




Verification and certification report form for CDM project activities

(Version 01.0)

Complete this form in accordance with the "Attachment: Instructions for filling out the verification and certification report form for CDM project activities" at the end of this form.

VERIFICATION AND CERTIFICATION REPORT

Title of the project activity	Small scale Jhansi JFM A/R CDM Project on degraded lands in Jhansi Forest Division, Uttar Pradesh, India.
Reference number of the project activity	UNFCCC ID: 10220 TN P-No. : 8113824800 -16/179
Version number of the verification and certification report	2.0
Completion date of the verification and certification report	02/08/2017
Monitoring period number and duration of this monitoring period	MP 1, 01-01-2012 to 06-06-2016 (both days included)
Version number of monitoring report to which this report applies	5.0
Crediting period of the project activity corresponding to this monitoring period	01-01-2012 to 31-12-2031 (including both days)
Project participant(s)	M/s Divisional Forest Officer (DFO), Jhansi Forest Division
Host Party	India
Sectoral scope(s), selected methodology(ies), and where applicable, selected standardized baseline(s)	Scope: 14 / Technical Area 14.1 CDM Methodology: AR-AMS0007: "Afforestation and reforestation project activities implemented on lands other than wetlands", Version 03.0
Estimated GHG emission reductions or net anthropogenic GHG removals for this monitoring period in the registered PDD	7,236 t CO _{2e}
Certified GHG emission reductions or net anthropogenic GHG removals for this monitoring period	5,464 t CO _{2e}
Name of DOE	TÜV NORD CERT GmbH
Name, position and signature of the approver of the verification and certification report	

	Rainer Winter Final Approver
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SECTION A. Executive summary

M/s Divisional Forest Officer (DFO), Jhansi Forest Division has commissioned the TÜV NORD JI/CDM Certification Program to carry out the first periodic verification of the project:

“Small scale Jhansi JFM A/R CDM Project on degraded lands in Jhansi Forest Division, Uttar Pradesh, India”

with regard to the relevant requirements for CDM project activities.

This verification covers the period from 01/01/2012 to 06/06/2016 (including both days).

The project reduces GHG emissions due to the reforestation of the degraded forest lands with the help of local communities under low income category with the technical and financial assistance from the Uttar Pradesh Forest Department.

Details of the project location are given in table A-1 below:

Table A-1: Project Location

No.	Project Location
Host Country	India
Region:	Jhansi Forest Division, Uttar Pradesh
Project location address:	Communities: Villages represented by the following Joint Forest Management Committees (JFMCs): <ol style="list-style-type: none"> 1. Saraul 2. Kakarwai 3. Khadaura 4. Manpur-Babina 5. Raseena 6. Kanaura 7. Baraura 8. Parechha
Latitude:	Various locations please refer MR Appendix
Longitude:	Various locations please refer MR Appendix

Basic technical details of the project are summarized in table A-2.

Table - A-2: Technical data of the project activity

The following main tree species as given in the table below are planted as the part of the project. Apart from that 9 other species namely *Acacia leucophloea*, *Albizia amara*, *Acacia Arabica*, *Anogeissus pendula*, *Bauhinia racemosa*, *Bolanitis aegyptica*, *Boswellia serrate*, *Capparis Decidua*, *Nyctanthese arbortristis* were also planted in the project area.

<i>Acacia catechu</i>	Khair	Fabaceae	Bark decoction is used in stomachache. Also used in chronic diarrhea. The bark is used to prepare tannin and dyes
<i>Acacia nilotica</i>	Babul	Fabaceae	The exudate gum of this tree is known as gum arabic and has been collected from the pharaonic times for the manufacture of medicines, dyes

			and paints. The gum of <i>A. nilotica</i> is also referred to in India as Amaravati gum.
<i>Acacia leucophloea</i>	Reunja	Fabaceae	The bark extracts of <i>Vachellia leucophloea</i> are used in Pakistan traditional medicine as an astringent, a bitter, a thermogenic, a styptic, a preventive of infections, an anthelmintic, a vulnerary, a demulcent, an expectorant, an antipyretic, an antidote for snake bites and in the treatment of bronchitis, cough, vomiting, wounds, ulcers, diarrhea, dysentery, internal and external hemorrhages, dental caries, stomatitis, and intermittent fevers and skin diseases.
<i>Acacia arabica</i>	Desi babool	Fabaceae	The part of the tree finds use in diabetes, skin diseases and leucorrhoea. These are also used as an antidiarrhoeal, antidysenteric, antidiabetic. The stem bark is astringent, demulcent used in diarrhoea, dysentery, diabetes as astringent, antihelmentic, in skin disease, cough and bleeding piles, gonorrhea and as an antiasthmatic.
<i>Ailanthus excelsa</i>	Aru	Simaroubaceae	Powdered bark is used to treat intestinal tapeworm, constipation, stomach troubles and dysentery. Root bark is administered to cure epilepsy, heart troubles and asthma
<i>Albizia amara</i>	Siras	Fabaceae	The leaves and flowers are used for treatment of boils and ulcers. The leaf is also used for treatment of erysipelas. Its wood is used for construction and furniture, and as a firewood. <i>Albizia amara</i> provides many environmental services: control of soil erosion, wind break, shade provider. It is also an ornamental tree in urban areas. Ruminants can feed its leaves
<i>Anogeissus pendula</i>	Kardhai	Combretaceae	It is used for its wood and tannins and as a fodder.
<i>Azadirachta indica</i>	Neem	Meliaceae	Neem products have medicinal properties that prove to be anthelmintic, antifungal, anti-diabetic, antibacterial, antiviral, anti-fertility and sedative. Its oil is used for preparing cosmetics, like soap, shampoo, balms, creams, etc, which prove handy for skin care, such as in

			treatment of acne, for keeping the elasticity of skin. The gum of neem tree is used as a bulking agent to prepare special purpose food for diabetic patients. Its twigs are commonly used for cleaning teeth. A decoction can be prepared from the roots of neem tree and ingested to relieve fever
<i>Bauhinia racemosa</i>	Mauli	Fabaceae	The leaves are used in the production of <i>beedi</i> , a thin Indian cigarette.
<i>Bolanitis aegyptica</i>	Hingota	Zygophyllaceae	Desert date fruit is mixed into porridge and eaten by nursing mothers, and the oil is consumed for headache and to improve lactation.
<i>Boswellia serrata</i>	Salaiya	Burseraceae	Extracts of <i>Boswellia serrata</i> have been clinically studied for osteoarthritis and joint function, particularly for osteoarthritis of the knee, with the research showing a slight improvement of both pain and function compared to a placebo.
<i>Butea monosperma</i>	Palas	Fabaceae	The leaves and flowers are astringent, depurative, diuretic and aphrodisiac. These are used against boils, pimples, worms and piles. Gum is used for diarrhea
<i>Capparis decidua</i>	Karil	Capparaceae	<i>Capparis decidua</i> is used as a vegetable for diabetic patients.
<i>Dalbergia sissoo</i>	Sisham	Fabaceae	Decoction of leaves useful in gonorrhea, roots astringent
<i>Holoptelea integrifolia</i>	Chilbil	Ulmaceae	The bruised leaves are applied to boils. Juice of boiled bark is applied to rheumatic swellings
<i>Nyctanthese arbotristis</i>	Harsingar	Oleaceae	Extracts of the seeds, flowers and leaves possesses immunostimulant, hepatoprotective, antileishmanial, antiviral and antifungal activities in vitro.
<i>Pongamia pinnata</i>	Kanji	Fabaceae	Juice is used to treat diarrhea, cough, dyspepsia, leprosy and gonorrhea. The oil from seeds is used in making soap.
<i>Prosopis juliflora</i>	Prosopis	Fabaceae	Its uses include forage, wood and environmental management. The plant possesses an unusual amount of the flavanol (-)-mesquitol in its heartwood
<i>Tectona grandis</i>	Sagwan	Verbenaceae	Wood is acrid, cooling, laxative, sedative to gravid uterus and useful in treatment of piles, leucoderma and dysentery. Flowers are acrid, bitter and dry and useful in bronchitis,

			biliousness, urinary discharges etc. Roots are useful in treatment of urinary system related troubles
<i>Ziziphus xylopyrus</i>	Aashadh	Rhamnaceae	It is a medicinal tree and its fruits are used in treatment of diseases of skin, urinary disorders, diseases occurring due to vitiation of blood, obesity, diabetes, snake bite, fever, diarrhea, insomnia and digestive disorders.
<i>Ziziphus mauritiana</i>	Ber	Rhamnaceae	Fruits are edible. Decoction of roots is used in fever and powder applied to old wounds and ulcers. Bark is used in diarrhea

However the following 21 species are identified with 2 m height and 10 cm girth and only taken for GHG Removal calculations in the excel sheets. They are *Acacia Catechu*, *Acacia leucophloea*, *Acacia nilotica*, *Albizia amara*, *Azadirachta indica*, *Butea monosperma*, *Dalbergia sissoo*, *Prosopis juliflora*, *Tectona grandis*, *Holoptelea integrifolia*, *Nyctanthese arbortristis*, *Pongamia pinnata*, *Ziziphus mauritiana*, *Zizyphus xylopyrus*, *Acacia arabica*, *Ailanthus excels*, *Anogeissus pendula*, *Bauhinia racemosa*, *Bolanitis aegyptica*, *Boswellia serrate* and *Capparis Decidua*.

As a result of this verification, the verifier confirms that:

- all operations of the project are implemented and installed as planned and described in the validated project design document.
- the monitoring plan is in accordance with the applied approved CDM methodology, i.e., AR-AMS0007: "Afforestation and reforestation project activities implemented on lands other than wetlands", Version 03.0
- the installed equipment essential for measuring parameters required for calculating emission removals are calibrated appropriately.
- the monitoring system is in place and functional. The project has generated GHG emission removals.

As the result of the first periodic verification, the verifier confirms that the GHG emission removals are calculated without material misstatements in a conservative and appropriate manner. TÜV NORD JI/CDM CP herewith confirms that the project has achieved emission removals in the above mentioned reporting period as follows:

Emission removals: 5,464 t CO₂e

SECTION B. Verification team, technical reviewer and approver**B.1. Verification 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	x	x	
4	External Technical Expert	OR	Hari Prasath	CN	ETE	x			

B.2. Technical reviewer and approver of the verification and certification report

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	IR	Nuske	Alexandra	TUV NORD CERT
2.	Technical reviewer	ETE	Kochaniewicz	Grzegorz	ETE for TNC
3	Approver	IR	Winter	Rainer	TUV NORD CERT

SECTION C. Application of materiality**C.1. Consideration of materiality in planning the verification**

In order to ensure a complete, transparent and timely execution of the verification task the team leader has planned the complete sequence of events necessary to arrive at a substantiated final verification opinion.

Various tools have been established in order to ensure an effective verification planning.

Materiality Threshold

The verification is based on the materiality threshold identified in table C-1 below:

Table C-1: Applied Materiality Threshold

	Threshold	Related to
<input type="checkbox"/>	0.5 %	Emission reductions or removals for registered CDM project activities achieving a total emission reduction or removal equal to or more than 500,000 tonnes of carbon dioxide equivalent per year ¹ ;
<input type="checkbox"/>	1 %	Emission reductions or removals for registered CDM project activities achieving a total emission reduction or removal of

¹ A year refers to a period of 12 consecutive months.

	Threshold	Related to
		between 300,000 and 500,000 tonnes of carbon dioxide equivalent per year;
<input type="checkbox"/>	2 %	Emission reductions or removals for registered large-scale CDM project activities achieving a total emission reduction or removal of 300,000 tonnes of carbon dioxide equivalent per year or less;
<input checked="" type="checkbox"/>	5 %	Emission reductions or removals for registered small-scale CDM project activities other than registered CDM project activities covered under next category below;
<input type="checkbox"/>	10 %	Emission reductions or removals for the type of registered CDM project activities referred to in decision 3/CMP.6, paragraph 38 (referred to as microscale project activities).

Strategic Analysis

At the beginning of the verification the verification team leader has assessed the nature, scale and complexity of the verification tasks by carrying out a strategic analysis of all activities relevant to the project activity. The team leader has collected and reviewed the information relevant to assess that the designated verification team is sufficiently competent to carry out the verification and to ensure that it is able to conduct the necessary risk analysis.

Risk analysis and detailed audit testing planning

For the identification and assessment of potential reporting risks and to determine the necessary detailed audit testing procedures for residual risk areas the following table is used.

No.	Risk that could lead to material errors, omissions or misstatements	Assessment of the risk		Response to the risk in the verification plan and/or sampling plan
		Risk level	Justification	
1.	Measurement of GBH and H	Medium	Due to untrained persons who conduct the measurement which may give erroneous data in measuring also feeding the data to excel sheets Training may not be well trained.	During onsite the measurement procedures need to be checked along with the SOP. The training modules and the data sheets are to be checked with the actual data at site for one sample plot and compared with CER sheets The Correct measuring instrument usage of instrument needs to be checked
2.	Area of the Stratum	Low	The Area is fixed at the time of validation. There may be chances for some exclusion.	Interview with personnel as well as checking the GPS points of the JFMC boundary randomly.
3.	Selection of Sample plots and Size of Sample	Medium	The Sample size for the verification is fixed at the validation. But the PP has increased the sample size. There may chances of having the sample plots of more than 0.05 Ha due to	Interview with personnel about the randomness and selection of the sample plot. Also direct field measurement to ensure that 0.05 Ha sample plot is selected.

