**Verification and certification report form for CDM project activities**

**(Version 02.1)**

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

| VERICATION AND CERTIFICATION REPORT | |
|---|---|
| **Title and UNFCCC reference number of the project activity** | Small scale Allahabad JFM A/R CDM Project on degraded lands in Allahabad Forest Division, Uttar Pradesh, India. UNFCCC ID: 10181<br>TN P-No. : 8113824800 -16/170 |
| **Version number of the verification and certification report** | 3.0 |
| **Completion date of the verification and certification report** | 29/10/2018 |
| **Monitoring period number and duration of this monitoring period** | MP 1,<br>01/01/2012 to 06/06/2016 (both days included) |
| **Version number of monitoring report to which this report applies** | 7.0 |
| **Crediting period of the project activity corresponding to this monitoring period** | Renewal Crediting period, 01/01/2012 to 31/12/2031 (including both days), 20 years |
| **Project participant(s)** | Divisional Forest Officer, Allahabad Forest Division, Uttar Pradesh |
| **Host Party** | India |
| **Applied methodologies and standardized baselines** | CDM Methodology: AR-AMS0007: "Afforestation and reforestation project activities implemented on lands other than wetlands", Version 03.0 |
| **Mandatory sectoral scopes linked to the applied methodologies** | Scope: 14 (Afforestation and reforestation) |
| **Conditional sectoral scope(s) linked to the applied methodologies** | NA |
| **Estimated GHG emission reductions or net anthropogenic GHG removals for this monitoring period in the registered PDD** | 10,259 t $CO_{2e}$ |
| **Certified GHG emission reductions or net anthropogenic GHG removals for this monitoring period** | 9,157 t $CO_{2e}$ |
| **Name and UNFCCC reference number of the DOE** | TÜV NORD CERT GmbH (E022) |

| | |
|---|---|
| **Name, position and signature of the approver of the verification and certification report** |  <br>Rainer Winter<br>Final Approver |

## SECTION A. Executive summary

Divisional Forest Officer, Allahabad Forest Division, Uttar Pradesh has commissioned the TÜV NORD JI/CDM Certification Program to carry out the first periodic verification of the project:

"Small scale Allahabad JFM A/R CDM Project on degraded lands in Allahabad 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: | Allahabad Forest Division, Uttar Pradesh |
| Project location address: | Communities: Villages represented by the following Joint Forest Management Committees (JFMCs):<br>1. Gauraiya Kala<br>2. Mudpela<br>3. Baddiha<br>4. Kharka Dabar<br>5. Sukath<br>6. Dari<br>7. Unchdiha<br>8. Gaderiya<br>9. Sikikala<br>10. Lakhnauti<br>11. Madanpur |
| 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 project area is planted with 36 tree species namely Acacia auriculiformis, *Acacia catechu, Acacia leucophloea, Acacia mangium. Acacia nilotica, Acacia sp, Aegle marmelos, Ailanthus excels, Albizia amara, Albizia procera, Azadirachta indica, Bombax ceiba, Butea monosperma, Cassia fistula, Cassia siamea, Cordia dichotoma, Dalbergia sissoo, Diospyros melanoxylon, Eucalyptus hybrid, Flacourtia indica, Haplophragma adenophyllum, Hardwickia binate, Holarrhena antidysenterica, Holoptelea integrifolia, Madhuca indica, Mangifera indica, Melia azedarach, Phyllanthus emblica, Pithecellobium dulce, Pongamia pinnata, Streblus asper, Tamarindus indica, Tectona grandis, Terminalia arjuna, Ziziphus mauritiana and Zizyphus xylopyrus*

However the following 26 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 mangium, Acacia nilotica, Ailanthus excelsa, Albizia amara, Albizia procera, Azadirachta indica, Butea monosperma, Cassia fistula, Cassia siamea, Cordia dichotoma, Dalbergia sissoo, Diospyros melanoxylon, Flacourtia indica, Haplophragama adenophyllum, Hardwickia binata, Holarrhena antidysenterica, Holoptelea integrifolia, Melia azedarach, Phyllanthus emblica, Pithecellobium dulce, Pongamia pinnata, Streblus asper, Tectona grandis* and *Ziziphus xylopyrus*.

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: 9,157 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 | | | |
| 4 | External Technical Expert | OR | Hari Prasath | CN | ETE | x | x | 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 | ETE | Kochaniewicz | Grzegorz | ETE for TNC |
| 2 | Approver | IR | Winter | Rainer | TÜV 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 |
|---|---|---|
| ☐ | **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];** |
| ☐ | **1 %** | **Emission reductions or removals for registered CDM project activities achieving a total emission reduction or removal of between 300,000 and 500,000 tonnes of carbon dioxide equivalent per year;** |
| ☐ | **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;** |
| ☒ | **5 %** | **Emission reductions or removals for registered small-scale CDM project activities other than registered CDM project activities covered under next category below;** |
| ☐ | **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.

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

| 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*<br>*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*<br>*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 untrained persons working* | *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.* |
| 4. | *Omissions and misstatements in data transfer from hand written notes into digital Excel ER spread sheet* | *Medium* | *Ineffective quality control of data transfer due to unclear QA/QC procedure* | *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.* |

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* | *Correc-ted* | *Remaining verification risk* |
|---|---|---|---|---|---|
| *DBH,* | *ASP* | ☒ | CAR D1 | ☒ | *Not material* |
| *H* | *ASP* | ☒ | CAR B1<br>CAR D1 | ☒ | *Not material* |
| *Area of the stratum and Area of Sample plot* | *ASP* | ☒ | CAR A1 | ☒ | *Not material* |
| *Aggregate* | | | | | *Materiality threshold not exceeded* |

**) 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/document 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/,
- 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<br>Counting of trees/ GBH / Height of the trees in sample plots | Sikikala and Madanpur JFMC | 30/12/2016<br>02/01/2017 | G Ezhilarasu<br>C N Hari Prasath |
| 2 | Checking the GPS pillar readings of some sample plots<br><br>GPS points of JFMC area, pillars<br>Tree Species<br><br>Forest inventories and techniques | Sikikala and Madanpur JFMC | 30/12/2016<br>02/01/2017 | G Ezhilarasu<br>C N Hari Prasath |
| 3 | Best forest practices<br><br>Status of the project Implementation<br>Species Selection<br><br>CER calculations and Monitoring Report Desk Review findings | Allahabad | 01/01/2017 | G Ezhilarasu<br>C N Hariprasath |
| 4 | Document Review<br><br>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. | Khare | M K | UPFD, DFO Allahabad | 30/12/2016 & 02/01/2017 | Project Implementation<br>Area of the project<br>Monitoring<br>Funding<br>Overall support | G Ezhilarasu<br>C N Hari Prasath |
| 2 | Yadav | K. S | UPFD, SDO Allahabad. | 30/12/2016 & 02/01/2017 | Plantation Schedules, sample plots marking, Monitoring and training Assistance<br>Records keeping | G Ezhilarasu<br>C N Hari Prasath |
| 5 | Narayan | Raj | AFMU Allahabad | 02/01/2017 | Data Entry and QA & QC | G Ezhilarasu<br>C N Hari Prasath |
| 6 | JFMC President, Members and villagers | | JFMC Sikikala | 30/12/2016 | Species selection, Level of involvement in raising the plantation, JFMC meetings and agenda<br>Locational Guidance<br>Forest protection measures, manual work contribution,<br>JFMC Meetings | G Ezhilarasu<br>C N Hari Prasath |
| 7 | JFMC President, Members and villagers | | JFMC Madanpur | 02/01/2017 | | G Ezhilarasu<br>C N Hari Prasath |
| 8 | Tyagi | Aparna | TERI Research Associate | 01/01/2017 | Monitoring Report<br>CER Calculations<br>Desk Review | G Ezhilarasu<br>C N Hari Prasath |
| | | | | 30/12/2016<br>02/01/2017 | Monitoring Aspects<br>Trainings to the field enumerators<br>Sample plot markings-Randomness Selection | G Ezhilarasu<br>C N Hari Prasath |
| 9 | A Lele | Yathish | | 09/01/2017<br>10/01/2017 | Data Transfers<br>ER estimations<br>MR Issues<br>Site findings | G Ezhilarasu |
| 10 | Arif Wali | Syed | TERI Project Convenor | 01/01/2017 | Monitoring Report<br>CER Calculations<br>Desk Review | G Ezhilarasu<br>C N Hariprasath |

| | | | | | | |
|---|---|---|---|---|---|---|
| 11 | Negi | B S | TERI Field Co-ordinator | 30-12-2016 & 02-01-2017 | Field level monitoring GPS measurements, Baseline studies, Changes in stocks On field measurements Training effectiveness Data Sheets | G Ezhilarasu C N Hari Prasath |
| 12 | Adhikari | B. Singh | TERI Research Assistant | | | |

