Paper
5.1	Chemical Industry
5.2	Caprolactam, nitric and adipic acid
8.1	Mining/mineral production
9.1	Aluminium and magnesium production
9.2	Iron, steel and Ferro-alloy production
11.1	Emission of fluorinated gases
11.2	Refrigerant gas production
12.1	Chemical industry
13.1	Solid waste and wastewater

003 - Rev. 10, Date: 2016-07-01

003_S01-VA050-F20_2016-07-01_rev10.doc

S01-VA050-F20 rev3 / 2013-10-25

Appendix 3. Documents reviewed or referenced

No.	Author	Reference	Title	References to the document	Provider
1	UNFCCC	/meth/	AR-AMS0007 - Afforestation and reforestation project activities implemented on lands other than wetlands version 03.0 AR-AMS0007 - Afforestation and reforestation project activities implemented on lands other than wetlands version 03.1	https://cdm.unfccc.int/filestorage/2/D/8/2D8GSJ95T6AHQWZCRY3L7EI0U4PNKF/eb85_repan22.pdf?t=SmJ8bnM4bHd4fDAbl3w7V1yVxFJbELgCxfRr http://cdm.unfccc.int/UserManagement/FileStorage/G7D639YWI0K1JBECMX84FH2TLNSVPO	Other
2	DOE	/CPM/	TÜV NORD JI / CDM CP Manual (incl. CP procedures and forms)		Other
3	IPCC	/IPCC/	1. 1996 IPCC Guidelines for National Greenhouse Gas Inventories: work book 2. 2006 IPCC Guidelines for National Greenhouse Gas Inventories: work book	www.ipcc-nggip.iges.or.jp	Other
4	UNFCCC	/KP/	Kyoto Protocol (1997)	http://unfccc.int/kyoto_protocol/items/2830.php	Other
5	UNFCCC	/MA/	Decision 3/CMP. 1 (Marrakesh – Accords)	http://cdm.unfccc.int/Reference/COPMOP/index.html	Other
6	PP	/MR/	Monitoring Report for CDM project: “Small scale Allahabad JFM A/R CDM Project on degraded lands in Allahabad Forest Division, Uttar Pradesh, India” version 01, dated 20/11/2016 Monitoring Report for CDM project: “Small scale Allahabad JFM A/R CDM Project on degraded lands in Allahabad Forest Division, Uttar Pradesh, India” version 02, dated 01/06/2017 Monitoring Report for CDM project: “Small scale Allahabad JFM A/R CDM Project on degraded lands in Allahabad Forest Division, Uttar Pradesh, India” version 03, dated 24/08/2017 Monitoring Report for CDM project: “Small scale Allahabad JFM A/R CDM Project on degraded lands in Allahabad Forest Division, Uttar Pradesh, India” version 04, dated 13/10/2017 Monitoring Report for CDM project:		PP

			<p>"Small scale Allahabad JFM A/R CDM Project on degraded lands in Allahabad Forest Division, Uttar Pradesh, India" version 05, dated 12/02/2018</p> <p>Monitoring Report for CDM project: "Small scale Allahabad JFM A/R CDM Project on degraded lands in Allahabad Forest Division, Uttar Pradesh, India" version 06, dated 25/04/2018.</p> <p>Monitoring Report for CDM project: "Small scale Allahabad JFM A/R CDM Project on degraded lands in Allahabad Forest Division, Uttar Pradesh, India" version 07, dated 27/06/2018.</p>		
7	UNFCCC	/MRT/	Monitoring Report Form (CDM-MR-FORM), Version 06.0	https://cdm.unfccc.int/Reference/PDDs_Forms/index.html	Other
8	UNFCCC	/PDD/	Project Design Document for CDM project: "Small scale Jhansi JFM A/R CDM Project on degraded lands in Jhansi Forest Division, Uttar Pradesh, India." version 03, dated 22/11/2015		
9	UNFCCC	/PS/	CDM Project Standard for Project activities (Version 1.0)	http://cdm.unfccc.int/Reference/Standards/index.html	Other
10	PP	/VAL/	Validation Report for CDM project "Small scale Jhansi JFM A/R CDM Project on degraded lands in Jhansi Forest Division, Uttar Pradesh, India." version 01, dated 25/11/2015		Other
11	Forest Survey of India	/VOL/	Volume equations for forests of India, Nepal and Bhutan by FSI, MoEF, 1996. and Indian state of forest report 2011 Annexure 2.		Other
12	UNFCCC	/VVS/	CDM Validation and Verification Standard for project activities (Version 01.0)	http://cdm.unfccc.int/Reference/Standards/index.html	Other
13	UNFCCC	/SAMPL E/	<p>"Guidelines for Sampling and Surveys for CDM Project Activities and Programme Activities" (Version 04.0)</p> <p>"Standard for Sampling and Surveys for CDM Project Activities and Programme Activities" (version 07.0)</p>	https://cdm.unfccc.int/Reference/Guidclarif/index.html http://cdm.unfccc.int/Reference/Standards/index.html	Other
14	UNFCCC	/TA/	<p>1. Estimation of carbon stocks and change in carbon stocks of trees and shrubs in A/R CDM project activities Version 04.2</p> <p>2. Demonstration of eligibility of lands for A/R CDM project activities Version 02</p> <p>3. Guidance on application of the definition of the project boundary to A/R CDM project activities Version 01</p>	http://cdm.unfccc.int/Reference/tools/index.html	Other
15	UNFCCC	/GOT/	Glossary "CDM terms" (version 08.0)	https://cdm.unfccc.int/filestore/e/x/t/extfile-20150226124447549-glos_CDM.pdf/glos_CDM.pdf	Other