			<i>untrained persons working</i>	
4.	<i>Omissions and misstatements in data transfer from hand written notes into digital Excel ER spread sheet</i>	<i>Medium</i>	<i>Ineffective quality control of data transfer due to unclear QA/QC procedure</i>	<i>Check SOP. PP may demonstrate how to transfer data and how this is crosschecked. Conduct interview with related personnel whether procedure is actually conducted but not adequately described.</i>

On the basis of the risk analysis the verification has been planned. A detailed audit/verification plan has been prepared and submitted to the project participant(s) in due time before the site visit.

C.2. Consideration of materiality in conducting the verification

Based on the verification planning the verification has been carried out. The concept of materiality has been considered. A breakdown of the chosen approaches is included in the following table.

Parameter	Approach*	Errors* detected	Findings reference	Corrected	Remaining verification risk
<i>DBH,</i>	<i>ASP</i>	<input checked="" type="checkbox"/>	<i>CAR D1</i>	<input checked="" type="checkbox"/>	<i>Not material</i>
<i>H</i>	<i>ASP</i>	<input checked="" type="checkbox"/>	<i>CAR D1</i>	<input checked="" type="checkbox"/>	<i>Not material</i>
<i>Area of the stratum and Area of Sample plot</i>	<i>ASP</i>	<input checked="" type="checkbox"/>	<i>CAR A1 and CARD2</i>	<input checked="" type="checkbox"/>	<i>Not material</i>
<i>Aggregate</i>					<i>Materiality threshold not exceeded</i>

**) incl. omissions and misstatements*

**) Verification Approaches:*

CDC: Complete data check of data including all data aggregation steps

NDC: Non-complete data check – omissions not material

SPL: Sampling approach (all data available)

ASP: Acceptance Sampling

COM: Data check at higher data aggregation levels and sampling at original data levels

The verification was basically carried out as per the verification plan. However, based on the actual situation on-site and the errors, omissions and misstatements identified during the verification minor deviations from the original plan occurred. However, due to the insignificance no major revision of the overall plan was required. Esp. there was no need for significant modification of the sampling approaches or for additional / less locations to be visited during the on-site.

SECTION D. Means of verification

D.1. Desk review

During the desk review all documents initially provided by the client and publicly available documents relevant for the verification were reviewed. The main documents are listed below:

- the last revision of the PDD including the monitoring plan^{/PDD/},
- the last revision of the validation report^{/VAL/},
- documentation of previous verifications^{/VER/}
- the monitoring report, including the claimed emission removals for the project^{/MR/},
- the emission reduction calculation spread sheet^{/XLS/}.

Other supporting documents, such as publicly available information on the UNFCCC website and background information were also reviewed.

D.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	Manpur Babina and Kakarwai JFMC	07/01/2017 08/07/2017	G Ezhilarasu Sudha Padmanabha
2	Checking the GPS pillar readings of some sample plots GPS points of JFMC area, pillars Tree Species Forest inventories and techniques	Manpur Babina and Kakarwai JFMC	07/01/2017 08/07/2017	G Ezhilarasu Sudha Padmanabha
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

D.3. Interviews

No.	Interviewee			Date	Subject	Team member
	Last name	First name	Affiliation			
1.	Shukla	Manoj	UPFD, DFO Jhansi	07/01/2017 & 08/01/2017	Project Implementation Area of the project Monitoring Funding Overall support	G Ezhilarasu Sudha Padmanabha
2	Jain	Ashok	FMU, FRO Babina	07/01/2017	Plantation Schedules, sample plots marking, Monitoring and training Assistance Records keeping	G Ezhilarasu Sudha Padmanabha
3	Malaviya	A K	FMU, SDO Jhansi	08/01/2017		
4	Shukla	P K	FMU, RO, Bamour			
5	Raje	Rajamani	JICA , FLW	07/01/2017	Sensitation	G Ezhilarasu Sudha Padmanabha
6	JFMC President, Members and villagers		JFMC Babina	07/01/2017	Species selection, Level of involvement in raising the plantation, JFMC meetings and agenda Locational	G Ezhilarasu Sudha Padmanabha
7	JFMC President, Members and villagers		JFMC Kakarwai	08/01/2017	Guidance Forest protection measures, manual work contribution, JFMC Meetings	G Ezhilarasu Sudha Padmanabha
8	Tyagi	Aparna	TERI Research Associate	01/01/2017	Monitoring Report CER Calculations Desk Review	G Ezhilarasu C N Hariprasath
				07/01/2017	Monitoring Aspects Trainings to the field enumerators	G Ezhilarasu Sudha Padmanabha
				08/01/2017	Sample plot markings- Randomness Selection	G Ezhilarasu Sudha Padmanabha
				09/01/2017 10/01/2017	Data Transfers ER estimations MR Issues Site findings	G Ezhilarasu
10	Arif Wali	Syed	TERI Project	01/01/2017	Monitoring Report	G Ezhilarasu C N Hariprasath

			Convenor		CER Calculations Desk Review	
11	Negi	B S	TERI Field Co-ordinator	07-01-2017 & 08-01-2017	Field level monitoring GPS measurements, Baseline studies, Changes in stocks On field measurements Training effectiveness Data Sheets	G Ezhilarasu Sudha Padmanabha
12	Adhikari	B. Singh	TERI Research Assistant			

D.4. Sampling approach

D.4.1 Sampling during monitoring

<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	5378	39
	Diameter at Breast Height (DBH)	StRS	PS	5378	39

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

D.4.2 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	39	10

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 7 but verification team visited 10 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

D.5. Clarification requests, corrective action requests and forward action requests raised

Areas of verification findings	No. of CL	No. of CAR	No. of FAR
Compliance of the monitoring report with the monitoring report form (E.1)	1	-	-
Compliance of the project implementation with the registered PDD (E.3)	-	2	-
Post-registration changes (E.4)	-	1	-
Compliance of the monitoring plan with the monitoring methodology including applicable tool and standardized baseline (E.5)	-	-	-
Compliance of monitoring activities with the registered monitoring plan (E.6)	1	2	-
Compliance with the calibration frequency requirements for measuring instruments (E.7)	-	1	-
Assessment of data and calculation of emission reductions or net removals (E.8)	1	1	-
Others (please specify)	-	-	-
Total	3	7	-

SECTION E. Verification findings

E.1. Compliance of the monitoring report with the monitoring report form

Means of	A draft monitoring report was submitted to the verification team by the project
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verification	<p>participants. The DOE has made this report publicly available prior to the start of the verification activities. No comments were received.</p> <p>By means of the UNFCCC website it has been checked whether the latest applicable MR template CDM-MR-FORM has been used.</p> <p>Further it has been checked whether the latest instructions for filling out the MR template have been followed. Every section has been checked against the respective guidance.</p> <p>The following sources of information have been used in this context:</p> <ul style="list-style-type: none"> • /MR/ • /MRT/ • /unfccc/ 	
Findings	<input type="checkbox"/>	The latest reporting template CDM-MR-FORM as listed on the UNFCCC website has been used for the Monitoring Report to be uploaded.
	<input type="checkbox"/>	The latest instructions for filling out the MR have been followed. No adverse finding has been identified in the course of this verification.
	<input checked="" type="checkbox"/>	The respective requirements have widely been complied with; however; the following issues needed to be addressed in this context: CL A1 is raised
Conclusion	<input type="checkbox"/>	No CARs/CLs have been raised in this context. No correction was required in the context. The project is in line with the respective requirements.
	<input checked="" type="checkbox"/>	The raised CARs/CLs have been addressed appropriately. The PP has carried out the requested corrections. All respective findings could be closed out. For details please refer to Appendix 4.
	The PP used the latest template version 05.1 of the monitoring report form available in the UNFCCC website.	

E.2. Remaining forward action requests from validation and/or previous verification

During the validation the validating DOE might have raised issues that could not be closed or resolved during the validation stage. For this purpose FARs might have been raised. Likewise FARs might have been raised in the course of previous verifications.

In the course of this verification the latest version of the PDD ^{/PDD/} and the previous verification report ^{/VER/}, where applicable, have been checked in order to identify any remaining forward action requests. For the current monitoring period the following applies:

(i) Open issues from validation:

<input checked="" type="checkbox"/>	There were no open issues which have been addressed in the latest version of the validation report.
<input type="checkbox"/>	All open issues from the validation have been appropriately addressed in the context of previous verifications.
<input type="checkbox"/>	All issues related to the validation have been appropriately addressed in the course of the current monitoring period (for details please refer to appendix 4)
<input type="checkbox"/>	The following issues related to the validation have not yet been appropriately addressed (for details please refer to appendix 4):
	- N/A

(ii) Open issues from previous verifications:

<input checked="" type="checkbox"/>	N/A – as this is the first monitoring period for this CDM project activity.
<input type="checkbox"/>	There were no open issues which have been addressed in the previous verification report
<input type="checkbox"/>	All issues related to the previous verification have been appropriately addressed in the course of the current monitoring period (for details please refer to appendix 4)
<input type="checkbox"/>	The following issues related to the previous verification have not yet been appropriately

	addressed (for details please refer to appendix 4):
-	N/A

E.3. Compliance of the project implementation with the registered project design document

Means of verification	<p>By means of an in-depth review of the PDD in its latest form – as downloaded from the UNFCCC project site - and the checks carried out during the on-site visit an assessment has been carried out whether the project has been implemented and operated in line with the latest approved version of the PDD and whether all physical features of the project are in place. The following has been checked: implemented technology, project equipment as well as monitoring and metering equipment.</p> <p>Further it has been checked if relevant technical equipment of the project activity has been exchanged or modified during the monitoring period and consistent notations of key equipment (meters etc.) in PDD, MR and calculation spread sheet are applied.</p> <p>Interviews with operational personnel have been carried out, QMS records, maintenance records; instrument specifications were checked in this context. Special focus has further been laid to determine whether a potential phase wise implementation has occurred within the crediting period or any delays with respect to the starting dates have occurred.</p> <p>Further it has been checked whether any observed deviations from the registered project design have been correctly addressed as PRCs.</p> <p>The following sources of information have been used in this context:</p> <ul style="list-style-type: none"> • /PDD/ • /MR/ • /VVS/ • /XLS/ • /QMS/ • /unfccc/ 																
Findings	<table border="1"> <tr> <td><input type="checkbox"/></td><td>The project has been implemented as described in the latest version of the PDD as well as in section B.1 of the monitoring report. No deviations thereof have been identified in the course of this verification.</td></tr> <tr> <td><input type="checkbox"/></td><td>The following deviations from the registered / approved project design and or the project description in the MR have been identified in the course of this verification (for further details please refer to section E.4): - N/A</td></tr> <tr> <td><input checked="" type="checkbox"/></td><td>In this context the following CARs, CLs have been raised: CAR A1</td></tr> <tr> <td colspan="2"><i>In case of phased implementation:</i></td></tr> <tr> <td><input type="checkbox"/></td><td>N/A</td></tr> <tr> <td><input type="checkbox"/></td><td>The phased implementation has correctly and in sufficient detail been described in the latest version of the PDD.</td></tr> <tr> <td><input type="checkbox"/></td><td>The description in section 3.1 of the MR differs in content or the level of detail from the latest version of the PDD. However, the description in the MR is correct and reflects the situation during the site inspection.</td></tr> <tr> <td><input type="checkbox"/></td><td>The project description in the PDD/MR is not deemed sufficient. The detailed implementation timeline is as follows: N/A</td></tr> </table>	<input type="checkbox"/>	The project has been implemented as described in the latest version of the PDD as well as in section B.1 of the monitoring report. No deviations thereof have been identified in the course of this verification.	<input type="checkbox"/>	The following deviations from the registered / approved project design and or the project description in the MR have been identified in the course of this verification (for further details please refer to section E.4): - N/A	<input checked="" type="checkbox"/>	In this context the following CARs, CLs have been raised: CAR A1	<i>In case of phased implementation:</i>		<input type="checkbox"/>	N/A	<input type="checkbox"/>	The phased implementation has correctly and in sufficient detail been described in the latest version of the PDD.	<input type="checkbox"/>	The description in section 3.1 of the MR differs in content or the level of detail from the latest version of the PDD. However, the description in the MR is correct and reflects the situation during the site inspection.	<input type="checkbox"/>	The project description in the PDD/MR is not deemed sufficient. The detailed implementation timeline is as follows: N/A
<input type="checkbox"/>	The project has been implemented as described in the latest version of the PDD as well as in section B.1 of the monitoring report. No deviations thereof have been identified in the course of this verification.																
<input type="checkbox"/>	The following deviations from the registered / approved project design and or the project description in the MR have been identified in the course of this verification (for further details please refer to section E.4): - N/A																
<input checked="" type="checkbox"/>	In this context the following CARs, CLs have been raised: CAR A1																
<i>In case of phased implementation:</i>																	
<input type="checkbox"/>	N/A																
<input type="checkbox"/>	The phased implementation has correctly and in sufficient detail been described in the latest version of the PDD.																
<input type="checkbox"/>	The description in section 3.1 of the MR differs in content or the level of detail from the latest version of the PDD. However, the description in the MR is correct and reflects the situation during the site inspection.																
<input type="checkbox"/>	The project description in the PDD/MR is not deemed sufficient. The detailed implementation timeline is as follows: N/A																
Conclusion	<table border="1"> <tr> <td><input type="checkbox"/></td><td>No CARs/CLs have been raised in this context. No correction was required in the context. The project is in line with the respective requirements.</td></tr> <tr> <td><input checked="" type="checkbox"/></td><td>The raised CARs/CLs have been addressed appropriately. The PP has carried out the requested corrections. All respective findings could be closed out. For details please refer to Appendix 4.</td></tr> <tr> <td colspan="2">The project was already implemented in phased manner before the start of the validation. The implementation is as per the registered PDD.</td></tr> </table>	<input type="checkbox"/>	No CARs/CLs have been raised in this context. No correction was required in the context. The project is in line with the respective requirements.	<input checked="" type="checkbox"/>	The raised CARs/CLs have been addressed appropriately. The PP has carried out the requested corrections. All respective findings could be closed out. For details please refer to Appendix 4.	The project was already implemented in phased manner before the start of the validation. The implementation is as per the registered PDD.											
<input type="checkbox"/>	No CARs/CLs have been raised in this context. No correction was required in the context. The project is in line with the respective requirements.																
<input checked="" type="checkbox"/>	The raised CARs/CLs have been addressed appropriately. The PP has carried out the requested corrections. All respective findings could be closed out. For details please refer to Appendix 4.																
The project was already implemented in phased manner before the start of the validation. The implementation is as per the registered PDD.																	