## D.4. Sampling approach

### D.4.1 Sampling during monitoring

| | |
|---|---|
| ☐ | No sampling approach has been used by the PP to determine the monitored parameters |
| ☒ | A sampling approach has been taken for the following monitored parameter(s): |

| Parameter | Sampling approach [1)] | Sampling Type [2)] | Population | Sample Size |
|---|---|---|---|---|
| *Height of the Tree (H)* | StRS | PS | 10133 | 88 |
| *Diameter at Breast Height (DBH)* | StRS | PS | 10133 | 88 |

[1)] *Sampling Approaches:*

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

[2)] *Sampling Types:*

*PS: Parameter Sampling*

### D.4.2 Sampling approaches during verification

| | |
|---|---|
| ☐ | No sampling approach has been used by the VT to verify the monitored parameters |
| ☒ | A sampling approach has been applied by the VT for the following monitored parameter(s): |

| Parameter | Sampling approach [1)] | Sampling Type [2)] | Population | Sample Size |
|---|---|---|---|---|
| *Diameter at Breast Height (DBH) and Height of the Tree (H) within the sample plots* | SiRS | AS | 88 | 16 |

[1] *Sampling Approaches:*

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

[2] *Sampling Types:*

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

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

The following sampling approach as per IAF Guidance on the Application of ISO/IEC Guide 66 - G.5.3.12. : x= square root (y) Where x=sample and y=sample group is used. So the minimum required is 10 but verification team visited 16 sample plots. To minimise the travel and prevalent climatic conditions (fog) the verification team selected two JFMC and visited the sample plots. The area of the sample plot is checked along with the GPS pillar readings.
Also in each JFMC the diameter and height of the all the trees are checked in one sample plots of each JFMC and in other sample plots the number of trees were counted and randomly picked some trees and crossed checked the height and DBH with the provided data.

Also the verification team crossed randomly selected a sample plot of 5mX 5m within the JFMCS and counted the trees and measured the Height and GBH and found that the average number of trees, Average height of the trees and average GBH of trees are well within the average values provided by the PP.
Thus sampling approach is conducted according with “Guidelines for Sampling and Surveys for CDM Project Activities and Programme Activities” and the “Standard for Sampling and Surveys for CDM Project Activities and Programme Activities”. As the population is relatively homogeneous with respect to the object of the sampling effort, simple random sampling method with accepted sampling is adopted for verification of the parameters

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

| Areas of verification findings | No. of CL | No. of CAR | No. of FAR |
|---|---|---|---|
| Compliance of the monitoring report with the monitoring report form | 1 | - | - |
| Compliance of the project implementation and operation with the registered PDD | - | 2 | - |
| Post-registration changes | - | 1 | - |
| Compliance of the registered monitoring plan with the methodologies including applicable tools and standardized baselines | - | - | - |
| Compliance of monitoring activities with the registered monitoring plan | 1 | 2 | - |
| Compliance with the calibration frequency requirements for measuring instruments | - | 1 | - |
| Assessment of data and calculation of emission reductions or net removals | - | 1 | - |
| Assessment of reported sustainable development co-benefits | - | - | - |
| Global stakeholder consultation | - | - | - |
| Others (please specify) | 1 | - | - |
| **Total** | 3 | 7 | - |

## SECTION E. Verification findings

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

| | | |
|---|---|---|
| **Means of verification** | A draft monitoring report was submitted to the verification team by the project participants. The DOE has made this report publicly available prior to the start of the verification activities. No comments were received.<br>By means of the UNFCCC website it has been checked whether the latest applicable MR template CDM-MR-FORM has been used.<br>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.<br>The following sources of information have been used in this context:<br>• /MR/<br>• /MRT/<br>• /unfccc/ | |
| **Findings** | ☐ | The latest reporting template CDM-MR-FORM as listed on the UNFCCC website has been used for the Monitoring Report to be uploaded. |
| | ☐ | The latest instructions for filling out the MR have been followed. No adverse finding has been identified in the course of this verification. |
| | ☒ | The respective requirements have widely been complied with; however; the following issues needed to be addressed in this context: |
| | | CL A1 is raised |
| | | |
| | | |
| **Conclusion** | ☐ | 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. |
| | ☒ | 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 verifications

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:

| | |
|---|---|
| ☒ | There were no open issues which have been addressed in the latest version of the validation report. |
| ☐ | All open issues from the validation have been appropriately addressed in the context of previous verifications. |
| ☐ | 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) |
| ☐ | 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:

| | |
|---|---|
| ☒ | N/A – as this is the first monitoring period for this CDM project activity. |

| | |
|---|---|
| ☐ | There were no open issues which have been addressed in the previous verification report |
| ☐ | 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) |
| ☐ | 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 and operation with the registered project design document

| | | |
|---|---|---|
| **Means of verification** | 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.<br>Further is 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.<br>Interviews with operational personnel have been carried out, QMS records, maintenance records; instrument specifications were checked in this context.<br>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.<br>Further it has been checked whether any observed deviations from the registered project design have been correctly addressed as PRCs.<br>The following sources of information have been used in this context:<br>• /PDD/<br>• /MR/<br>• /VVS/<br>• /XLS/<br>• /unfccc/ | |
| **Findings** | ☐ | 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. |
| | ☐ | 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):<br>- N/A |
| | ☒ | In this context the following CARs, CLs have been raised:<br>CAR A1 |
| | *In case of phased implementation:* | |
| | ☐ | N/A |
| | ☐ | The phased implementation has correctly and in sufficient detail been described in the latest version of the PDD. |
| | ☐ | 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. |
| | ☐ | The project description in the PDD/MR is not deemed sufficient. The detailed implementation timeline is as follows:<br>N/A |
| **Conclusion** | ☐ | 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. |

| | | |
|---|---|---|
| | ☒ | 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.<br><br>The project is implemented on degraded forest land under the control of the state government and DFO Allahabad division is appointed and responsible for the management of the entire forest land of Allahabad 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 506.63 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.<br><br>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.<br><br>The land isdegarded and come under dry deciduous forest as evidenced from the registered PDD. Also the wet lands in the host country as per list of Ramsar sites is checked from the below web link https://en.wikipedia.org/wiki/List_of_Ramsar_sites_in_India and found that the wetlands in the state of Uttarpradesh is in stretch of Brijghat to Narora which is more than 500 kms from the project site.<br>Also the forest map of the country is checked and the Area under the project activity falls under tropical dry deciduous. Apart from that the land is under the control of state forest department as per the land records<br><br>Thus the project area is developed as forested land from degraded land and not in wetlands and as such the applicability conditions as per paragraph 3 and 4 of the applied methodology is satisfied. | |

## 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 applied methodologies or applied standardized baselines

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.

| | |
|---|---|
| ☒ | 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. |
| ☐ | The following TDfrMP or TDfMM have been approved or are under approval by the UNFCCC |

| | | | |
|---|---|---|---|
| | 1 | Title | |
| | | Status | ☐ under approval; ☐ approved (approval No.: ) |
| | | Appr.date | |
| | | Ref. No. | |
| | 2 | Title | |
| | | Status | ☐ under approval; ☐ approved (approval No.: ) |
| | | Appr.date | |
| | | Ref.No. | |
| ☐ | 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 | | |
| ☐ | 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: | |
| ☒ | The following TDfrMP or TDfMM for which appendix 1 of the PS is applicable have been applied: | | |
| | 1 | Issue: | As per the registered PDD the first Monitoring has to take place after January 2017, i.e., after the five years from the start of the project activity. However the monitoring happened during May June 2016.<br><br>Assessment: The PP decided to have the monitoring pre-ponned from 2017 to mid of 2016 because of the better rains happened in the previous years compared to 2013-2014 2015-16 is better year, as observed from the http://www.imd.gov.in, anticipating involvement of communities in agricultural activities and also the winter weather conditions with shorter duration of days.<br><br>This change will not alter the project implementation and also it will not lead to increase in Emission removals.<br><br>The verification team's assessment report on the above post registration change is submitted along with this report |
| | 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.

| | | | |
|---|---|---|---|
| ☐ | During the verification of the current MP no need for corrections has been identified. | | |
| ☒ | The following corrections have been applied: | | |
| | 1 | Issue: | The spelling mistakes are corrected and the same is mentioned in the MR section B.2.2 |
| | 2 | Issue: | The notation for number of baseline trees mentioned in section B.8.1 of the registered PDD is $B_{Trees}$ which is typo error and the same is changes as $N_{BSL\ Trees}$ which is used in the MR is mention in section B.2.2 |
| | The PDD has been revised accordingly: Revised PDD not required for A/R CDM projects/PRC PDD/<br>(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. |
| | ☐ 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.<br>☒ 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. Change to the start date of the crediting period of the project activity

| | |
|---|---|
| ☒ | N/A - as this is not the first verification within the crediting period |
| ☐ | The PPs do not intend to change the start date of the crediting period. |
| ☐ | 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. |
| ☐ | 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. |
| ☐ | 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

| | |
|---|---|
| ☒ | N/A - as this monitoring plan was part of the registered PDD |
| ☐ | 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. |
| ☐ | 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, or permanent deviation of monitoring from the applied methodologies, standardized baselines or other applied standards or tools