				?t=UmZ8bnFjODI3fDCW9A3vJwR03kQQh4sbLiYu	
16	PP	/XLS/	<p>Emission removal calculation excel sheets w.r.t to Monitoring report version 01 dated 20/11/2016</p> <p>Emission removal calculation excel sheets w.r.t to Monitoring report version 02 dated 01/06/2017</p> <p>Emission removal calculation excel sheets w.r.t to Monitoring report version 03 dated 24/08/2017</p> <p>Emission removal calculation excel sheets w.r.t to Monitoring report version 04 dated 13/10/2017</p> <p>Emission removal calculation excel sheets w.r.t to Monitoring report version 05 dated 12/02/2018</p> <p>Emission removal calculation excel sheets w.r.t to Monitoring report version 06 dated 25/04/2018</p> <p>Emission removal calculation excel sheets w.r.t to Monitoring report version 07 dated 28/06/2018</p>		PP
17	PP	/SOP/	Standard operating Procedures for the A/R CDM Project – Allahabad		PP
18	PP	/DS/	Data sheets used for marking the details of sample plots, Trees numbers and its species, Height and GBH of all trees in the sample plot.		PP
19	PP	/VOL/	Volume equations for forests of India, Nepal and Bhutan by FSI, MoEF, and 1996.and Indian state of forest report 2011 Annexure 2.		Forest Survey of India
20	PP	/rules/	JFMC rules prepared by UPFD, dated 28-12-2002 and 26-11-2010, Hindi version and its English translation. (Land rights evidence)		PP
21	PP	/KML/	Shape files for the project activity, depicting the project boundary		PP
22	PP	/TRN/	Various training records/ attendance given to the field level enumerators Video documentary for training		PP
23	PP	/Meet//	Regular Meeting Records of the JFMC and minutes of the meetings		PP
24	PP	/INS/	<p>Purchase records for GRAMIN Make eTrex and GRAMIN Make GPSMAP 76CSx</p> <p>Purchase records of new measuring tapes (30 meters tape, 50 meters tape and 5 meters tape) for all JFMCs</p>		PP
25	PP	/SP/	Data base of all sample plots		PP
26	PP	/Co-od/	Excel data of the GPS co-ordinates for all patches of A/R CDM area,		PP

			JFMC wise		
27	UNFCCC	/PRC PDD/	Mail communication from UNFCCC dated 16 May 2013 stating that revised is not required for A/R CDM projects for post registration changes		DOE
28	FAO	/FAO/	Wood densities for tropical forest of Asia	http://www.fao.org/docrep/w4095e/w4095e0c.htm	Food and Agricultural Organisation

Appendix 4. Clarification requests, corrective action requests and forward action requests

Table 1. CLs from this validation

CL ID	xx	Section no.	Date: DD/MM/YYYY
Description of CL			
Project participant response			
Date: DD/MM/YYYY			
Documentation provided by project participant			
DOE assessment			
Date: DD/MM/YYYY			

Table 2. CARs from this validation

CAR ID	xx	Section no.	Date: DD/MM/YYYY
Description of CAR			
Project participant response			
Date: DD/MM/YYYY			
Documentation provided by project participant			
DOE assessment			
Date: DD/MM/YYYY			

Table 3. FARs from this validation

FAR ID	xx	Section no.	Date: DD/MM/YYYY
Description of FAR			
Project participant response			
Date: DD/MM/YYYY			
Documentation provided by project participant			
DOE assessment			
Date: DD/MM/YYYY			

Appendix 5. Assessment of Financial Parameters

Assessment of Financial Parameters (VVS, §§ 129, 130 / in case financial parameters from FSR §131 and §132)

<input checked="" type="checkbox"/>	No financial parameters are used for additionality justification					
<input type="checkbox"/>	Assessment of all financial parameters see below					
Parameter	Value applied	Unit	Source of Information (please indicate document and page)	Reference	DOE ASSESSMENT	
					Correctness of value applied	Comment
				//	<input type="checkbox"/>	

Appendix 6. Assessment of Barrier Analysis

Assessment of Barrier Analysis (VVS, §§ 133-136)

<input checked="" type="checkbox"/>	No barrier parameters are used for additionality justification			
<input type="checkbox"/>	Assessment of barriers see below			
Kind of Barrier (invest, tech, other)	Description of Barrier	Evidence used	Assessment of validation team	
			Appropriateness of information source	Explanation of final result
			<input checked="" type="checkbox"/>	

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Document information

<i>Version</i>	<i>Date</i>	<i>Description</i>
02.0	31 October 2017	Revision to align with the requirements in the “CDM validation and verification standard for project activities” (version 01.0).
01.0	23 March 2015	Initial publication.
Decision Class: Regulatory Document Type: Form Business Function: Registration Keywords: post-registration change, project activities, validation report		

TÜV NORD Revision history

<i>Version</i>	<i>Date</i>	<i>Description</i>
3.0	18.06.2015	Adoption of UNFCCC report template to TÜV NORD certification and quality system as well as TÜV NORDs reporting guidance
Decision Class: Regulatory Document Type: Form Business Function: Registration Keywords: post-registration change, project activities, validation report		