	<p>The project is implemented on degraded forest land under the control of the state government and DFO Jhansi division is appointed and responsible for the management of the entire forest land of Jhansi division and the A/R CDM project is implemented under this division. The JFMC members are only responsible for the plantation and enjoy the income for their labour work and enjoy the forest produce like fruits, cutting the fodder grasses and thus the project area of 268.87 hectare (of all JFMCs) is under the control of the PP which is in line with VVS Para 417 that the areas of land for which the control over the registered A/R CDM project activity has been established by the project participants since validation.</p> <p>The A/R CDM project boundary is protected using fences and trenches and the pillars are installed in those boundaries. The same was observed during the site visit and thus the project boundary is delineated exclusively from the rest of the JFMC area to have distinct boundary for A/R CDM area which is in line with VVS paragraph 418.</p>
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E.4. Post-registration changes

- ☐ By means of site visit, document check and interview it could be verified that the project is implemented and operated in line with the registered PDD and the applied methodology.
- ☒ Post registration changes have been identified and are assessed in detail in the subsequent steps E.4.1 to E.4.7.

E.4.1. Temporary deviations from the registered monitoring plan, monitoring methodology or standardized baseline

It has been checked whether Temporary deviations from the registered monitoring plan (TDfrMP) or Temporary deviations from monitoring methodology or standardized baseline (TDfMM) have been applied during this monitoring period. The result is summarized in the table below.

<input type="checkbox"/>	No Temporary deviations from the registered monitoring plan (TDfrMP) or Temporary deviations from monitoring methodology or standardized baseline (TDfMM) have been submitted to the UNFCCC prior to the current monitoring period.		
<input type="checkbox"/>	The following TDfrMP or TDfMM have been approved or are under approval by the UNFCCC		
	1	Title	
		Status	<input type="checkbox"/> under approval; <input type="checkbox"/> approved (approval No.:)
		Appr.date	
		Ref. No.	
	2	Title	
		Status	<input type="checkbox"/> under approval; <input type="checkbox"/> approved (approval No.:)
		Appr.date	
		Ref.No.	
<input type="checkbox"/>	During the verification of the current MP no need for a TDfrMP or TDfMM has been identified. The monitoring plan is in accordance with the approved methodology applied by the PA		
<input type="checkbox"/>	An approval of the following TDfrMP or TDfMM is to be requested from the EB for the current MP as appendix 1 of the project standard does not apply. Please refer to the related PRC report submitted along with this issuance request for further details w.r.t. the assessment of the PRC.		
	1	Issue:	

	2	Issue:	
<input checked="" type="checkbox"/>	The following TDfRMP or TDfMM for which appendix 1 of the PS is applicable have been applied:		
	1	Issue:	<p>The tree height is not measured using Ravi altimeter. Because most of the trees are around 5m (anticipated growth not there). 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 up to 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.</p> <p>Assessment: 1. During the site visit it was observed that the most of the trees are less than 7 m height. So to have accurate and fast measurements the PP used graduated poles (graduation markings are done with the help of the measuring tapes) which 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.</p> <p>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.</p> <p>The verification team's assessment report on the above post registration change is submitted along with this report</p>
	2	Issue:	

E.4.2. Corrections

It has been checked whether any corrections to project information or parameters fixed at validation have been approved during this monitoring period or submitted with this monitoring report. The result is summarized in the table below.

<input checked="" type="checkbox"/>	During the verification of the current MP no need for corrections has been identified.		
<input type="checkbox"/>	The following corrections have been applied:		
	1	Issue:	
	2	Issue:	
	The PDD has been revised accordingly: (New) version Nos.: Revision date:		
	It is confirmed that the updated / corrected information is an accurate reflection of the actual project information and that the corrected parameters are in accordance with the applied methodology and the monitoring plan.		
	<input type="checkbox"/> A related post registration change has been submitted prior to the issuance request. The approval has been received on DD/MM/YYYY via approval number PRC-XXXX-00Z. <input type="checkbox"/> A related post registration change is submitted along with this issuance request. Please refer to the related PRC report submitted along with this issuance request for further details w.r.t. the assessment of the PRC.		

E.4.3. Changes to the start date of the crediting period

<input checked="" type="checkbox"/>	N/A - as this is not the first verification within the crediting period
<input type="checkbox"/>	The PPs do not intend to change the start date of the crediting period.
<input type="checkbox"/>	As the change in the start date was below the related time period as indicated in PS § 277 and § 278 no prior approval was required but only a notification. This notification has been submitted by the PP without involvement of the DOE. The change and new start date has been checked from the related UNFCCC project webpage.
<input type="checkbox"/>	The PPs intend to change the start date of the crediting period. As the intended change in start date beyond the related time period as indicated in PS § 279 prior approval by the Board is required. For detailed assessment of the change please refer to related PRC validation report. As per assessment in this report the DOE confirms that the change to the start date of the crediting period are in line with the related requirements of the VVS and PS.
<input type="checkbox"/>	The approval to change the start date of the crediting period has been received on DD/MM/YYYY via approval number PRC-XXXX-00Z

E.4.4. Inclusion of a monitoring plan to a registered project activity

<input checked="" type="checkbox"/>	N/A - as this monitoring plan was part of the registered PDD
<input type="checkbox"/>	In line with PS § 281 or § 282 the PP has forwarded a monitoring plan to the DOE for validation. No prior approval of the monitoring plan was required as the PP in line with PS § 282 wished to submit the monitoring plan together with the request for issuance for the first monitoring period. Please refer to the related PRC report submitted along with this issuance request for further details w.r.t. the assessment of the PRC..
<input type="checkbox"/>	In line with § 282 the PP submitted a monitoring plan prior to the submission of the request for issuance for validation to the DOE. A DOE has assessed the monitoring plan in line with related VVS requirements and submitted a related PRC report for prior approval. The approval has been received on DD/MM/YYYY via approval number PRC-XXXX-00Z.

E.4.5. Permanent changes from registered monitoring plan, monitoring methodology or standardized baseline

It has been checked whether any permanent changes from the registered monitoring plan (PCfrMP) or applied methodologies (PCfMM) including standardized baselines (PCfSB) have been approved prior or during this monitoring period or submitted with this monitoring report. The result is summarized in the table below.

<input checked="" type="checkbox"/>	No PCfrMP, PCfMM or PCfSB have been submitted to the UNFCCC prior to the current monitoring period		
<input type="checkbox"/>	The following PCfrMP, PCfMM or PCfSB have been approved or are under approval by the UNFCCC		
	1	Title	
		Status	<input type="checkbox"/> under approval; <input type="checkbox"/> approved
		Appr.date	
		Ref. No.	
	2	Title	
		Status	<input type="checkbox"/> under approval; <input type="checkbox"/> approved

		Appr.date	
		Ref.No.	
<input type="checkbox"/>	During the verification of the current MP no need for a PCfrMP, PCfMM or PCfSB has been identified. The monitoring plan is in accordance with the approved methodology applied by the PA		
<input type="checkbox"/>	An approval of the following PCfrMP, PCfMM or PCfSB is to be requested from the EB for the current MP as appendix 1 of the project standard does not apply.		
	1	Issue:	
	2	Issue:	
<input type="checkbox"/>	The following PCfrMP, PCfMM or PCfSB for which appendix 1 of the PS is applicable have been applied:		
	1	Issue:	
	2	Issue:	

E.4.6. Changes to the project design of a registered project activity

It has been checked whether any changes to the project design (CoPD) have been approved prior or during this monitoring period or submitted with this monitoring report. The result is summarized in the table below.

<input checked="" type="checkbox"/>	No CoPD has been submitted to the UNFCCC prior to the current monitoring period		
<input type="checkbox"/>	The following CoPD have been approved or are under approval by the UNFCCC		
	1	Title	
		Status	<input type="checkbox"/> under approval; <input type="checkbox"/> approved
		Appr.date	
		Ref. No.	
	2	Title	
		Status	<input type="checkbox"/> under approval; <input type="checkbox"/> approved
		Appr.date	
		Ref.No.	
<input type="checkbox"/>	During the verification of the current MP no need for a CoPD has been identified. The monitoring plan is in accordance with the approved methodology applied by the PA		
<input type="checkbox"/>	An approval of the following CoPD.is to be requested from the EB for the current MP as appendix 1 of the project standard does not apply.		
	1	Issue:	
	2	Issue:	
<input type="checkbox"/>	The following CoPD for which appendix 1 of the PS is applicable have been applied:		
	1	Issue:	
	2	Issue:	

E.4.7. Types of changes specific to afforestation and reforestation project activities

<input type="checkbox"/>	N/A - as this monitoring plan was part of the registered PDD																				
<input checked="" type="checkbox"/>	The following changes for which appendix 1 of the PS is applicable have been applied:																				
Issue 1	<p>The volume equations of some species have been changed as mentioned below</p> <table border="1"> <thead> <tr> <th>S.No</th> <th>Species name</th> <th>Old Formula</th> <th>New Formula</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Tectona grandis</td> <td>$0.08847 - 1.46936 * D^2 + 11.98979 * D^2 + 1.970560 * D^3$</td> <td>$0.006 + 2.661999 * D^2 + 0.280538 * D^2 * H$</td> </tr> <tr> <td>2</td> <td>Butea monosperma</td> <td>$(2.95525 * D - 0.24276)^2$</td> <td>$0.00855 + 0.4432 * D^2 + 0.28813 * D^2 * H$</td> </tr> <tr> <td>3</td> <td>Acacia catechu</td> <td>$0.02384 - 0.72161 * D^2 + 7.46888 * D^2$</td> <td>$(0.00817 / D^2 * H + 0.29886) * D^2 * H$</td> </tr> <tr> <td>4</td> <td>Acacia leucophloea</td> <td>$(-0.00142 + 2.61911 * D - 0.54703 * D^{1/2})^2$</td> <td>$0.00855 + 0.4432 * D^2 + 0.28813 * D^2 * H$</td> </tr> </tbody> </table> <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. Also the other species which are included in this monitoring period are <i>Acacia leucophloea</i>, <i>Albizia amara</i>, <i>Acacia Arabica</i>, <i>Anogeissus pendula</i>, <i>Bauhinia racemosa</i>, <i>Bolanitis aegyptica</i>, <i>Boswellia serrate</i>, <i>Capparis Decidua</i>, <i>Nyctanthese arbortristis</i>.</p> <p>The volume equations for the 9 other species are also 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 will not increase the the Emission removals calculated. This is in line EB 66 Annex 24 para (p). Hence acceptable.</p> <p>The verification team's assessment report on the above post registration change is submitted along with this report</p>	S.No	Species name	Old Formula	New Formula	1	Tectona grandis	$0.08847 - 1.46936 * D^2 + 11.98979 * D^2 + 1.970560 * D^3$	$0.006 + 2.661999 * D^2 + 0.280538 * D^2 * H$	2	Butea monosperma	$(2.95525 * D - 0.24276)^2$	$0.00855 + 0.4432 * D^2 + 0.28813 * D^2 * H$	3	Acacia catechu	$0.02384 - 0.72161 * D^2 + 7.46888 * D^2$	$(0.00817 / D^2 * H + 0.29886) * D^2 * H$	4	Acacia leucophloea	$(-0.00142 + 2.61911 * D - 0.54703 * D^{1/2})^2$	$0.00855 + 0.4432 * D^2 + 0.28813 * D^2 * H$
S.No	Species name	Old Formula	New Formula																		
1	Tectona grandis	$0.08847 - 1.46936 * D^2 + 11.98979 * D^2 + 1.970560 * D^3$	$0.006 + 2.661999 * D^2 + 0.280538 * D^2 * H$																		
2	Butea monosperma	$(2.95525 * D - 0.24276)^2$	$0.00855 + 0.4432 * D^2 + 0.28813 * D^2 * H$																		
3	Acacia catechu	$0.02384 - 0.72161 * D^2 + 7.46888 * D^2$	$(0.00817 / D^2 * H + 0.29886) * D^2 * H$																		
4	Acacia leucophloea	$(-0.00142 + 2.61911 * D - 0.54703 * D^{1/2})^2$	$0.00855 + 0.4432 * D^2 + 0.28813 * D^2 * H$																		