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.

| | | | |
|---|---|---|---|
| ☒ | No PCfrMP, PCfMM or PCfSB have been submitted to the UNFCCC prior to the current monitoring period | | |
| ☐ | The following PCfrMP, PCfMM or PCfSB have been approved or are under approval by the UNFCCC | | |
| | 1 | Title | |
| | | Status | ☐ under approval; ☐ approved |
| | | Appr.date | |
| | | Ref. No. | |
| | 2 | Title | |
| | | Status | ☐ under approval; ☐ approved |
| | | Appr.date | |
| | | Ref.No. | |
| ☐ | 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 | | |
| ☐ | 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: | |
| ☒ | The following PCfrMP, PCfMM or PCfSB for which appendix 1 of the PS is applicable have been applied: | | |
| | 1 | Issue: | 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.<br><br>Assessment. 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://fennerschool-associated.anu.edu.au/mensuration/height.htm. Thus the usage of graduated poles instead of Ravi altimeter is accepted for tree height measurements.<br><br>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.<br><br>The verification team's assessment report on the above post registration change is submitted along with this report |
| | 2 | Issue: | ISSUE: The parameter shrub crown cover $CC_{SHRUBi}$ was not included as the monitoring parameter in the registered PDD. The PP included the same as permanent change in the monitoring plan.<br><br>In this monitoring the crown cover of shrub biomass is insingnificant and it is considered as zero and the shrub biomass is estimated as zero. However the shrub crown cover $CC_{SHRUBi}$ will be monitored from the next verification, and shrub biomass will be calculated as per equation 26 and 27 of AR tool 14. |

| | | | |
|---|---|---|---|
| | | | Assessment : The parameter shrub crown cover $CC_{SHRUBi}$ was not included as the monitoring parameter in the registered PDD and the values of the monitoried parameter was insingnificant during this monitoring period. Accordingly the PP considered this parameter as 0 and the shrub biomass is also taken a nil for this verification. But the same will be monitored for the next verification and they intend to use the ocular method as per procedures prescribed under national forest inventory. The same is presented in the MR under Section D,2.<br><br>The calculation procedure for estimating Shrub biomass is per the equation 26 and 27 of the AR tool 14. The same is presented in section E.2 of the MR and the default values are taken as the registered PDD and as per AR tool 14.<br><br>Hence this change, the inclusion of the parameter in monitoring is accepted as it will not deviate from the methodological requirements. |

### E.4.6. Changes to the project design

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.

| | | | |
|---|---|---|---|
| ☒ | No CoPD has been submitted to the UNFCCC prior to the current monitoring period | | |
| ☐ | The following CoPD have been approved or are under approval by the UNFCCC | | |
| | 1 | Title | |
| | | Status | ☐ under approval; ☐ approved |
| | | Appr.date | |
| | | Ref. No. | |
| | 2 | Title | |
| | | Status | ☐ under approval; ☐ approved |
| | | Appr.date | |
| | | Ref.No. | |
| ☐ | 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 | | |
| ☐ | 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: | |
| ☐ | The following CoPD for which appendix 1 of the PS is applicable have been applied: | | |
| | 1 | Issue: | |
| | 2 | Issue: | |

### E.4.7. Changes specific to afforestation and reforestation project activities

| | |
|---|---|
| ☐ | N/A - as this monitoring plan was part of the registered PDD |
| ☒ | The following changes for which appendix 1 of the PS is applicable have been applied: |

Issue 1

The volume equations of some species have been changed as mentioned below

| S.No | Species name | Old Formula | New Formula |
|---|---|---|---|
| 1 | *Butea monosperma* | $(2.95525* D - 0.24276)^2$ | 0.00855 + 0.4432*D^2 + 0.28813*D^2*H |
| 2 | *Acacia leucophlaea* | $(-0.00142+2.61911*D-0.54703*D^{0.5})^2$ | 0.00855 + 0.4432*D^2 + 0.28813*D^2*H |
| 3 | *Cassia siamea* | 0.05159-0.53331D+ 3.46016 D2 + 10.18473 D3 | 0.00855 + 0.4432*D^2 + 0.28813*D^2*H |
| 4 | *Tectona grandis* | 0.006+2.661999*D^2+0.280538*D^2*H | 0.006+2.661999*D^2+0.2805 *D^2*H |
| 5 | *Acacia catechu* | 0.00855 + 0.4432*D^2 + 0.28813*D^2*H | (0.00817/(D^2*H)+0.29886)*D 2*H |
| 6 | *Butea monosperma* | $(2.95525* D - 0.24276)^2$ | 0.00855 + 0.4432*D^2 + 0.28813*D^2*H |
| 7 | *Acacia catechu* | 0.00855 + 0.4432*D^2 + 0.28813*D^2*H | (0.00817/(D^2*H)+0.29886)*D 2*H |
| 8 | *Diospyros melanoxylon* | 0.00855 + 0.4432*D^2 + 0.28813*D^2*H | 0.042+0.246*D^2*H |

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.

In the registered PDD the main species with more economic benefits were exhaustively listed and some minor species are not listed. However in the project area 36 species were planted and the general volume equations of the rest of the species are taken for those species where volume equations were not mentioned in the registered PDD or for those species which was not mentioned in the PDD.

The volume equations for all the species are sourced from the Indian State of Forest Report, 2011 and Forest Survey of India-Volume Equations for forests of India, Nepal and Bhutan (1996). (National forestry inventory.

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.
Also the equations in Registered PDD were also taken from the same source but those equations are applicable only for certain range.
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 Emission removals calculated.

The Wood densities are revised and corrected as per the FAO data and where wood density values are not available for particular species, 0.67 is taken as default value as per the registered PDD. This is in line EB 66 Annex 24 para (p). Hence acceptable.

The verification team's assessment report on the above post registration change is submitted along with this report.

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

| | | | | |
|---|---|---|---|---|
| **Means of verification** | By means of comparison of the MR with<br>(i) the applied CDM methodology<br>(ii) all applicable CDM Meth tools and<br>(iii) if applicable, a standardized baseline<br>The verification team has checked whether the MP is in compliance with the MP related requirements of the applied methodology/tools/SB.<br>The following sources of information have been used in this context:<br>• /MR/<br>• /METH/<br>• /TOOL/<br>• /unfccc/ | | | |
| **Findings** | ☒ | 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: | | |
| | | 1 | Title (of the tool) | |
| | | | Version | |
| | | | MP compliance | ☐ full compliance<br>☐ findings have been raised<br>☐ N/A (for MP) |
| | | 2 | Title (of the tool) | [Name_SB] |
| | | | Version | [Version_SB] |
| | | | MP compliance | ☐ full compliance<br>☐ findings have been raised<br>☐ N/A |
| | ☐ | The breakdown of MP accordance of the applicable SB is as follows: | | |
| | | 1 | Title (of the SB) | Name of SB |
| | | | Version | |
| | | | MP compliance | |
| | ☐ | In this context the following CARs, CLs, FARs have been raised: | | |
| | | | | |
| **Conclusion** | ☒ | No CARs/CLs/FARs has been raised in this context. No correction was required. The project is in line with the respective requirements. | | |
| | ☐ | 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** | 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.<br>Further it has been checked whether the GWP for the respective period have been correctly applied.<br>The following sources of information have been used in this context:<br>• /MR/<br>• /XLS/<br>• /PDD/ |

| | | |
|---|---|---|
| | • /PS/<br>• /VVS/<br>• /unfccc/ | |
| **Findings** | ☐ | 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. |
| | ☐ | The following deviations from the parameters fixed ex-ante or at renewal of crediting period have been identified in the course of this verification:<br>- N/A |
| | ☒ | In this context the following CARs, CLs, FARs have been raised:<br>CAR D1 and CAR D2 |
| **Conclusion** | ☐ | No CARs/CLs/FARs have been raised in this context. No correction was required. The project is in line with the respective requirements. |
| | ☒ | 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<br>(i) appropriateness of the applied measurement / determination method,<br>(ii) the correctness of the values applied for ER calculation,<br>(iii) the accuracy, and applied QA/QC measures.<br>The results as well as the verification procedure are described parameter-wise in the project specific verification checklist (Appendix 5). | |
| **Findings** | CAR D1 | |
| **Conclusion** | ☐ | No CARs/CLs/FARs have been raised in this context. No correction was required. The project is in line with the respective requirements. |
| | ☒ | 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.<br><br>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.<br><br>The crown cover of shrubs was not included in the registered monitoring plan and but for this monitoring it is considered as zero due to its insignificance but the same is taken as permanent change in the monitoring plan and will be monitored in the next verification. | |

### 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.<br>Further it has been checked whether the PPs have correctly applied the implemented sampling plan including<br>(i) description of the implemented sampling design |

<table>
<tr><td></td><td colspan="4">(ii) collected data<br>(iii) analysis of collected data<br>(iv) Demonstration on whether the required confidence/precision has been met.<br>The following sources of information have been used in this context:<br>• /MR/<br>• /XLS/<br>• /PDD/.</td></tr>
<tr><td rowspan="6">Findings</td><td>☐</td><td colspan="3">The PPs have not applied sampling approaches for the parameters monitored.</td></tr>
<tr><td rowspan="5">☒</td><td colspan="3">The PPs have applied sampling approaches for the following parameters monitored.</td></tr>
<tr><td rowspan="3">1</td><td>Parameter:</td><td>DBH & H</td></tr>
<tr><td>Name:</td><td>Diameter at breast Height and Height of the trees.</td></tr>
<tr><td>Description on how the sampling efforts and survey comply with the validated sampling plan:</td><td>As per the registered PDD, 76 samples are required for monitoring. But the PP laid down 88 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.<br>This is in line with the sampling requirements of the validated PDD.</td></tr>
<tr><td rowspan="3">2</td><td>Parameter:</td><td></td></tr>
<tr><td>Name:</td><td>Tree Species</td></tr>
<tr><td>Description on how the sampling efforts and survey comply with the validated sampling plan:</td><td>As per the registered PDD, 76 samples are required for monitoring. But the PP laid down 88 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, 26 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.</td></tr>
<tr><td>☒</td><td colspan="3">In this context the following CARs, CLs, FARs have been raised:<br>CAR B2 and CL D1, CAR D2,</td></tr>
<tr><td rowspan="3">Conclusion</td><td>☐</td><td colspan="3">No CARs/CLs/FARs have been raised in this context. No correction was required. The project is in line with the respective requirements.</td></tr>
<tr><td>☒</td><td colspan="3">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.</td></tr>
<tr><td colspan="4">The number of plots taken is 88, which is 12 more than the required 76 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 is done by spraying grains over a map picture in a paper and the grain location on the map is located taken as the centre point, and thus the method of selecting the random sample is accepted. The same is explained clearly in the revised MR.</td></tr>
</table>

| | |
|---|---|
| | 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 is nature. Hence further stratification is not required in this monitoring period. |

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

| | | |
|---|---|---|
| **Means of verification** | 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.<br>The results as well as the verification procedure are described equipment-wise in the project specific verification checklist (Appendix 6).<br>The following sources of information have been used in this context:<br>• /MR/<br>• /XLS/ | |
| **Findings** | ☒ | 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. |
| | ☐ | 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.<br>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.<br>For details please refer to appendix 6 |
| | ☒ | In this context the following CARs, CLs, FARs have been raised: |
| | | CAR D3 |
| **Conclusion** | ☐ | No CARs/CLs/FARs have been raised in this context. No correction was required. The project is in line with the respective requirements. |
| | ☒ | 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. |
| | 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.<br>The GPS meter used were new GPS meters, The GPS meters are self-calibrating. Hence calibration is not applicable.<br>The pillar markings for the sample plots are also marked using new GPS meters<br>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,<br><br>To ensure conservativeness the GBH is rounded down to nearest 0.5 cm and height is rounded down to the nearest 0.5 m.<br><br>Hence the calibration is not applicable for the instruments used in this monitoring period | |

## 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** | During the verification the calculation of baseline GHG emissions has been checked. In detail the following has been verified:<br>• *Transparency:* It has been checked whether the calculation of baseline emissions is fully traceable and, where used, the Excel calculation provides all calculation formulae.<br>• *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.<br>• *Correctness:* 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.<br>• *Completeness:* It has been checked whether all calculations are complete and without omissions.<br>The following sources of information have been used in this context:<br>• /MR/<br>• /XLS/. | |
| **Findings** | ☒ | The calculation of the baseline emissions was found to be fully compliant with the above stated principles.<br>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.<br>No errors, miscalculations, omissions, misstatements or incomplete information has been identified. |
| | ☐ | The verification team has identified mistakes in the baseline emissions calculation or the underlying calculation approaches. |
| | ☐ | In this context the following CARs, CLs, FARs have been raised: |
| | | - |
| **Conclusion** | ☒ | No CARs/CLs/FARs have been raised in this context. No correction was required. The project is in line with the respective requirements. |
| | ☐ | 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 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 baseline net GHG removals is accepted.. | |

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

| | |
|---|---|
| **Means of verification** | During the verification the calculation of project GHG emissions has been checked. In detail the following has been verified:<br>• Transparency: It has been checked whether the calculation of project emissions is fully traceable and, where used, the Excel calculation provides all calculation formulae.<br>• 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.<br>• 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.<br>• Completeness: It has been checked whether all calculations are complete and without omissions.<br>The following sources of information have been used in this context:<br>• /MR/<br>• /XLS/. | |
| **Findings** | ☐ | The calculation of the project emissions was found to be fully compliant with the above stated principles.<br>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.<br>No errors, miscalculations, omissions, misstatements or incomplete information have been identified. |
| | ☒ | The verification team has identified mistakes in the project emissions calculation or the underlying calculation approaches. |
| | ☒ | In this context the following CARs, CLs, FARs have been raised:<br>CAR B1, CAR D1 and CAR E1 |
| **Conclusion** | ☐ | No CARs/CLs/FARs have been raised in this context. No correction was required. The project is in line with the respective requirements. |
| | ☒ | 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.<br>The calculations procedures especially above ground biomass, below ground 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 5.73% as per the A/R Tool 14, discount factors are not required to be applied<br>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.<br>The following sources of information have been used in this context:<br>• /MR/<br>• /XLS/. | |
| **Findings** | ☒ | No leakage emissions were to be considered (LE = 0). |
| | ☐ | The calculation of the leakage emissions was found to be fully compliant with the above stated principles (see 8.1 and 8.2).<br>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. |
| | ☐ | The verification team has identified mistakes in the project emissions calculation or the underlying calculation approaches. |
| | ☐ | In this context the following CARs, CLs, FARs have been raised: |
| | | - |
| **Conclusion** | ☐ | No CARs/CLs/FARs have been raised in this context. No correction was required. The project is in line with the respective requirements. |
| | ☐ | 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<br>- Total baseline emissions,<br>- Total project emissions,<br>- Total leakage,<br>- Total emission removals.<br>It has been assessed whether the values are correct or need to be revised as a consequence of issues identified above. | |
| **Findings** | ☒ | Section E.4 of the MR includes in a summary table of the emission removals calculation. |
| | ☒ | The summary table specified the total baseline, project and leakage emissions as well as the total emission removals separately. |
| | ☐ | 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. |
| | ☒ | During the verification issues with impact on the ER calculation have been identified. |
| | ☒ | In this context the following CARs, CLs, FARs have been raised: |
| | | CAR D1 and CAR E1 |
| **Conclusion** | ☐ | No CARs/CLs/FARs have been raised in this context. No correction was required. The project is in line with the respective requirements. |
| | ☒ | 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.<br>It has further checked which of the below listed cases is applicable for the calculated ER of the current monitoring period. | |
| **Findings** | ☒ | *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. |
| | ☐ | *Case 2:* The ex-ante estimated value fits very good to the actually monitored value. No further justification is deemed required. |
| | ☐ | *Case 3:* The ex-ante estimated value was found to be proportionally lower than the ex-post determined value. |
| | ☐ | In this context the following CARs, CLs, FARs have been raised: |
| | | - |

| | | |
|---|---|---|
| **Conclusion** | ☒ | No CARs/CLs/FARs have been raised in this context. No correction was required. The project is in line with the respective requirements. |
| | ☐ | 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** | ☒ | 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). |
| | ☐ | *For case 3:* The PP has provided a related justification in the MR. The reasons for the increase are as follows: |
| | ☐ | In this context the following CARs, CLs, FARs have been raised: |
| | | - |
| **Conclusion** | ☒ | No CARs/CLs/FARs have been raised in this context. No correction was required. The project is in line with the respective requirements. |
| | ☐ | 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** | ☒ The MR in section E.7 includes a summary table of the ER breakdown<br>*a) ER up to 2012-12-31 and*<br>*b) ER from 2013-01-01 onwards*<br>☐ The breakdown of the ERs during the first commitment period and from 2013-01-01 onwards is as follows:<br>☐ The ER have completely been generated during the first commitment period<br>☐ The ERs have completely been generated from 2013-01-01 onwards,<br>☒ The ERs have partly been generated during the first commitment period and partly from 2013-01-01 onwards.<br>☒ The breakdown of the ERs is correct, considering the applicable guidance. | |
| **Conclusion** | ☒ | No CARs/CLs/FARs have been raised in this context. No correction was required. The project is in line with the respective requirements. |
| | ☐ | The raised CARs/CLs/FARs have been addressed appropriately. The PP has carried out the requested corrections. All respective findings |

| | **until 2012-12-31** [1)] | **from 2013-01-01** [1)] | **Sum** |
|---|---|---|---|
| Emission removals [$tCO_{2e}$] | - | 9,157 | 9,157 |