E.5. Compliance of monitoring plan with the monitoring methodology including applicable tool and standardized baseline

Means of verification	<p>By means of comparison of the MR with</p> <ul style="list-style-type: none"> (i) the applied CDM methodology (ii) all applicable CDM Meth tools and (iii) if applicable, a standardized baseline <p>The verification team has checked whether the MP is in compliance with the MP related requirements of the applied methodology/tools/SB.</p> <p>The following sources of information have been used in this context:</p>
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		<ul style="list-style-type: none"> • /MR/ • /METH/ • /TOOL/ • /unfccc/ 		
Findings	<input checked="" type="checkbox"/>	The MP is completely in accordance with the approved methodology applied by the CDM project (last registered/approved version of the PDD)		
		The breakdown of MP accordance of the referenced tools is as follows:		
	<input type="checkbox"/>	1	Title (of the tool)	
			Version	
			MP compliance	<input type="checkbox"/> full compliance <input type="checkbox"/> findings have been raised <input type="checkbox"/> N/A (for MP)
	<input type="checkbox"/>	2	Title (of the tool)	[Name SB]
		Version	[Version SB]	
		MP compliance	<input type="checkbox"/> full compliance <input type="checkbox"/> findings have been raised <input type="checkbox"/> N/A	
<input type="checkbox"/>	The breakdown of MP accordance of the applicable SB is as follows:			
<input type="checkbox"/>	1	Title (of the SB)	Name of SB	
		Version		
		MP compliance		
<input type="checkbox"/>	In this context the following CARs, CLs, FARs have been raised:			
Conclusion	<input checked="" type="checkbox"/>	No CARs/CLs/FARs has been raised in this context. No correction was required. The project is in line with the respective requirements.		
	<input type="checkbox"/>	The raised CARs/CLs/FARs has been addressed appropriately. The PP has carried out the requested corrections. All respective findings could be closed out. For details please refer to Appendix 4.		

E.6. Compliance of monitoring activities with the registered monitoring plan

E.6.1. Data and parameters fixed ex ante or at renewal of crediting period

Means of verification	<p>By means of comparison of the MR and the ER calculation with the latest version of the registered PDD the verification team has checked whether all parameters fixed ex-ante or at renewal of the crediting period have been applied correctly.</p> <p>Further it has been checked whether the GWP for the respective period have been correctly applied.</p> <p>The following sources of information have been used in this context:</p> <ul style="list-style-type: none"> • /MR/ • /XLS/ • /PDD/ • /PS/ • /VVS/ • /unfccc/ 	
Findings	<input type="checkbox"/>	The MR and the ER calculation have considered the parameters fixed ex-ante or at the renewal of the crediting period correctly, no deviations have been observed.
	<input type="checkbox"/>	<p>The following deviations from the parameters fixed ex-ante or at renewal of crediting period have been identified in the course of this verification:</p> <p>- N/A</p>

	<input checked="" type="checkbox"/>	In this context the following CARs, CLs, FARs have been raised: CAR D1 CAR D2 are raised
Conclusion	<input type="checkbox"/>	No CARs/CLs/FARs have been raised in this context. No correction was required. The project is in line with the respective requirements.
	<input checked="" type="checkbox"/>	The raised CARs/CLs/FARs have been addressed appropriately. The PP has carried out the requested corrections. All respective findings could be closed out. For details please refer to Appendix 4.
	After the closure of CARs/ CLs, all parameters which are fixed ex-ante as per the registered PDD is taken up for emission removal calculations, however the volume equations of the some of the species were changed	

E.6.2. Data and parameters monitored

Means of verification	During the verification all relevant monitoring parameters (as listed in chapter B.7.1 of the PDD) have been verified with regard to the (i) appropriateness of the applied measurement / determination method, (ii) the correctness of the values applied for ER calculation, (iii) the accuracy, and applied QA/QC measures. The results as well as the verification procedure are described parameter-wise in the project specific verification checklist (Appendix 5).		
Findings	For details please refer to appendix 5		
Conclusion	<input type="checkbox"/>	No CARs/CLs/FARs have been raised in this context. No correction was required. The project is in line with the respective requirements.	
	<input checked="" type="checkbox"/>	The raised CARs/CLs/FARs have been addressed appropriately. The PP has carried out the requested corrections. All respective findings could be closed out. For details please refer to Appendix 4.	
	It can be confirmed that all monitoring parameters have been measured / determined without material misstatements and in line with all applicable standards and relevant requirements. However the Parameter height H of the trees is measured using graduated poles instead of Ravi altimeter as per the registered PDD. But the trees heights are less than 7 m so use of graduated poles is acceptable as per the standard forestry practices.		

E.6.3. Implementation of sampling plan

Means of verification	The verification team has been checked whether the PPs have applied a sampling approach to determine the monitored values. Further it has been checked whether the PPs have correctly applied the implemented sampling plan including (i) description of the implemented sampling design (ii) collected data (iii) analysis of collected data (iv) Demonstration on whether the required confidence/precision has been met. The following sources of information have been used in this context: • /MR/ • /XLS/ • /PDD/.			
Findings	<input type="checkbox"/>	The PPs have not applied sampling approaches for the parameters monitored.		
	<input checked="" type="checkbox"/>	The PPs have applied sampling approaches for the following parameters monitored.		
		1	Parameter:	DBH & H
			Name:	Diameter at breast Height and Height of the trees.
			Description on how the	As per the registered PDD, 32 samples

		sampling efforts and survey comply with the validated sampling plan:	are required for monitoring. But the PP laid down 39 sample plots, allocated the sample plots proportionate to the area of the JFMC, and laid down the required number of sample plots of 25m x 20m and measured the DBH and H of trees which are more than 10 cm Girth and 2 m height. This is in line with the sampling requirements of the validated PDD.
	2	Parameter:	
		Name:	Tree Species
		Description on how the sampling efforts and survey comply with the validated sampling plan:	As per the registered PDD, 32 samples are required for monitoring. But the PP laid down 39 sample plots, allocated the sample plots proportionate to the area of the JFMC, and laid down the required number of sample plots of 25m x 20m and the species with more than 10 cm Girth and 2 m height are noted. In all the sample plots, 21 species are only identified. These species are mostly fast growing species and other species planted were not having considerable growth and are not accounted by the PP for emission removal calculations by the PP in this monitoring period. Thus the species identified are in line with the sampling requirements of the validated PDD.
	<input checked="" type="checkbox"/>	In this context the following CARs, CLs, FARs have been raised: CAR B2 and CL D1, CAR D2,	
Conclusion	<input type="checkbox"/>	No CARs/CLs/FARs have been raised in this context. No correction was required. The project is in line with the respective requirements.	
	<input checked="" type="checkbox"/>	The raised CARs/CLs/FARs have been addressed appropriately. The PP has carried out the requested corrections. All respective findings could be closed out. For details please refer to Appendix 4.	
	<p>The number of plots taken is 39, which is 7 more than the required 32 as per the registered PDD. The increase in sample plots to represent the proportionate numbers of sample plot allocated to year of planting is accepted. The location of sample plots to ensure randomness by spraying grains over a map picture in a paper and locating the point is accepted. The same is explained clearly in the revised MR.</p> <p>During the monitoring period the project area was not affected by pest, fires, and natural disturbances. Also no silvicultural activity happened. Also each JFMC is homogeneous in nature. Hence further stratification is not required in this monitoring period.</p>		

E.7. Compliance with the calibration frequency requirements for measuring instruments

Means of verification	<p>During the verification the relevant monitoring equipment has been checked whether the calibration requirements have been met; especially if the calibration frequency is in line with the requirements of the validated PDD and/or the applicable calibration standards.</p> <p>The results as well as the verification procedure are described equipment-wise in the project specific verification checklist (Appendix 6).</p> <p>The following sources of information have been used in this context:</p> <ul style="list-style-type: none"> • /MR/ • /XLS/ • /CAL/.
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Findings	<input checked="" type="checkbox"/>	Based on the details listed in appendix 6 the verification team can confirm that all installed monitoring equipment has been duly calibrated for this entire monitoring period.
	<input type="checkbox"/>	Based on the assessment and information as per appendix 6 delay(s) in calibration have been identified. The PP has applied the maximum permissible error of the instrument to the measured values taken during the period between the scheduled date of calibration and the actual date of calibration. From the related calibration certificates and emission reduction calculation the verification team confirms that the maximum permissible error has been applied in a conservative manner so that the adjusted measured values due to the delayed calibration result in fewer claimed emission removals. For details please refer to appendix 6
	<input checked="" type="checkbox"/>	In this context the following CARs, CLs, FARs have been raised: CAR D3
Conclusion	<input type="checkbox"/>	No CARs/CLs/FARs have been raised in this context. No correction was required. The project is in line with the respective requirements.
	<input checked="" type="checkbox"/>	The raised CARs/CLs/FARs have been addressed appropriately. The PP has carried out the requested corrections. All respective findings could be closed out. For details please refer to Appendix 4.
		<p>During the time of validation the area of the A/R CDM project is fixed. The GPS co-ordinates are given in the registered PDD. The next monitoring will take place in 2017 and hence not monitored now.</p> <p>The GPS meter used were new GPS meters, The GPS meters are self-calibrating. Hence calibration is not applicable.</p> <p>The pillar markings for the sample plots are also marked using new GPS meters</p> <p>The height of the trees are measured using graduated poles and graduations are done using measuring tapes which are purchased at the time of monitoring in 2016. Similarly new tapes are used to measure GBH,</p> <p>To ensure conservativeness the GBH is rounded down to nearest 0.5 cm and height is rounded down to the nearest 0.5 m.</p> <p>Hence the calibration is not applicable for the instruments used in this monitoring period</p>

E.8. Assessment of data and calculation of emission reductions or net removals

E.8.1. Calculation of baseline GHG emissions or baseline net GHG removals by sinks

Means of verification	<p>During the verification the calculation of baseline GHG emissions has been checked. In detail the following has been verified:</p> <ul style="list-style-type: none"> <i>Transparency:</i> It has been checked whether the calculation of baseline emissions is fully traceable and, where used, the Excel calculation provides all calculation formulae. <i>Parameter consistency:</i> It has been checked whether all internal and external parameters and data used for the calculation are applied consistently in the monitoring report and the calculation spread sheet. <i>Correctness:</i> It has been checked whether the applied formulae and methods for calculating baseline emissions are in accordance with the monitoring plan and the approved methodology. <i>Completeness:</i> It has been checked whether all calculations are complete and without omissions. <p>The following sources of information have been used in this context:</p> <ul style="list-style-type: none"> /MR/
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	<ul style="list-style-type: none"> • /XLS/. 	
Findings	<input checked="" type="checkbox"/>	<p>The calculation of the baseline emissions was found to be fully compliant with the above stated principles.</p> <p>The calculations of baseline net GHG removals have been carried out in accordance with the formulae and methods described in the registered monitoring plan, the applied methodology and, where applicable, the applied standardized baseline. Any assumptions used in emission or removal calculations have been justified. Appropriate emission factors, IPCC default values, GWPs and other reference values have been correctly applied.</p> <p>No errors, miscalculations, omissions, misstatements or incomplete information has been identified.</p>
	<input type="checkbox"/>	<p>The verification team has identified mistakes in the baseline emissions calculation or the underlying calculation approaches.</p>
	<input type="checkbox"/>	<p>In this context the following CARs, CLs, FARs have been raised:</p>
Conclusion	<input checked="" type="checkbox"/>	<p>No CARs/CLs/FARs have been raised in this context. No correction was required. The project is in line with the respective requirements.</p>
	<input type="checkbox"/>	<p>The raised CARs/CLs/FARs have been addressed appropriately. The PP has carried out the requested corrections. All respective findings could be closed out. For details please refer to Appendix 4.</p>
	<p>The baseline net GHG removals by sinks is calculated by the PP at the time of validation and the same is deducted from actual net GHG removals by sinks in the GHG estimation. But as per methodology the baseline removals can be taken as zero. As the PP used the conservative approach the inclusion of baselinenet GHG removals is accepted..</p>	