[1)] Both days included

| | | |
|---|---|---|
| | | 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. | |

### E.9. Assessment of reported sustainable development co-benefits

| | |
|---|---|
| **Means of verification** | Not Applicable |
| **Findings** | - |
| **Conclusion** | - |

### E.10. Global stakeholder consultation

| | |
|---|---|
| **Means of verification** | Not Applicable as no comments were received. |
| **Findings** | - |
| **Conclusion** | - |

## 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

Divisional Forest Officer, Allahabad Forest Division, Uttar Pradesh has commissioned the TÜV NORD JI/CDM Certification Program to carry out the 1st periodic verification of the project: "Small scale Allahabad JFM A/R CDM Project on degraded lands in Allahabad Forest Division, Uttar Pradesh, India",(UNFCCC no :10181) 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: 9,157 t $CO_{2e}$.

## SECTION H. Certification statement

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

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

UNFCCC-No. : 10181

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: 9,157 t $CO_{2e}$.

Coimbatore 29/10/2018

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

TÜV NORD Certification

**Statement of Competence**

Appointment and authorization according to the procedures of the TÜV NORD JI/CDM Certification Program

**Mr. Ezhilarasu G.**

| SCHEME | STATUS | VALID UNTIL |
|---|---|---|
| CDM | Senior Assessor (Validation, Verification) | 2020-02-06 |
| VCS / ISO 14064-2 | Senior Assessor | 2020-02-06 |

Authorization status for technical areas within sectoral scopes:

| CODE | TECHNICAL AREA |
|---|---|
| 1.2 | Renewables |
| 3.1 | Energy demand |
| 13.1 | Solid waste and wastewater |
| 13.2 | Manure |

130 – Rev. 5, Date: 2018-01-04

130_S01-VA060-F20_2018-01-04_rev5.doc S01-VA060-F20 rev3 / 2012-10-25

TÜV NORD Certification

**Statement of Competence**

Appointment and authorization according to the procedures of the TÜV NORD JI/CDM Certification Program

**Mr. Indrapal Parmar**

| 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

TÜV NORD Certification

**Statement of Competence**

Appointment and authorization according to the procedures of the TÜV NORD JI/CDM Certification Program

**Ms. Sudha Padmanabha**

Authorization status for technical areas within sectoral scopes:

| CODE | TECHNICAL AREA | TR SUBCATEGORIES |
|---|---|---|
| 14.1 | Forestry | |
| | | |
| | | |
| | | |
| | | |
| | | |

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

345_S01-VA060-F20_rev.1_2015-01-05.doc S01-VA060-F20 rev3 / 2012-10-25

TÜV NORD Certification

**Statement of Competence**

Appointment and authorization according to the procedures of the TÜV NORD JI/CDM Certification Program

**Mr. Hariprasath C N**

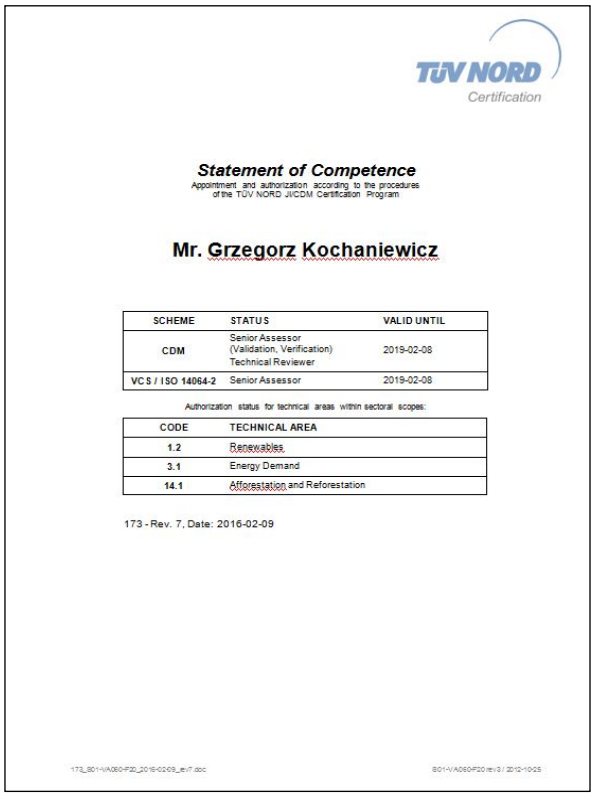
Authorization status for technical areas within sectoral scopes:

| CODE | TECHNICAL AREA |
|---|---|
| 14.1 | Afforestation and reforestation |

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

365_S01-VA060-F20_2016-12-20_rev0.doc S01-VA060-F20 rev3 / 2012-10-25

| | |
|---|---|



TÜV NORD Certification

**Statement of Competence**

Appointment and authorization according to the procedures of the TÜV NORD JI/CDM Certification Program

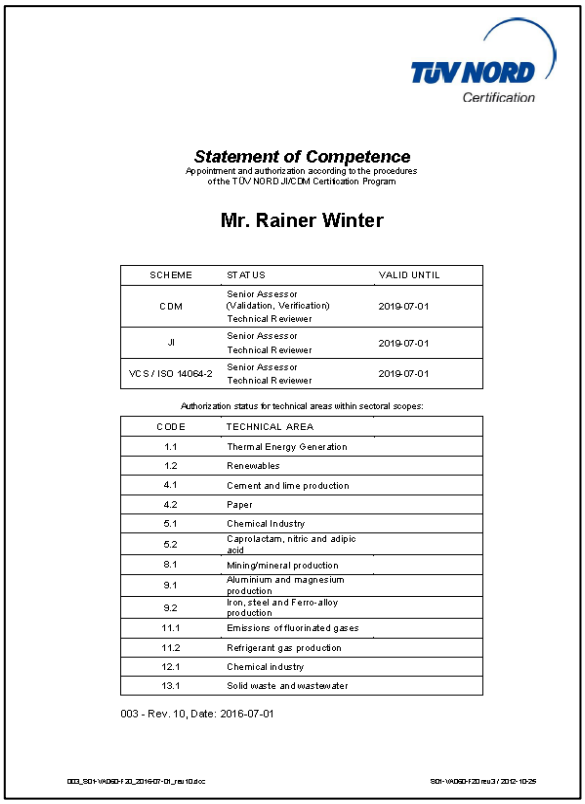
**Mr. Grzegorz Kochaniewicz**

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

Authorization status for technical areas within sectoral scopes:

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

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



TÜV NORD Certification

**Statement of Competence**

Appointment and authorization according to the procedures of the TÜV NORD JI/CDM Certification Program

**Mr. Rainer Winter**

| SCHEME | STATUS | VALID UNTIL |
|---|---|---|
| CDM | Senior Assessor (Validation, Verification) Technical Reviewer | 2019-07-01 |
| JI | Senior Assessor Technical Reviewer | 2019-07-01 |
| VCS / ISO 14064-2 | Senior Assessor Technical Reviewer | 2019-07-01 |

Authorization status for technical areas within sectoral scopes:

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

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

# Appendix 3. Documents reviewed or referenced

| No. | Author | Reference | Title | References to the document | Provider |
|---|---|---|---|---|---|
| 1 | UNFCCC | **/meth/** | AR-AMS0007 - Afforestation and reforestation project activities implemented on lands other than wetlands version 03.0 | https://cdm.unfccc.int/filestorage/2/D/8/2D8GSJ95T6AHQWZCRY3L7EI0U4PNKF/eb85_repan22.pdf?t=SmJ8bnM4bHd4fDAbI3w7V1yVxFJbELgCxfRr | 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<br>2. 2006 IPCC Guidelines for National Greenhouse Gas Inventories: work book | www.ipcc-nggip.iges.or.jp | Other |
| 4 | UNFCCC | **/KP/** | Kyoto Protocol (1997) | http://unfccc.int/kyoto_protocol/items/2830.php | Other |

| | | | | | |
|---|---|---|---|---|---|
| 5 | UNFCCC | **/MA/** | Decision 3/CMP. 1 (Marrakesh – Accords) | http://cdm.unfccc.int/Reference/COPMOP/index.html | Other |
| 6 | PP | **/MR/** | Monitoring Report for CDM project: "Small scale Allahabad JFM A/R CDM Project on degraded lands in Allahabad Forest Division, Uttar Pradesh, India" version 01, dated 20/11//2016<br><br>Monitoring Report for CDM project: "Small scale Allahabad JFM A/R CDM Project on degraded lands in Allahabad Forest Division, Uttar Pradesh, India" version 02, dated 01/06/2017<br><br>Monitoring Report for CDM project: "Small scale Allahabad JFM A/R CDM Project on degraded lands in Allahabad Forest Division, Uttar Pradesh, India" version 03, dated 24/08/2017<br><br>Monitoring Report for CDM project: "Small scale Allahabad JFM A/R CDM Project on degraded lands in Allahabad Forest Division, Uttar Pradesh, India" version 04, dated 13/10/2017<br><br>Monitoring Report for CDM project: "Small scale Allahabad JFM A/R CDM Project on degraded lands in Allahabad Forest Division, Uttar Pradesh, India" version 05, dated 12/02/2018<br><br>Monitoring Report for CDM project: "Small scale Allahabad JFM A/R CDM Project on degraded lands in Allahabad Forest Division, Uttar Pradesh, India" version 06, dated 25/04/2018.<br><br>Monitoring Report for CDM project: "Small scale Allahabad JFM A/R CDM Project on degraded lands in Allahabad Forest Division, Uttar Pradesh, India" version 07, dated 27/06/2018. | | PP |
| 7 | UNFCCC | **/MRT/** | Monitoring Report Form (CDM-MR-FORM), Version 06.0 | https://cdm.unfccc.int/Reference/PDDs_Forms/index.html | Other |

| | | | | | |
|---|---|---|---|---|---|
| 8 | UNFCCC | **/PDD/** | Project Design Document for CDM project: "Small scale Allahabad JFM A/R CDM Project on degraded lands in Allahabad Forest Division, Uttar Pradesh, India." version 06, dated 25/07/2015 | | |
| 9 | UNFCCC | **/PS/** | CDM Project Standard for project activities (Version 01.0) | http://cdm.unfccc.int/Reference/Standards/index.html | Other |
| 10 | PP | **/VAL/** | Validation Report for CDM project "Small scale Allahabad JFM A/R CDM Project on degraded lands in Allahabad Forest Division, Uttar Pradesh, India." version 01, dated 25/11/2015 | | Other |
| 11 | Forest Survey of India | **/VOL/** | Volume equations for forests of India, Nepal and Bhutan by FSI, MoEF,1996.and Indian state of forest report 2011 Annexure 2. | | Other |
| 12 | UNFCCC | **/VVS/** | CDM Validation and Verification Standard for project activities (Version 01.0) | http://cdm.unfccc.int/Reference/Standards/index.html | Other |
| 13 | UNFCCC | **/SAMPLE/** | "Guidelines for Sampling and Surveys for CDM Project Activities and Programme Activities" (Version 04.0)<br>"Standard for Sampling and Surveys for CDM Project Activities and Programme Activities" (version 07.0) | https://cdm.unfccc.int/Reference/Guidclarif/index.html<br><br>http://cdm.unfccc.int/Reference/Standards/index.html | Other |
| 14 | UNFCCC | **/TA/** | 1. Estimation of carbon stocks and change in carbon stocks of trees and shrubs in A/R CDM project activities Version 04.2<br>2. Demonstration of eligibility of lands for A/R CDM project activities Version 02<br>3. Guidance on application of the definition of the project boundary to A/R CDM project activities Version 01 | http://cdm.unfccc.int/Reference/tools/index.html | Other |
| 15 | UNFCCC | **/GOT/** | Glossary "CDM terms" (version 08.0) | https://cdm.unfccc.int/filestorage/e/x/t/extfile-20150226124447549-glos_CDM.pdf/glos_CDM.pdf?t=UmZ8bnFjODI3fDCW9A3vJwR03kQQh4sbLiYu | Other |
| 16 | PP | /XLS/ | Emission removal calculation excel sheets w.r.t to Monitoring report | | PP |

| | | | | | |
|---|---|---|---|---|---|
| | | | version 01 dated 20/11/2016<br>Emission removal calculation excel sheets w.r.t to Monitoring report version 02 dated 01/06/2017<br>Emission removal calculation excel sheets w.r.t to Monitoring report version 03 dated 24/08/2017<br>Emission removal calculation excel sheets w.r.t to Monitoring report version 04 dated 13/10/2017<br>Emission removal calculation excel sheets w.r.t to Monitoring report version 05 dated 12/02/2018<br>Emission removal calculation excel sheets w.r.t to Monitoring report version 06 dated 25/04/2018<br>Emission removal calculation excel sheets w.r.t to Monitoring report version 07 dated 27/06/2018 | | |
| 17 | PP | /SOP/ | Standard operating Procedures for the A/R CDM Project – Allahabad. | | PP |
| 18 | PP | /DS/ | Data sheets used for marking the details of sample plots, Trees numbers and its species, Height and GBH of all trees in the sample plot. | | PP |
| 19 | PP | /VOL/ | Volume equations for forests of India, Nepal and Bhutan by FSI, MoEF, and 1996.and Indian state of forest report 2011 Annexure 2. | | Forest Survey of India |
| 20 | PP | /rules/ | JFMC rules prepared by UPFD, dated 28-12-2002 and 26-11-2010, Hindi version and its English translation. (Land rights evidence) | | PP |
| 21 | PP | /KML/ | Shape files for the project activity, depicting the project boundary | | PP |
| 22 | PP | /TRN/ | Various training records/ attendance given to the field level enumerators<br>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<br><br>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 |
| 28 | FAO | /FAO/ | Wood densities for tropical forest of Asia | http://www.fao.org/docrep/w4095e/w4095e0c.htm | Food and Agricultural Organisation |
| 29 | PP | /BL/ | Baseline excel sheets submitted at the time of registration | PDD Appendix 1 - 10181 Baseline | UNFCCC Project page 10181 |

# 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)** | | | | |
| ☐ | Changes in the PDD | | Section(s): | New version No.: |
| ☐ | Changes in MR | | Section(s): | New version No.: |
| ☐ | Changes in XLS | | Worksheet(s): | New version No.: |
| ☐ | Other: | | | |
| **DOE assessment (1st round)** | | | | **Date:** DD/MM/YYYY |
| | | | | |
| **Conclusion** *Tick the appropriate checkbox* | ☐ Additional action should be taken (finding remains open)<br>☐ The finding is closed | | | |

**Table 4. CL from this verification**

| **CL ID** | CL A1 | **Section no.** | All | **Date:** 22/01/2017 |
|---|---|---|---|---|
| **Description of CL** | | | | |
| 1. The description in the MR depicts the project is under implementation which is different form the actual Scenario, clarification requested<br>2. The formatting is not as per the filling guidelines, please clarify. | | | | |
| **Project participant response (1st round)** | | | | **Date:** 30/05/2017 |
| 1. The Tense forms are corrected in the MR and only past activities are included in the Monitoring report<br>2. The Formatting is done as per the MR filling guidelines. | | | | |
| **Documentation provided by project participant (1st round)** | | | | |
| ☐ | Changes in the PDD | | Section(s): | New version No.: |
| ☒ | Changes in MR | | Section(s):All | New version No.:2 |
| ☐ | Changes in XLS | | Worksheet(s): | New version No.: |
| ☐ | Other: | | | |
| **DOE assessment (1st round)** | | | | **Date:** 06/06/2017 |

| |
|---|
| 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.<br>2. The Arial font is used in all places with font size 10 as per the filling guidelines.<br>Hence CL A1 is closed. |

| | |
|---|---|
| **Conclusion**<br>*Tick the appropriate checkbox* | ☐ Additional action should be taken (finding remains open)<br>☒ The finding is closed |

| **CL ID** | CL C1 | **Section no.** | All | **Date:** 22/01/2017 |
|---|---|---|---|---|
| **Description of CL** | | | | |
| 1. The description of the QA/QC procedure in section C of the Monitoring report is not clear. Kindly Clarify.<br>2. The information about internal and external verifications is not clear. Please explain. | | | | |
| **Project participant response (1st round)** | | | | **Date:** 30/05/2017 |
| 1. The QA/QC procedure is revised with the reference to SOP in section C of the revised MR.<br><br>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)** | | | | |
| ☐ Changes in the PDD | | Section(s): | | New version No.: |
| ☒ Changes in MR | | Section(s):C | | New version No.:2 |
| ☐ Changes in XLS | | Worksheet(s): | | New version No.: |
| ☐ Other: | | | | |
| **DOE assessment (1st round)** | | | | **Date:** 06/06/2017 |
| 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.<br><br>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.<br>Hence CL C1 is closed | | | | |

| | |
|---|---|
| **Conclusion**<br>*Tick the appropriate checkbox* | ☐ Additional action should be taken (finding remains open)<br>☒ The finding is closed |