E.8.2. Calculation of project GHG emissions or actual net GHG removals by sinks

Means of verification	<p>During the verification the calculation of project GHG emissions has been checked. In detail the following has been verified:</p> <ul style="list-style-type: none"> • Transparency: It has been checked whether the calculation of project emissions is fully traceable and, where used, the Excel calculation provides all calculation formulae. • Parameter consistency: It has been checked whether all internal and external parameters and data used for the calculation are applied consistently in the monitoring report and the calculation spread sheet. • Correctness: It has been checked whether the applied formulae and methods for calculating project emissions are in accordance with the monitoring plan and the approved methodology. • Completeness: It has been checked whether all calculations are complete and without omissions. <p>The following sources of information have been used in this context:</p> <ul style="list-style-type: none"> • /MR/ • /XLS/. 	
Findings	<input type="checkbox"/>	<p>The calculation of the project emissions was found to be fully compliant with the above stated principles.</p> <p>The calculations of project GHG emissions or actual net GHG removals have been carried out in accordance with the formulae and methods described in the registered monitoring plan, the applied methodology and, where applicable, the applied standardized baseline. Any assumptions used in emission or removal calculations have been justified. Appropriate emission factors, IPCC default values, GWPs and other reference values have been correctly applied.</p> <p>No errors, miscalculations, omissions, misstatements or incomplete information have been identified.</p>
	<input checked="" type="checkbox"/>	<p>The verification team has identified mistakes in the project emissions calculation or the underlying calculation approaches.</p>
	<input checked="" type="checkbox"/>	<p>In this context the following CARs, CLs, FARs have been raised:</p>

		CAR B1, CAR D1 and CAR E1
Conclusion	<input type="checkbox"/>	No CARs/CLs/FARs have been raised in this context. No correction was required. The project is in line with the respective requirements.
	<input checked="" type="checkbox"/>	The raised CARs/CLs/FARs have been addressed appropriately. The PP has carried out the requested corrections. All respective findings could be closed out. For details please refer to Appendix 4.
		Wherever corrections are required a revised actual net GHG removals by sinks calculation was prepared by the PP and presented to the verification team. The calculations procedures especially above ground biomass, below ground biomass, shrub biomass are presented correctly as per the methodological requirements in the final corrected MR and CER calculation sheets. Also the uncertainty is calculated and it is 9.23% as per the A/R Tool 14, discount factors are not required to be applied All raised issues were addressed appropriately so that it can be confirmed that the actual net GHG removals by sinks is overall correct.

E.8.3. Calculation of leakage GHG emissions

Means of verification		During the verification it has been checked whether leakage emissions have to be considered and, in cases where leakage emissions have to be calculated, the respective calculation of leakage GHG emissions has been checked. In such cases the same verification principles have been considered as for the baseline and project emissions calculation. Please refer to E.8.1 and E.8.2. The following sources of information have been used in this context: <ul style="list-style-type: none"> • /MR/ • /XLS/.
Findings	<input checked="" type="checkbox"/>	No leakage emissions were to be considered (LE = 0).
	<input type="checkbox"/>	The calculation of the leakage emissions was found to be fully compliant with the above stated principles (see 8.1 and 8.2). The calculations of leakage GHG emissions have been carried out in accordance with the formulae and methods described in the registered monitoring plan, the applied methodology and, where applicable, the applied standardized baseline. Any assumptions used in leakage emissions calculations have been justified. Where applicable, appropriate emission factors, IPCC default values, GWPs and other reference values have been correctly applied. No errors, miscalculations, omissions, misstatements or incomplete information have been identified.
	<input type="checkbox"/>	The verification team has identified mistakes in the project emissions calculation or the underlying calculation approaches.
	<input type="checkbox"/>	In this context the following CARs, CLs, FARs have been raised:
Conclusion	<input type="checkbox"/>	No CARs/CLs/FARs have been raised in this context. No correction was required. The project is in line with the respective requirements.
	<input type="checkbox"/>	The raised CARs/CLs/FARs have been addressed appropriately. The PP has carried out the requested corrections. All respective findings could be closed out. For details please refer to Appendix 4.
		Leakage is not applicable for this project.

E.8.4. Summary of calculation of GHG emission reductions or net anthropogenic GHG removals by sinks

Means of verification	The verification team has checked if the MR includes a summary table of the emission removals calculation specifying separately <ul style="list-style-type: none"> - Total baseline emissions, - Total project emissions, - Total leakage,
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	- Total emission removals. It has been assessed whether the values are correct or need to be revised as a consequence of issues identified above.	
Findings	<input checked="" type="checkbox"/>	Section E.4 of the MR includes in a summary table of the emission removals calculation.
	<input checked="" type="checkbox"/>	The summary table specified the total baseline, project and leakage emissions as well as the total emission removals separately.
	<input type="checkbox"/>	The values as specified in the ER summary table are correct; no issues have been identified during the verification which requires changes in the ER calculation.
	<input checked="" type="checkbox"/>	During the verification issues with impact on the ER calculation have been identified.
	<input checked="" type="checkbox"/>	In this context the following CARs, CLs, FARs have been raised: CAR D1 and CAR E1
Conclusion	<input type="checkbox"/>	No CARs/CLs/FARs have been raised in this context. No correction was required. The project is in line with the respective requirements.
	<input checked="" type="checkbox"/>	The raised CARs/CLs/FARs have been addressed appropriately. The PP has carried out the requested corrections. All respective findings could be closed out. For details please refer to Appendix 4.
	The PP estimated the emission removals as per the registered PDD. Also emission removals by baseline trees are deducted from the overall removals as a conservative approach.	

E.8.5. Comparison of actual GHG emission reductions or net anthropogenic GHG removals by sinks with estimates in registered PDD

Means of verification	The verification team has checked if the MR includes a comparison of actual values of the monitoring period with the estimations in the registered PDD. It has further checked which of the below listed cases is applicable for the calculated ER of the current monitoring period.	
Findings	<input type="checkbox"/>	Case 1: The ex-ante estimated value was found to be proportionally higher than the ex-post determined value. No further action is deemed required.
	<input type="checkbox"/>	Case 2: The ex-ante estimated value fits very good to the actually monitored value. No further justification is deemed required.
	<input checked="" type="checkbox"/>	Case 3: The ex-ante estimated value was found to be proportionally lower than the ex-post determined value.
	<input type="checkbox"/>	In this context the following CARs, CLs, FARs have been raised:
Conclusion	<input checked="" type="checkbox"/>	No CARs/CLs/FARs have been raised in this context. No correction was required. The project is in line with the respective requirements.
	<input type="checkbox"/>	The raised CARs/CLs/FARs have been addressed appropriately. The PP has carried out the requested corrections. All respective findings could be closed out. For details please refer to Appendix 4.

E.8.6. Remarks on difference from estimated value in registered PDD

Means of verification	On the basis of the above comparison of actual values of the monitoring period with the estimations in the registered PDD (E.8.5) the verification team has checked whether (in case 3) an appropriate explanation is included in the MR.	
Findings	<input checked="" type="checkbox"/>	No further justification or explanation is deemed required as actual emissions of this MP do not exceed significantly the ex-ante calculated emission removals (applicable for case 1 and 2).
	<input type="checkbox"/>	For case 3: The PP has provided a related justification in the MR. The reasons for the increase are as follows:
	<input type="checkbox"/>	In this context the following CARs, CLs, FARs have been raised:

Conclusion	<input checked="" type="checkbox"/>	No CARs/CLs/FARs have been raised in this context. No correction was required. The project is in line with the respective requirements.
	<input type="checkbox"/>	The raised CARs/CLs/FARs have been addressed appropriately. The PP has carried out the requested corrections. All respective findings could be closed out. For details please refer to Appendix 4.
	Not Applicable.	

E.8.7. Actual GHG emission reductions or net anthropogenic GHG removals by sinks during the first commitment period and the period from 1 January 2013 onwards

Means of verification	The verification team has checked chapter E.7 of the MR and the emission reduction calculation sheet /XLS/.										
Findings	<input checked="" type="checkbox"/> The MR in section E.7 includes a summary table of the ER breakdown <ul style="list-style-type: none"> a) <i>ER up to 2012-12-31 and</i> b) <i>ER from 2013-01-01 onwards</i> <input type="checkbox"/> The breakdown of the ERs during the first commitment period and from 2013-01-01 onwards is as follows: <ul style="list-style-type: none"> <input type="checkbox"/> The ER have completely been generated during the first commitment period <input type="checkbox"/> The ERs have completely been generated from 2013-01-01 onwards, <input checked="" type="checkbox"/> The ERs have partly been generated during the first commitment period and partly from 2013-01-01 onwards. <input checked="" type="checkbox"/> The breakdown of the ERs is correct, considering the applicable guidance.										
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th></th><th style="text-align: center;">until 2012-12-31 ¹⁾</th><th style="text-align: center;">from 2013-01-01 ¹⁾</th><th style="text-align: center;">Sum</th></tr> </thead> <tbody> <tr> <td>Emission removals [tCO_{2e}]</td><td style="text-align: center;">-</td><td style="text-align: center;">5464</td><td style="text-align: center;">5464</td></tr> </tbody> </table>					until 2012-12-31 ¹⁾	from 2013-01-01 ¹⁾	Sum	Emission removals [tCO _{2e}]	-	5464	5464
	until 2012-12-31 ¹⁾	from 2013-01-01 ¹⁾	Sum								
Emission removals [tCO _{2e}]	-	5464	5464								
¹⁾ Both days included											
Conclusion	<input checked="" type="checkbox"/>	No CARs/CLs/FARs have been raised in this context. No correction was required. The project is in line with the respective requirements.									
	<input type="checkbox"/>	The raised CARs/CLs/FARs have been addressed appropriately. The PP has carried out the requested corrections. All respective findings could be closed out. For details please refer to Appendix 4.									
	The data provided in the MR is correct as well as the related breakdown. The pro-rata approach was correctly applied to the calculations of GHG emission reductions or net anthropogenic GHG removals in accordance with the project standard, as the monitoring period starts before 31 December 2012 and ends anytime thereafter.										

SECTION F. Internal quality control

Before the submission of the final verification report a technical review of the whole verification procedure was carried out. The technical reviewers are competent GHG auditors being appointed for the scope this project falls under. The technical reviewers are 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 verification opinion and the topic specific assessments as prepared by the verification team leader may have been confirmed or revised. Furthermore reporting improvements might have been achieved.

After the successful technical review an overall (esp. procedural) assessment of the complete verification has been carried out by a senior assessor located in the accredited premises of TÜV NORD.

After this step the submission for requesting for issuance is conducted.

SECTION G. Verification opinion

M/s Divisional Forest Officer (DFO), Jhansi Forest Division has commissioned the TÜV NORD JI/CDM Certification Program to carry out the 1st periodic verification of the project: “Small scale Jhansi JFM A/R CDM Project on degraded lands in Jhansi Forest Division, Uttar Pradesh, India”,(UNFCCC no :10220) with regard to the relevant requirements for CDM project activities. The project achieves GHG removals due to afforestation and reforestation activities in the degraded forest lands implemented by low income communities. This verification covers the period from 01/01/2012 to 06/06/2016 (including both days).

As a result of this verification, the verifier confirms that:

- all operations of the project are implemented and installed as planned and described in the validated project design document,
- the monitoring plan is in accordance with the applied approved CDM methodology, i.e., AR-AMS0007: “Afforestation and reforestation project activities implemented on lands other than wetlands”, Version 03.0 ,
- the installed equipment essential for measuring parameters required for calculating emission removals are calibrated appropriately,
- the monitoring system is in place and functional. The project has generated GHG emission removals,
- the GHG emission removals are calculated without material misstatements in a conservative and appropriate manner.

TÜV NORD JI/CDM CP further confirms that the project has achieved emission removals in the above mentioned reporting period as follows:

Emission removals: 5,464 t CO_{2e}.

SECTION H. Certification statement

As a duly accredited DOE, TÜV NORD CERT confirms that the project

““Small scale Jhansi JFM A/R CDM Project on degraded lands in Jhansi Forest Division,
Uttar Pradesh, India”, registered under

UNFCCC-No. : 10220

has achieved emission removals in accordance with all applicable requirements for
registered CDM project activities during the current monitoring period

MP-No.: 01

from: 01-01-2012

to: 06-06-2016

(including both days) as follows:

Emission removals: 5,464 t CO_{2e}.

Coimbatore 02/08/2017



G Ezhilarasu
Team leader

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

SCHEME	STATUS	VALID UNTIL
CDM	Senior Assessor (Validation, Verification)	2017-02-06
VCS / ISO 14064-2	Senior Assessor	2017-02-06

Authorization status for technical areas within sectoral scopes:

CODE	TECHNICAL AREA
1.2	Renewable Energies
3.1	Energy Demand
13.1	Waste Handling and Disposal

130 - Rev. 3, Date: 2014-02-07

130_S01-VA060-F20_2014-02-07_rev3.doc

S01-VA060-F20 rev3 / 2012-10-25

SCHEME	STATUS	VALID UNTIL
CDM	Lead Assessor (Validation, Verification)	2018-01-06
VCS / ISO 14064-2	Lead Assessor	2018-01-06

Authorization status for technical areas within sectoral scopes:

CODE	TECHNICAL AREA	TR SUBCATEGORIES
1.2	Renewable Energies	

191 - Rev. 4, Date: 2015-01-07

191_S01-VA060-F20_2015-01-07_rev4.doc

S01-VA060-F20 rev3 / 2012-10-25

CODE	TECHNICAL AREA	TR SUBCATEGORIES
14.1	Forestry	

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

345_S01-VA060-F20_rev1_2015-01-06.doc


S01-VA060-F20 rev3 / 2012-10-25

CODE	TECHNICAL AREA
14.1	Afforestation and reforestation

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

365_S01-VA060-F20_2016-12-20_rev0.doc

S01-VA060-F20 rev3 / 2012-10-25



Statement of Competence
Appointment and authorization according to the procedures
of the TÜV NORD JVCDM Certification Program

Mr. Grzegorz Kochaniewicz


SCHEME	STATUS	VALID UNTIL
CDM	Senior Assessor (Validation, Verification) Technical Reviewer	2019-02-08
VC 5 / 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 Conservation

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

173_S01-VA050-F02_2016-02-09_r7.doc



Statement of Competence
Appointment and authorization according to the procedures
of the TÜV NORD JVCDM Certification Program

Mr. Rainer Winter

SCHEME	STATUS	VALID UNTIL
CDM	Senior Assessor (Validation, Verification) Technical Reviewer	2016-07-01
JII	Senior Assessor Technical Reviewer	2016-07-01
VCS / ISO 14064-2	Senior Assessor Technical Reviewer	2016-07-01

Authorization status for technical areas within sectoral scopes:

CODE	TECHNICAL AREA	TR SUBCATEGORIES
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	
11.2	Refrigerant gas production	
12.1	Chemical industry	
13.1	Solid waste and wastewater	

003 - Rev. 9, Date: 2015-05-18

003_S01-VA050-F02_2015-05-18_r9.doc

Appendix 3. Documents reviewed or referenced

No	Author	Reference	Title	References to the document	Provider
1	UNFCCC	/AMS/	AR-AMS0007 - Afforestation and reforestation project activities implemented on lands other than wetlands version 03.0	https://cdm.unfccc.int/filestorage/2/D/8/2D8GSJ95T6AHQWZCRY3L7EI0U4PNKF/eb85_repa_n22.pdf?t=SmJ8bnM4bHd4fDAbl3w7V1yVxFJbELgCxfRr	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/	<p>Monitoring 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 03/09/2016</p> <p>Monitoring Report for CDM project: "Small scale Jhansi JFM A/R CDM Project on degraded lands in Jhansi Forest Division, Uttar Pradesh, India" version 02, dated 08/03/2017</p> <p>Monitoring Report for CDM project: "Small scale Jhansi JFM A/R CDM Project on degraded lands in Jhansi Forest Division, Uttar Pradesh, India" version 03, dated 27/03/2017</p> <p>Monitoring Report for CDM project: "Small scale Jhansi JFM A/R CDM Project on degraded lands in Jhansi Forest Division, Uttar Pradesh, India" version 04, dated 27/04/2017</p> <p>Monitoring Report for CDM project: "Small scale Jhansi JFM A/R CDM Project on degraded lands in Jhansi Forest Division, Uttar Pradesh, India" version 05, dated 02/08/2017</p>		PP
7	UNFCCC	/MRT/	Monitoring Report Form (CDM-MR-FORM), Version 5.1	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 21/11/2015		
9	UNFCCC	/PS/	CDM Project Standard (Version 9.0)	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 (Version 09.0)	http://cdm.unfccc.int/Reference/Standards/index.html	Other

13	UNFCCC	/SAMPLE/	<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 4.1)</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/filestorage/external/20150226124447549-glos_CDM.pdf/glos_CDM.pdf?t=UmZ8bnFjODI3fDCW9A3vJwR03kQQh4sbLiYu	Other
16	PP	/CER/	<p>Emission removal calculation excel sheets w.r.t to Monitoring report version 01 dated 03/09/2016</p> <p>Emission removal calculation excel sheets w.r.t to Monitoring report version 02 dated 08/03/2017</p> <p>Emission removal calculation excel sheets w.r.t to Monitoring report version 03 dated 27/03/2017</p> <p>Emission removal calculation excel sheets w.r.t to Monitoring report version 04 dated 27/04/2017</p> <p>Emission removal calculation excel sheets w.r.t to Monitoring report version 05 dated 02/08/2017</p>		PP
17	PP	/SOP/	Standard operating Procedures for the A/R CDM Project – Jhansi.		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,		Forest Survey of

			MoEF, and 1996.and Indian state of forest report 2011 Annexure 2.		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/	Purchase records for GRAMIN Make eTrex and GRAMIN Make GPSMAP 76CSx Purchase records of new measuring tapes (30 meters tape, 50 meters tape and 5 meters tape) for all JFMCs		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, JFMC wise		PP
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

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

Table 3. Remaining FAR from validation and/or previous verification

FAR ID	NA	Section no.	Date:
Description of FAR			
Project participant response (1st round)			Date:
Documentation provided by project participant (1st round)			
<input type="checkbox"/>	Changes in the PDD	Section(s):	New version No.:
<input type="checkbox"/>	Changes in MR	Section(s):	New version No.:
<input type="checkbox"/>	Changes in XLS	Worksheet(s):	New version No.:
<input type="checkbox"/>	Other:		
DOE assessment (1st round)			Date: DD/MM/YYYY
Conclusion <i>Tick the appropriate checkbox</i>		<input type="checkbox"/> Additional action should be taken (finding remains open) <input type="checkbox"/> The finding is closed	

Table 4. CL from this verification

CL ID	CL A1	Section no.	All	Date: 22/01/2017
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Description of CL		
<ol style="list-style-type: none"> 1. The description in the MR depicts the project is under implementation which is different from the actual Scenario, clarification requested 2. The formatting is not as per the filling guidelines, please clarify. 		
Project participant response (1st round)		Date: 08/03/2017
<ol style="list-style-type: none"> 1. The Tense forms are corrected in the MR and only past activities are included in the Monitoring report 2. The Formatting is done as per the MR filling guidelines. 		
Documentation provided by project participant (1st round)		
<input type="checkbox"/> Changes in the PDD	Section(s):	New version No.:
<input checked="" type="checkbox"/> Changes in MR	Section(s):All	New version No.:2
<input type="checkbox"/> Changes in XLS	Worksheet(s):	New version No.:
<input type="checkbox"/> Other:		
DOE assessment (1st round)		Date: 10/03/2017
<ol style="list-style-type: none"> 1. The past tense is used in the MR wherever required, upon revision the MR depicts the actual implementation of the project very clearly hence accepted. 2. The Arial font is used in all places with font size 10 as per the filling guidelines. <p>Hence CL A1 is closed.</p>		
Conclusion <i>Tick the appropriate checkbox</i>		<input type="checkbox"/> Additional action should be taken (finding remains open) <input checked="" type="checkbox"/> The finding is closed

CL ID	CL C1	Section no.	All	Date: 22/01/2017
Description of CL				
<ol style="list-style-type: none"> 1. The description of the QA/QC procedure in section C of the Monitoring report is not clear. Kindly Clarify. 2. The information about internal and external verifications is not clear. Please explain. 				
Project participant response (1st round)				Date: 08/03/2017
<ol style="list-style-type: none"> 1. The QA/QC procedure is revised with the reference to SOP in section C of the revised MR. 2. The internal verification is done internally for the monitored parameters during the monitoring especially the GBH, H and number of trees along with the details of the sample plots, but during internal verification no major deviations from the SOPs were seen. But however the DOE verifications comments will be added in the SOP to strength the further verification. 				
Documentation provided by project participant (1st round)				
<input type="checkbox"/> Changes in the PDD	Section(s):	New version No.:		
<input checked="" type="checkbox"/> Changes in MR	Section(s):C	New version No.:2		
<input type="checkbox"/> Changes in XLS	Worksheet(s):	New version No.:		
<input type="checkbox"/> Other:				
DOE assessment (1st round)				Date: 10/03/2017
<ol style="list-style-type: none"> 1. The QA/ QC procedure for reliability check is revised and is in line with the SOP and by cross checking the monitored data randomly by doing the actual check and also by ocular checks. 2. The internal verification is the reliability check as described above and the deviations where not observed. However the external verification refers to the DOE observations and if any will be included in the SOP for future verifications. Also any changes in the UNFCCC requirements will be added in the SOP to be in line with the requirements. <p>Hence CL C1 is closed</p>				
Conclusion <i>Tick the appropriate checkbox</i>				<input type="checkbox"/> Additional action should be taken (finding remains open) <input checked="" type="checkbox"/> The finding is closed

CL ID	CL D1	Section no.	All	Date: 22/01/2017
Description of CL				
<ol style="list-style-type: none"> 1. The field measurement data sheets and SOP are not submitted. 2. The details of the sample plots are not given in MR or CER sheets 				
Project participant response (1st round)				Date: 08/03/2017

1. Due to the volume of the data sheets only some sample sheets are submitted to the DOE for verification and also SOP is submitted. 2. The Sample plot details are submitted in a separate Excel sheet.		
Documentation provided by project participant (1st round)		
<input type="checkbox"/> Changes in the PDD	Section(s):	New version No.:
<input type="checkbox"/> Changes in MR	Section(s):	New version No.:
<input checked="" type="checkbox"/> Changes in XLS	Worksheet(s): sample plots	New version No.:
<input type="checkbox"/> Other:		
DOE assessment (1st round)		Date: 10/03/2017
1. The Sample measurement sheets submitted are checked to ensure the correct data is filled from the sample sheets in the emission removals calculation which are not visited by DOE. Also during the verification the data sheets of the visited sample plots are reviewed by the DOE and the SOP is submitted. 2. The Sample plot information is provided in a separate excel sheets and submitted along with the pillar co-ordinates. Hence CL D1 is closed		
Conclusion <i>Tick the appropriate checkbox</i>		<input type="checkbox"/> Additional action should be taken (finding remains open) <input checked="" type="checkbox"/> The finding is closed

Table 5. CAR from this verification

CAR ID	CAR A1	Section no.		Date: 22/01/2017
Description of CAR				
1. The information about the area under the control of PP is not clear in the MR.				
Project participant response (1st round)				
1. The area of the A/R CDM project is not changed from the validation to this verification. The area is fixed at the validation period and information about the GPS readings given in the registered PDD and annex 2 of the MR is same. Also it should be noted that the forest area is under the control of the government of Uttar Pradesh and the implementation and monitoring the same is rested with the local communities under the guidance of forest department. The typo error in the various sections are corrected and the area of the project is made consistent with the entire sections of the MR.				
Documentation provided by project participant (1st round)				Date: 08/03/2017
<input type="checkbox"/> Changes in the PDD	Section(s):		New version No.:	
<input checked="" type="checkbox"/> Changes in MR	Section(s): A, B		New version No.: 2	
<input type="checkbox"/> Changes in XLS	Worksheet(s):		New version No.:	
<input type="checkbox"/> Other:				
DOE assessment (1st round)				Date: 10/03/2017
1. The area of the A/R CDM project is 268.87 hectares. The Area under the control of the PP has not changed from the validation to the first verification. The MR appendix is checked with the information provided in the registered PDD. Also the random pillar markings are checked during the site visit. Also the UP forest department records are checked along discussions with the DFO Jhansi revealed that the area under A/R CDM for all the JFMCs is 268.87. Hence CAR A1 is closed.				
Conclusion <i>Tick the appropriate checkbox</i>		<input type="checkbox"/> Additional action should be taken (finding remains open) <input checked="" type="checkbox"/> The finding is closed		

CAR ID	CAR B1	Section no.	B.2.1, B.2.7	Date: 22/01/2017
Description of CAR				
1. It is observed that the tree height are measured using the graduated poles whereas the PDD it is mentioned as Ravi altimeter. 2. Some of the volume equations mentioned in the registered PDD and the MR are different. Kindly clarify				
Project participant response (1st round)				
1. The tree heights are around 5m (anticipated growth not there). 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 up to 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. The same is mentioned in section B.2.1 of the MR.

- For some species the usage of volume equations as per the registered PDD, shows a decreasing trend in volume for increase in GBH up to a certain value. Thus the estimation does not reflect the ground conditions. So as to have conservative values the generic volume equations for the rest of the species or the applicable volume equations available in the literatures are used. The section B.2.7 is revised to reflect the changes.