| **CL ID** | CL D1 | **Section no.** | All | **Date:** 22/01/2017 |
|---|---|---|---|---|
| **Description of CL** | | | | |
| 1. The field measurement data sheets and SOP are not submitted.<br>2. The details of the sample plots are not given in MR or CER sheets | | | | |
| **Project participant response (1st round)** | | | | **Date:** 30/05/2017 |
| 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.<br>2. The Sample plot details are submitted in a separate Excel sheet. | | | | |
| **Documentation provided by project participant (1st round)** | | | | |
| ☐ Changes in the PDD | | Section(s): | | New version No.: |
| ☐ Changes in MR | | Section(s): | | New version No.: |
| ☒ Changes in XLS | | Worksheet(s): sample plots | | New version No.: |
| ☐ Other: | | | | |
| **DOE assessment (1st round)** | | | | **Date:** 06/06/2017 |
| 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.<br>Hence CL D1 is closed | |
| **Conclusion**<br>*Tick the appropriate checkbox* | ☐ Additional action should be taken (finding remains open)<br>☒ 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:** 30/05/2017 |
| ☐ Changes in the PDD | | Section(s): | | New version No.: |
| ☒ Changes in MR | | Section(s):A, B | | New version No.:2 |
| ☐ Changes in XLS | | Worksheet(s): | | New version No.: |
| ☐ Other: | | | | |
| **DOE assessment (1st round)** | | | | **Date:** 06/06/2017 |
| 1. The area of the A/R CDM project is 506.63 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 Allahabad revealed that the area under A/R CDM for all the JFMCs is 506.63. Hence CAR A1 is closed. | | | | |
| **Conclusion**<br>*Tick the appropriate checkbox* | ☐ Additional action should be taken (finding remains open)<br>☒ The finding is closed | | | |

| **CAR ID** | CAR B1 | **Section no.** | B.2.5, 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.<br>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.2.5 of the MR.<br><br>2. 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:** 30/05/2017 |
| ☐ Changes in the PDD | | Section(s): | | New version No.: |
| ☒ Changes in MR | | Section(s):B.2.5 & B.2.7 | | New version No.:2 |

| | | | |
|---|---|---|---|
| ☐ | Changes in XLS | Worksheet(s): | New version No.: |
| ☐ | Other: | | |
| **DOE assessment (1st round)** | | | **Date:** 06/06/2017 |

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://fennerschool-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.
2. 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.

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.

Hence CAR B1 is closed.

However the CAR is reopened based on the information and reporting check comments by UNFCCC EB (for similar project) why the monitoring happened in mid of 2016 but not in the year 2017 as mentioned in the revised PDD. PP is requested to clarify the same

Also it was observed that the volume equations mentioned in the MR is not in line with excel sheets

CAR is opened on 28/12/2017

**Project participant response (2nd round)**

1. The month of January-February was supposed to have good harvest because of favourable climate/ rainfall in 2015-2016 (when compared to 2012-2013 and 2013-2014, are being the drought years). So, the communities were expected to take part in agricultural activities like harvesting in the Kharif season and sowing in the Rabi season. http://www.imd.gov.in/Welcome%20To%20IMD/Welcome.php (year wise rainfall data statistics)
   Apart from that, the fog in the winter season in the months of January- February is a hindrance in visibility, also during these months there is short duration of sunlight/ day length to have proper monitoring. Whereas, during summers, days are longer and have clear visibility. Therefore, PP chose to have verification in mid of May to June .

   However during next verification which is supposed to be done in 2022 will also be conducted in the month of May-June because of the same reason i.e. day length and clear visibility.

2. The volume equations in the MR is taken and in CER the bracket formatting is revised and checked to depict the correct calculations.

| | | | | |
|---|---|---|---|---|
| **Documentation provided by project participant (2nd round)** | | | | **Date:** 08/02/2018 |
| ☐ | Changes in the PDD | ☐ | Changes in the PDD | New version No.: |
| ☒ | Changes in MR | ☒ | Changes in MR | New version No.:5 |
| ☒ | Changes in XLS | ☒ | Changes in XLS | New version No.:5 |
| ☐ | Other: | ☐ | | |
| **DOE assessment (2nd round)** | | | | **Date:** 12/02/2018 |

1. The PP is response is accepted and the this temporary change will not affect the project design or scale and also this will not have an impact the estimated emission removals. The rainfall data for IMD website http://www.imd.gov.in is checked and there deficient rainfall of 45% is reduced to 17% in 2015-2016 period. So the anticipation of agricultural activities was expected. During the site visit the validation team also observed this phenomenon (participation of community members in the morning period was very less and absence of women members) and community members are involved in agro

activities. During winter it was observed lesser duration of sunlight.

Hence Accepted and the PP intention of going for may June monitoring for this verification and the next verifications will take place after 10th. year from the project date that is in 2022, then in 2027 with a five year cycle plan is accepted.

2. The CER sheets are checked and the BODMAS (Brackets, Orders or powers, Division, Multiplication, Addition, and Subtraction) rule for arithmetic calculations are considered and accepted.

Hence CAR is closed

| **Conclusion** *Tick the appropriate checkbox* | ☐ Additional action should be taken (finding remains open)<br>☒ The finding is closed |
|---|---|

| **CAR ID** | CAR B2 | **Section no.** | B.2.2, B.2.5, B.2.7, CER Sheets | **Date:** 22/03/2017 |
|---|---|---|---|---|

**Description of CAR**

1. 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)**

1. The registered PDD mentions only the main species, but however 36 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:** 30/05/2017 |
|---|---|---|
| ☐ Changes in the PDD | Section(s): | New version No.: |
| ☒ Changes in MR | Section(s):B.2. 2, B.2.5 & B.2.7 | New version No.:3 |
| ☒ Changes in XLS | Worksheet(s): All | New version No.:3 |
| ☐ Other: | | |

**DOE assessment (1st round)** **Date:** 06/06/2017

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 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-ordinators 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.

   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).

Hence accepted and CAR B2 is closed.

| **Conclusion** *Tick the appropriate checkbox* | ☐ Additional action should be taken (finding remains open)<br>☒ The finding is closed |
|---|---|

| **CAR ID** | CAR D1 | **Section no.** | CER Sheets and Section D | **Date:** 22/01/2017 |
|---|---|---|---|---|

**Description of CAR**

1. Please explain why the mean diameter and height is used for the estimation of tree volume in ER calculation sheets.
2. The root shoot ratio is not consistent with MR and registered PDD. Please clarify.
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.
4. The linkage is not there from the calculations given the sheet "GHG Removal". Please explain
5. The value of the wood density taken for each species is not in line with registered PDD. Please clarify
6. The Trees with less than 2m height and 10 cm GBH is not available in the CER sheets. Please clarify.

**Project participant response (1st round)**

1. The volume of each tree is calculated based on the DBH and height of each tree in the revised calculation.
2. The root shoot ratio of 0.25 is used as per the registered PDD.
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.
4. The $b_{TREE}$ value is linked from the respective JFMC sheets in the revised calculation sheets
5. The wood density of each species taken is per the ex-ante values in the registered PDD.
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.

| **Documentation provided by project participant (1st round)** | | **Date:** 30/05/2017 |
|---|---|---|
| ☐ Changes in the PDD | Section(s): | New version No.: |
| ☒ Changes in MR | Section(s): D.1 | New version No.:2 |
| ☒ Changes in XLS | Worksheet(s):All | New version No.:2 |
| ☐ Other: | | |

**DOE assessment (1st round)** **Date:** 06/06/2017

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 0.25 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.

Hence CAR D1 is closed.

However during the Information and reporting check review comments the VT reviewed the calculations and it was observed that the wood densities are not in line with the FAO data as mentioned in the registered PDD.

Hence CAR is reopened on 28/12/2017

**Project participant response (2nd round)**

1. The wood densities are sourced from FAO data and for the species where it is not available

default value of 0.67 is taken and it is in line with the registered PDD,

| Documentation provided by project participant (1st round) | | Date: 24/05/2018 |
|---|---|---|
| ☐ Changes in the PDD | Section(s): | New version No.: |
| ☒ Changes in MR | Section(s): D.2 | New version No.:6 |
| ☒ Changes in XLS | Worksheet(s): All Sheets | New version No.:6 |
| ☐ Other: | | |

**DOE assessment (1st round)** — **Date:** 06/06/2018

1. The Wood densities are sourced from the FAO data and it is for the tropical forests of Asia. The following web link is checked http://www.fao.org/docrep/w4095e/w4095e0c.htm. The revision are in line with the registered PDD. Hence accepted and CAR D2 is closed.

| Conclusion<br>*Tick the appropriate checkbox* | |
|---|---|
| | ☐ Additional action should be taken (finding remains open) |
| | ☒ The finding is closed |

| CAR ID | CAR D2 | Section no. | D.3. | Date: 22/01/2017 |
|---|---|---|---|---|

**Description of CAR**

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)**

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: 30/05/2017 |
|---|---|---|
| ☐ Changes in the PDD | Section(s): | New version No.: |
| ☒ Changes in MR | Section(s): D.3 | New version No.:2 |
| ☒ Changes in XLS | Worksheet(s):sample plots | New version No.:2 |
| ☐ Other: | | |

**DOE assessment (1st round)** — **Date:** 06/06/2017

1. The number of plots taken is 88, which is 12 more than the required 76 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 is nature. Hence no stratification is required. Hence accepted.