Documentation provided by project participant (1st round)		Date: 08/03/2017
<input type="checkbox"/> Changes in the PDD	Section(s):	New version No.:
<input checked="" type="checkbox"/> Changes in MR	Section(s): B.2.1 & B.2.7	New version No.: 2
<input type="checkbox"/> Changes in XLS	Worksheet(s):	New version No.:
<input type="checkbox"/> Other:		
DOE assessment (1st round)		Date: 10/03/2017
<ol style="list-style-type: none"> During the site visit it was observed that the most of the trees are less than 7 m height. So to have accurate and fast measurements the PP used graduated poles (graduation markings are done with the help of the measuring tapes) which 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. This temporary change is accepted. The volume equation in the registered PDD does not give the linear correlation for DBH and volume. Thus the estimation of tree volume is not reliable. 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. Thus the revised volume equations used are acceptable. <p>Also the above changes do not decrease the precision in the estimated tree biomass and in line with EB 66 annex 24 paragraph (p) and also there is no change in the methodological choices. The monitoring plan is per the applied methodology. Thus prior approval from board is not required as per annex 1 of the VVS version 9.</p> <p>Hence CAR B1 is closed.</p>		
Conclusion <i>Tick the appropriate checkbox</i>	<input type="checkbox"/> Additional action should be taken (finding remains open) <input checked="" type="checkbox"/> The finding is closed	

CAR ID	CAR B2	Section no.	B.2.1, B.2.7, CER Sheets	Date: 22/03/2017
Description of CAR				
<ol style="list-style-type: none"> The list of species mentioned in the CER sheets, MR and registered PDD are not consistent. Also explain how the volume equations used are applicable in line with the methodological requirements 				
Project participant response (1st round)				
<ol style="list-style-type: none"> The registered PDD mentions only the main species, but however more more than 32 species were planted by planting and sowing of seeds. Also it should be noted that to improve the survival more species to the suit the local conditions were also planted. However only fast growing species has grown to considerable level. The slow growing species are yet attain the growth to account for calculations. Now in the revised MR and CER sheets are made consistent. The volume equations for all the species are taken 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). 				
Documentation provided by project participant (1st round)				Date: 27/03/2017
<input type="checkbox"/> Changes in the PDD	Section(s):		New version No.:	
<input checked="" type="checkbox"/> Changes in MR	Section(s): B.2.1 & B.2.7		New version No.: 3	
<input checked="" type="checkbox"/> Changes in XLS	Worksheet(s): All		New version No.: 3	
<input type="checkbox"/> Other:				

DOE assessment (1st round)	Date: 28/03/2017
<p>1. The species mentioned in the CER sheets are sourced from the data sheets used for measurements in the selected sample plots. The Species name are mentioned for each tree in sample plot and measured. The same are exported to data sheets. During the verification site visit. During the site visit the verification team checked the species in an selected sample plot and also checked with the plantations schedule of the particular parcel of land. The verification team is able to verify the local names through the interviews with the local JFMC members, UP forest department officials and field level co-ordinates along with the local sectoral expertise. The revised MR and CER sheets submitted are in line and consistent with species included in the emission removal calculations.</p> <p>The volume equations of all the species considered for emission removal calculations are sourced from Indian State of Forest Report, 2011 and Forest Survey of India-Volume Equations for forests of India, Nepal and Bhutan (1996). (national forestry inventory). This is in line with "Demonstrating appropriateness of volume equations for estimation of aboveground tree biomass in A/R CDM project activities" as per the tool "Demonstrating appropriateness of volume equations for estimation of aboveground tree biomass in A/R CDM project activities" (Version 01.0.1).</p> <p>Hence accepted and CAR B2 is closed.</p>	
Conclusion <i>Tick the appropriate checkbox</i>	<input type="checkbox"/> Additional action should be taken (finding remains open) <input checked="" type="checkbox"/> The finding is closed

CAR ID	CAR D1	Section no.	CER Sheets and Section	Date: 22/01/2017
Description of CAR				
<p>1. Please explain why the mean diameter and height is used for the estimation of tree volume in ER calculation sheets.</p> <p>2. The root shoot ratio is not consistent with MR and registered PDD. Please clarify.</p> <p>3. Please review and explain how the raw data for DBH is taken for ER calculations in the Excel sheets. Also consistent units are not used.</p> <p>4. The linkage is not there from the calculations given the sheet "GHG Removal". Please explain</p> <p>5. The value of the wooden density taken for each species is not in line with registered PDD. Please clarify</p> <p>6. The Trees with less than 2m height and 10 cm GBH are not available in the CER sheets. Please clarify.</p>				
Project participant response (1st round)				
<p>1. The volume of each tree is calculated based on the DBH and height of each tree in the revised calculation.</p> <p>2. The root shoot ration of 0.27 is used as per the registered PDD.</p> <p>3. The GBH measured is divided by the factor 22/7 to arrive at the DBH. However in data sheets the DBH is directly mentioned in some sample plots by the enumerator. But it is marked as GBH and also for some trees the direct value of GBH is taken as DBH for the calculations. The above mistakes are correct and the DBH is calculated by only by dividing the GBH by a factor of 22/7. Also as per the volume equations used the unit of DBH is taken as cm or m.</p> <p>4. The b_{TREE} value is linked from the respective JFMC sheets in the revised calculation sheets</p> <p>5. The wooden density of each species taken is per the ex-ante values in the registered PDD.</p> <p>6. The Trees with more than 2m height and 10cm girth alone are taken for ER calculations. But it is should be noted that the plantations were raised using saplings and sowings of seeds. The rainfall was very less for the last two years after the seeds were sown in 2014 and the germination is still happening. So the complete tree list will be available only after 2019. The same will be provided in the next verification.</p>				
Documentation provided by project participant (1st round)				Date: 08/03/2017
<input type="checkbox"/>	Changes in the PDD	Section(s):	New version No.:	
<input checked="" type="checkbox"/>	Changes in MR	Section(s): D.1	New version No.:2	
<input checked="" type="checkbox"/>	Changes in XLS	Worksheet(s):All	New version No.:2	
<input type="checkbox"/>	Other:			

DOE assessment (1st round)		Date: 10/03/2017
<ol style="list-style-type: none"> 1. The volume of each tree in the sample plots is calculated using the measured GBH and H of the individual trees in the revised ER calculations hence accepted. 2. The root shoot ratio of 0.27 which fixed ex ante is used as per the registered PDD hence accepted. 3. The calculation of DBH from GBH and the usage of correct data are ensured in the revised ER sheets. The Sheets reflect the GBH as per the data sheets and DBH is calculated by dividing GBH with a factor of 22/7. The calculation sheets and data sheets are checked. Hence accepted. 4. The Linkage is given in the revised excel sheets hence ok. 5. The values of wood density taken for ER calculations in the revised sheets are in line with the registered PDD. Hence accepted. 6. During the site visit the trees coming out of the seeds were observed and the same has to be monitored during the next verification. <p>Hence CAR D1 is closed.</p>		
Conclusion <i>Tick the appropriate checkbox</i>		<input type="checkbox"/> Additional action should be taken (finding remains open) <input checked="" type="checkbox"/> The finding is closed

CAR ID	CAR D2	Section no.	D3	Date: 22/01/2017
Description of CAR				
<ol style="list-style-type: none"> 1. The basis for selecting the sample plots, the number sample plots for each JFMC and its details are not given in the section D.3 of the MR. 2. The stratification requirements are not addressed in the MR. 				
Project participant response (1st round)				
<ol style="list-style-type: none"> 1. The required number of sample plots is taken as per the registered PDD. However the numbers of sample plots are increased in some JFMC for the proportional representation of sample plots as per the year of planting. The process of selecting the location of the sample plots is explained in the revised MR section D.3 and the list of sample plots for each JFMC is also mentioned. The co-ordinate of each sample plots are given in the separate excel sheet. 2. The further stratification is not required the factors affecting the stratification like fire, pest natural disturbances did not happened during the monitoring period, 				
Documentation provided by project participant (1st round)				Date: 08/03/2017
<input type="checkbox"/>	Changes in the PDD	Section(s):	New version No.:	
<input checked="" type="checkbox"/>	Changes in MR	Section(s): D.3	New version No.:2	
<input checked="" type="checkbox"/>	Changes in XLS	Worksheet(s):sample plots	New version No.:2	
<input type="checkbox"/>	Other:			
DOE assessment (1st round)				Date: 10/03/2017
<ol style="list-style-type: none"> 1. The number of plots taken is 39, which is 7 more than the required 32 as per the registered PDD. The increase in sample plots to represent the proportionate numbers of sample plot allocated to year of planting is accepted. The location of sample plots to ensure randomness by spraying grains over a map picture in a paper and locating the point is accepted. The same is explained clearly in the revised MR. 2. During the monitoring period the project area was not affected by pest, fires, and natural disturbances. Also no silvicultural activity happened. Also each JFMC is homogeneous in nature. Hence no stratification is required. Hence accepted. <p>Hence CAR D2 is closed.</p>				
Conclusion <i>Tick the appropriate checkbox</i>		<input type="checkbox"/> Additional action should be taken (finding remains open) <input checked="" type="checkbox"/> The finding is closed		

CAR ID	CAR D3	Section no.	D2	Date: 22/01/2017
Description of CAR				
<ol style="list-style-type: none"> 1. The calibration details are not mentioned in section D.2 of the MR. 				
Project participant response (1st round)				
<ol style="list-style-type: none"> 1. At the start of the project activity the GPS readings are taken and the new meters are used for 				

making the areas. GRAMIN Make eTrex GPS meter is used for the same. For the pillar markings new GRAMIN Make GPSMAP 76CSx GPS meters were used during the start of the monitoring at 2016. Also these meters are self-calibrating (switch off and on).

The new measuring tapes were used for GBH measures and for marking the poles for every 10 cm used to measure the height of the tree. Also it should be noted that the nearest rounded 0.5 cm value is used for GBH values and for height it multiples of 0.5 m is used, that 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 the calibration requirements will not arise for GBH and height measurements.

Documentation provided by project participant (1st round)		Date: 08/03/2017
<input type="checkbox"/> Changes in the PDD	Section(s):	New version No.:
<input type="checkbox"/> Changes in MR	Section(s):	New version No.:
<input type="checkbox"/> Changes in XLS	Worksheet(s):	New version No.:
<input type="checkbox"/> Other:		
DOE assessment (1st round)		Date: 10/03/2017
<p>1. The new GPS meters (which are self-calibrating) and measuring tapes are used in this monitoring period, the calibration requirements is not applicable. The same is checked during the site visit and discussions with the field level enumerators. The PPs explanation is accepted.</p> <p>Hence CAR D3 is closed.</p>		
Conclusion <i>Tick the appropriate checkbox</i>		<input type="checkbox"/> Additional action should be taken (finding remains open) <input checked="" type="checkbox"/> The finding is closed

CAR ID	CAR E1	Section no.	E	Date : 22/01/2017
Description of CAR				
<p>1. The shrub biomass is not included in the MR, please explain.</p> <p>2. The uncertainty calculation as per AR Tool 14 is not presented. Please clarify.</p>				
Project participant response (1st round)				
<p>1. The shrub biomass is included in the revised MR. The default values fixed ex-ante are used for the purpose and the forest biomass is taken as above ground biomass estimated,</p> <p>2. The uncertainty estimated is 9.23%. The same is mentioned the MR and detailed calculation is presented in ER calculation sheets.</p>				
Documentation provided by project participant (1st round)				Date: 08/03/2017
<input type="checkbox"/> Changes in the PDD	Section(s):		New version No.:	
<input checked="" type="checkbox"/> Changes in MR	Section(s): E		New version No.:2	
<input checked="" type="checkbox"/> Changes in XLS	Worksheet(s):Uncertainty and Shrub Biomass		New version No.:2	
<input type="checkbox"/> Other:				
DOE assessment (1st round)				Date: 10/03/2017
<p>1. The Shrub biomass is included and it is estimated based on the tool "Estimation of carbon stocks and change in carbon stocks of trees and shrubs in A/R CDM project activities" Version 04.2 and same is presented in the revised MR section E.2 and hence accepted.</p> <p>2. The Uncertainty calculation is presented in the revised ER sheets and since it is less than 10% as per the AR Tool 14, appendix 2 no discount factors need to be applied. Hence accepted</p> <p>CAR E1 is closed.</p>				
Conclusion <i>Tick the appropriate checkbox</i>				<input type="checkbox"/> Additional action should be taken (finding remains open) <input checked="" type="checkbox"/> The finding is closed

Table 6. FAR from this verification

FAR ID	NA	Section No.		Date:
Description of FAR				
Project participant response				Date:

Documentation provided by project participant		
<input type="checkbox"/> Changes in the PDD	Section(s):	New version No.:
<input type="checkbox"/> Changes in MR	Section(s):	New version No.:
<input type="checkbox"/> Changes in XLS	Worksheet(s):	New version No.:
<input type="checkbox"/> Other:		
DOE assessment		Date: DD/MM/YYYY
Conclusion <i>Tick the appropriate checkbox</i>	<input type="checkbox"/> To be checked during the next periodic verification	

Appendix 5. Monitored Parameters

Table A-5: Periodic Verification Checklist – Monitored Parameters

Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
A. Area of stratum i		Ai		
<p>a) Measurement / Determination method (VVS, §§ 389-393) Describe how the monitoring parameter was measured / determined. Focus primarily on the original data level (ODL) but also describe the applied data aggregation trails (from ODL to data aggregation level zero (DAL0)). Check if relevant equipment has been exchanged and if in cases of failures / downtimes of standard equipment other measurement / determination methods have been used. Furthermore, verify the frequency of measurements as per the requirements. Assess whether the measurement / determination method is in line with the registered monitoring plan of the PDD and the applied methodology.</p>	<p>/IM01/ /PDD/ /KML/ /Co-od/</p>	<p><i>Description:</i> The GPS readings of patches are noted in excel and the area of the boundary is estimated using the software ArcGIS. The area is fixed during the time of validation.</p> <p><i>Verifier's action:</i> The Excel data file containing the co-ordinates are checked with the information provided in the registered PDD.</p> <p>Also during the site visit the VT checked the GPS readings of the sample points and confirmed that the data in the excel sheets are in line with the actual readings.</p> <p>Also the interviews with the forest officers confirmed the actual area under A/R CDM/</p> <p><i>Conclusion:</i> The A/R CDM project area for each JFMC taken for Emission reduction calculation is correct</p> <p>However CAR A1 is raised</p>	CAR A1	OK
<p>b) Accuracy and QA/QC Procedure (VVS, §§ 394-400) In case of measured (or estimated) values, check whether the accuracy of equipment used for monitoring is controlled and calibrated in accordance with the monitoring plan or if significant inaccuracies occur; in this case, make sure that the most</p>	<p>/INS/ /Co-od/ /SOP/</p>	<p><i>Description:</i> The GPS readings are taken using the following instruments</p> <ol style="list-style-type: none"> GRAMIN Make eTrex GRAMIN Make GPSMAP 76CSx <p>The machines are magnetic based and also self-calibrating</p>	CAR B3	OK

Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
<i>conservative assumptions theoretically possible have been made for calculating ERs. Describe whether all applicable QA/QC procedures are met. Assess further if the calibration of the monitoring equipment has been carried out in line with the latest EB guidance. Include calibration dates and information in validity of the installed monitoring equipment in the table in Annex 2.</i>		<i>Verifier's action:</i> The operational manual of the above 2 GPS meters are checked and found that the machines are self-calibrating <i>Conclusion:</i> However CAR D3 is raised		
c) Correctness (VVS, §§ 389-393) <i>Determine whether the value given in the monitoring report is correct or determined in a conservative manner. In case of conservative approaches used in lieu of the monitoring as per registered MP detailed assessment of the conservativeness of the approach used should be given. In case of mistakes / deviations pl. provide details and descriptions of the CARs raised.</i>	/MR/ /CER /PDD/ /Co-od/	<input checked="" type="checkbox"/> Correct <input type="checkbox"/> Not correct (initial assessment) <i>Description:</i> The total area of the project and the area of the individual JFMCs are mentioned in the MR and CER sheets <i>Verifier's action:</i> The registered PDD and Data base is checked <i>Conclusion:</i> Thus it is concluded that the total area taken for the project is correct. However CAR A1 is raised.	CAR A+	OK
B. Name of the species		-		
a) Measurement / Determination method (VVS, §§ 389-393) <i>Describe how the monitoring parameter was measured / determined. Focus primarily on the original data level (ODL) but also describe the applied data aggregation trails (from ODL to data aggregation level zero (DAL0)). Check if relevant equipment has been exchanged and if in cases of failures / downtimes of standard equipment other measurement / determination</i>	/MR/ /CER /PDD/ /IM01/ /DS/	<i>Description:</i> There are 21 species in the project area namely <i>Acacia Catechu</i> , <i>Acacia leucophloea</i> , <i>Acacia nilotica</i> , <i>Albizia amara</i> , <i>Azadirachta indica</i> , <i>Butea monosperma</i> , <i>Dalbergia sissoo</i> , <i>Prosopis juliflora</i> , <i>Tectona grandis</i> , <i>Holoptelea integrifolia</i> , <i>Nyctanthese arbortristis</i> , <i>Pongamia pinnata</i> , <i>Ziziphus mauritiana</i> , <i>Zizyphus xylopyrus</i> , <i>Acacia arabica</i> , <i>Ailanthus excels</i> , <i>Anogeissus pendula</i> , <i>Bauhinia racemosa</i> , <i>Bolanitis aegyptica</i> , <i>Boswellia serrate</i> and <i>Capparis Decidua</i> are recorded	CAR B2	OK

Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
<p><i>methods have been used. Furthermore, verify the frequency of measurements as per the requirements.</i></p> <p><i>Assess whether the measurement / determination method is in line with the registered monitoring plan of the PDD and the applied methodology.</i></p>		<p>in the CER sheets for the calculation of emission removals.</p> <p><i>Verifier's action:</i></p> <p>The data sheets used for the measurement purpose are checked with the PDD, MR and CER sheets. Also the verification team had interviews with the JFMC members, UP forest department personal and field co-ordinators responsible for measurements</p> <p><i>Conclusion:</i></p> <p><i>The Species taken in CER sheets are as per the measurement data sheets</i></p> <p><i>However CAR B2 is raised</i></p>		
<p>b) Accuracy and QA/QC Procedure (VVS, §§ 394-400)</p> <p><i>In case of measured (or estimated) values, check whether the accuracy of equipment used for monitoring is controlled and calibrated in accordance with the monitoring plan or if significant inaccuracies occur; in this case, make sure that the most conservative assumptions theoretically possible have been made for calculating ERs.</i></p> <p><i>Describe whether all applicable QA/QC procedures are met. Assess further if the calibration of the monitoring equipment has been carried out in line with the latest EB guidance.</i></p> <p><i>Include calibration dates and information in validity of the installed monitoring equipment in the table in Annex 2.</i></p>	<p>/MR/ /CER /PDD/ /IM01/ /DS/ /vol/</p>	<p><i>Description:</i></p> <p>The 21 species are taken for emission removals calculations. The volume equations are sourced from forest survey of India volume equations book.</p> <p><i>Verifier's action:</i></p> <p>The MR CER sheets and volume equations are checked</p> <p><i>Conclusion:</i></p> <p>CAR B2 is raised</p>	CAR B2	OK

Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
<p>c) Correctness (VVS, §§ 389-393) <i>Determine whether the value given in the monitoring report is correct or determined in a conservative manner.</i> <i>In case of conservative approaches used in lieu of the monitoring as per registered MP detailed assessment of the conservativeness of the approach used should be given.</i></p> <p><i>In case of mistakes / deviations pl. provide details and descriptions of the CARs raised.</i></p>	<p>/MR/ /CER /PDD/ /IM01/ /DS/ /vol</p>	<p><input type="checkbox"/> Correct <input checked="" type="checkbox"/> Not correct (initial assessment)</p> <p><i>Description:</i> The name of the species and its volume equations are not consistent.</p> <p><i>Verifier's action:</i> The MR CER sheets and volume equations are checked</p> <p><i>Conclusion:</i> CAR B2 is raised.</p>	CAR B2	OK
C. Height of tree		H		
<p>a) Measurement / Determination method (VVS, §§ 389-393) <i>Describe how the monitoring parameter was measured / determined. Focus primarily on the original data level (ODL) but also describe the applied data aggregation trails (from ODL to data aggregation level zero (DAL0)).</i> <i>Check if relevant equipment has been exchanged and if in cases of failures / downtimes of standard equipment other measurement / determination methods have been used. Furthermore, verify the frequency of measurements as per the requirements.</i> <i>Assess whether the measurement / determination method is in line with the registered monitoring plan of the PDD and the applied methodology.</i></p>	<p>/IM01/ /PDD/ /DS/ /TRN/</p>	<p><i>Description:</i> The Height of all trees in the sample plot are measured using a graduated poles</p> <p><i>Verifier's action:</i> The graduated poles are checked and marked for decimetre. The sample trees are checked by the VT during site visit and compared them with the data sheets.</p> <p><i>Conclusion:</i> However CAR B1 is raised</p>	CAR B1	OK

Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
<p>b) Accuracy and QA/QC Procedure (VVS, §§ 394-400)</p> <p><i>In case of measured (or estimated) values, check whether the accuracy of equipment used for monitoring is controlled and calibrated in accordance with the monitoring plan or if significant inaccuracies occur; in this case, make sure that the most conservative assumptions theoretically possible have been made for calculating ERs.</i></p> <p><i>Describe whether all applicable QA/QC procedures are met. Assess further if the calibration of the monitoring equipment has been carried out in line with the latest EB guidance.</i></p> <p><i>Include calibration dates and information in validity of the installed monitoring equipment in the table in Annex 2.</i></p>	/INS/ /	<p><i>Description:</i></p> <p>The Measuring tapes used are purchased for individual JFMCs with various lengths at the time of monitoring</p> <p><i>Verifier's action:</i></p> <p>The Purchase records are checked and the graduated poles are checked by VT using a metallic tape for the graduations</p> <p><i>Conclusion:</i></p> <p>However CAR D3 is raised</p>	CAR D3	OK
<p>c) Correctness (VVS, §§ 389-393)</p> <p><i>Determine whether the value given in the monitoring report is correct or determined in a conservative manner.</i></p> <p><i>In case of conservative approaches used in lieu of the monitoring as per registered MP detailed assessment of the conservativeness of the approach used should be given.</i></p> <p><i>In case of mistakes / deviations pl. provide details and descriptions of the CARs raised.</i></p>	/IM01/ /CER /DS/	<p><input checked="" type="checkbox"/> Correct <input type="checkbox"/> Not correct (initial assessment)</p> <p><i>Description:</i></p> <p>The height of the individual trees of each sample plot is mentioned in the CER sheets</p> <p><i>Verifier's action:</i></p> <p>The values of height of the trees mentioned in the CER sheets are checked with the respective data sheets for sample. Also during the site visit the VT measured the heights of the samples trees and cross checked the same with Data sheets and CER Sheets.</p> <p>Also observed the measuring techniques by the field level representatives of the PP as per the SOP.</p> <p><i>Conclusion:</i></p> <p>Thus it is concluded that the height of the trees taken for emission removal calculation is correct.</p>	OK	OK

Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
D. Diameter at breast height of tree		DBH		
<p>a) Measurement / Determination method (VVS, §§ 389-393) Describe how the monitoring parameter was measured / determined. Focus primarily on the original data level (ODL) but also describe the applied data aggregation trails (from ODL to data aggregation level zero (DAL0)). Check if relevant equipment has been exchanged and if in cases of failures / downtimes of standard equipment other measurement / determination methods have been used. Furthermore, verify the frequency of measurements as per the requirements. Assess whether the measurement / determination method is in line with the registered monitoring plan of the PDD and the applied methodology.</p>	/IM01/ /PDD/ /DS/ /TRN/	<p><i>Description:</i> The girths at breast height of tree height of all trees in the sample plot are measured using a measuring tape. Poles with 1.37 m height is used to mark the measuring point, and then DBH is calculated by dividing GBH by the factor 22/7</p> <p><i>Verifier's action:</i> The measurement techniques are checked and the sample trees are checked by the VT during site visit and compared them with the data sheets.</p> <p><i>Conclusion:</i> However CAR D1 (point 3) is raised</p>	CAR D1	OK
<p>b) Accuracy and QA/QC Procedure (VVS, §§ 394-400) In case of measured (or estimated) values, check whether the accuracy of equipment used for monitoring is controlled and calibrated in accordance with the monitoring plan or if significant inaccuracies occur; in this case, make sure that the most conservative assumptions theoretically possible have been made for calculating ERs. Describe whether all applicable QA/QC procedures are met. Assess further if the calibration of the monitoring equipment has been carried out in line with the latest EB guidance. Include calibration dates and information in validity of the installed monitoring equipment in the table in Annex 2.</p>	/INS/	<p><i>Description:</i> The Measuring tapes used for measurements are purchased for individual JFMCs with various lengths at the time of monitoring</p> <p><i>Verifier's action:</i> The Purchase records are checked by VT. The tape is only used to measure the girth of the tree for the particular sample plot and the same is checked along with a metallic tape. Also the readings are rounded down to the nearest 0.5 cm.</p> <p><i>Conclusion:</i> However CAR D3 is raised</p>	CAR D3	OK

Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
<p>c) Correctness (VVS, §§ 389-393) Determine whether the value given in the monitoring report is correct or determined in a conservative manner. In case of conservative approaches used in lieu of the monitoring as per registered MP detailed assessment of the conservativeness of the approach used should be given. In case of mistakes / deviations pl. provide details and descriptions of the CARs raised.</p>	<p>/IM01/ /CER /DS/</p>	<p><input type="checkbox"/> Correct <input checked="" type="checkbox"/> Not correct (initial assessment)</p> <p><i>Description:</i> The girth at breast height measured and DBH is calculated from GBH</p> <p><i>Verifier's action:</i> The values of GBH of the trees mentioned in the CER sheets are checked with the respective data sheets for sample. Also during the site visit the VT measured the GBH of the samples trees and its conversion, are cross checked the same with data sheets and CER Sheets.</p> <p>Also observed the measuring techniques by the field level representatives of the PP as per the SOP.</p> <p><i>Conclusion:</i> However the GBH and DBH calculations are wrong for some trees in the data base and CAR D1 is raised</p>	<p>CAR D1</p>	<p>OK</p>

Appendix 6. Calibration dates and validity of installed monitoring equipment

Table A-6: Periodic Verification Checklist – Calibration details

Monitoring equipment	Related monitoring parameter as per applicable registered monitoring plan	Serial number	Type	Accuracy or accuracy class	Previous calibration (last calibration before start of this monitoring period)	Calibration date(s) during this monitoring period	Validity of calibration(s)	Delay in calibration: yes/no	Period of delayed calibration
GPS Meter	Area of the stratum -Ai	Various	GRAMIN Make eTrex and GRAMIN Make GPSMAP 76CSx	Magnetic typ Self Calibrating			NA	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes	From: To:
Measuring Tape	Diameter at breast height - DBH	Various	Standard tapes	Standard – New tapes			NA	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes	From: To:
Graduted Poles	Hieght of the tree -H	Various	Standard tapes	Standard – New tapes			NA	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes	From: To:

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Document information

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