Hence CAR D2 is closed.

| Conclusion<br>*Tick the appropriate checkbox* | |
|---|---|
| | ☐ Additional action should be taken (finding remains open) |
| | ☒ The finding is closed |

| CAR ID | CAR D3 | Section no. | D.2. | Date: 22/01/2017 |
|---|---|---|---|---|

**Description of CAR**

1. The calibration details are not mentioned in section D.2 of the MR.

**Project participant response (1st round)**

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:** 30/05/2017 |
|---|---|---|
| ☐ Changes in the PDD | Section(s): | New version No.: |
| ☐ Changes in MR | Section(s): | New version No.: |
| ☐ Changes in XLS | Worksheet(s): | New version No.: |
| ☐ Other: | | |

**DOE assessment (1st round)** **Date:** 06/06/2017

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.

Hence CAR D3 is closed.

| **Conclusion** *Tick the appropriate checkbox* | ☐ Additional action should be taken (finding remains open)<br>☒ The finding is closed |
|---|---|

| **CAR ID** | CAR E1 | **Section no.** | E | **Date :** 22/01/2017 |
|---|---|---|---|---|

**Description of CAR**

1. The shrub biomass is not included in the please explain.
2. The uncertainty calculation as per AR Tool 14 is not presented. Please clarify.

**Project participant response (1st round)**

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,
2. The uncertainty estimated is 5.73%. The same is mentioned the MR and detailed calculation is presented in ER calculation sheets.

| **Documentation provided by project participant (1st round)** | | **Date:** 30/05/2017 |
|---|---|---|
| ☐ Changes in the PDD | Section(s): | New version No.: |
| ☒ Changes in MR | Section(s): E | New version No.:2 |
| ☒ Changes in XLS | Worksheet(s):Uncertainty and Shrub Biomass | New version No.:2 |
| ☐ Other: | | |

**DOE assessment (1st round)** **Date:** 06/06/2017

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.
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

CAR E1 is closed.

However the during the reporting the information and reporting check, the EB has requested how the CC shrub was calculated without the monitoring of Crown cover and conservativeness of the $b_{forest}$ values and CAR is opened on 28/12/2017

Please clarify how the baseline trees are monitored

Also based on the comment for wood density and volume the PP requested to address the change in uncertainty (if applicable)

CAR is Open

**Project participant response (2nd round)**

1. The crown cover of the Shrub biomass is not included as the monitoring parameter during the registration of the project. Accordingly the PP consider the same as zero for this monitoring period.. However the shrub crown cover $CC_{SHRUBi}$ will be monitored during the next verification

and procedure and calculations are as per the AR tool 14. The same is included in the MR section D,2 and E,2 respectively.

2. The baseline trees is monitored at the start of the project activity which the start of the monitoring period, the values are sourced from the baseline sheets submitted at the time of registration and it is included in the monitored parameter as $N_{BSL\ Trees}$ in the revised monitoring report. The notation is wrongly mentioned in the registered PDD and the same is corrected and the corrections are listed in section B.2.2 of the MR. Also the baseline trees are counted just to indicate that the baselines are also protected along with the project trees. However the biomass of baseline trees will not be included in the emission removals.

3. The uncertainty estimated is less than 10% after revisions to the wood density and volume equation. Hence not discount factors need to be applied.

| **Documentation provided by project participant (1st round)** | | **Date:** 25/04/2018 |
|---|---|---|
| ☐ Changes in the PDD | Section(s): | New version No.: |
| ☒ Changes in MR | Section(s): D.2, E.2 | New version No.:6 |
| ☒ Changes in XLS | Worksheet(s):Uncertainty , All sheets | New version No.:6 |
| ☐ Other: | | |
| **DOE assessment (2nd round)** | | **Date:** 07/05/2018 |

1. The Shrub biomass is considered zero due to its insignificance and excluded from the emission removals conservatively for this monitoring period. The inclusion of the monitoring parameter shrub crown cover $CC_{SHRUBi}$ is accepted as it is as per the methodological requirements and as per the AR tool 14. The parameter is monitored by using ocular method as per procedures prescribed under national forest inventory for calculating shrub biomass and also in line with AR tool 14 and included in the section D,2 of the revised MR and the calculation presented in the revised MR Section E.2 follow the equation 26 and 26 of the AR tool 14.Hence the change is accepted.

2. The baseline trees are monitored during the start of the project activity. The same is included in the monitored parameter under the parameter $N_{BSL\ Trees}$ . The notation used in the registered PDD is wrongly given and the correction is accepted. The values are sourced from the baseline calculation sheets (monitored during the start of the project) submitted at the time of registration which are counted by laying sample plots. Hence accepted. Also as per the methodology the baseline removals are not required to be included in the overall emission removals, however conservatively PP deducted the baseline removals from the overall emission removals.

3. The Uncertainty calculation is presented in the revised ER sheets and it is 5.73 and it is less than 10%, as per Tool 14, appendix 2 no discount factors need to be applied. Hence accepted

CAR E1 is closed.

| **Conclusion** *Tick the appropriate checkbox* | ☐ Additional action should be taken (finding remains open)<br>☒ 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** | | | | |
| ☐ Changes in the PDD | | | Section(s): | New version No.: |
| ☐ Changes in MR | | | Section(s): | New version No.: |
| ☐ Changes in XLS | | | Worksheet(s): | New version No.: |
| ☐ Other: | | | | |
| **DOE assessment** | | | | **Date:** DD/MM/YYYY |

| | |
|---|---|
| | |
| **Conclusion**<br>*Tick the appropriate checkbox* | ☐ To be checked during the next periodic verification |

# Appendix 5. Monitored Parameters

**Table A-5:** Periodic Verification Checklist – Monitored Parameters

| **Checklist Item**<br>(incl. guidance for the verification team) | **Reference** | **Verification Team Comments**<br>(Means and results of assessment) | **Draft Concl.** | **Final Concl.** |
|---|---|---|---|---|
| **A. Area of stratum i** | | **Ai** | | |
| ***a) Measurement / Determination method (VVS, §§ 389-393)***<br>*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)).*<br>*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.*<br>*Assess whether the measurement / determination method is in line with the registered monitoring plan of the PDD and the applied methodology.* | /IM01/ /PDD/ /KML/<br>/Co-od/ | *Description:*<br>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.<br>*Verifier´s action:*<br>The Excel data file containing the co-ordinates are checked with the information provided in the registered PDD.<br>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.<br>Also the interviews with the forest officers confirmed the actual area under A/R CDM/<br>*Conclusion:*<br>The A/R CDM project area for each JFMC taken for Emission reduction calculation is correct<br>The list of Ramsar sites in the country is also checked and found that the project area is not falling under wetland category and it is developed from degraded lands. Thus the applicability conditions as per para 3 and 4 of the applied methodology is verified.<br>*However CAR A1 is raised* | ~~CAR A1~~ | OK |
| ***b) Accuracy and QA/QC Procedure*** | /INS/ | *Description:* | ~~CAR~~ | OK |

| Checklist Item<br>(incl. guidance for the verification team) | Reference | Verification Team Comments<br>(Means and results of assessment) | Draft Concl. | Final Concl. |
|---|---|---|---|---|
| ***(VVS, §§ 394-400)***<br>*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.*<br>*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.*<br>*Include calibration dates and information in validity of the installed monitoring equipment in the table in Annex 2.* | /Co-od/<br>/SOP/ | The GPS readings are taken using the following instruments<br>1. GRAMIN Make eTrex<br>2. GRAMIN Make GPSMAP 76CSx<br>The machines are magnetic based and also self-calibrating<br>*Verifier´s action:*<br>The operational manual of the above 2 GPS meters are checked and found that the machines are self-calibrating<br>*Conclusion:*<br>However CAR D3 is raised | ~~D3~~ | |
| ***c) Correctness***<br>***(VVS, §§ 389-393)***<br>*Determine whether the value given in the monitoring report is correct or determined in a conservative manner.*<br>*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.*<br>*In case of mistakes / deviations pl. provide details and descriptions of the CARs raised.* | /MR/<br>/XLS/<br>/PDD/<br>/Co-od/ | ☒ Correct ☐ Not correct (initial assessment)<br>*Description:*<br>The total area of the project and the area of the individual JFMCs are mentioned in the MR and CER sheets<br>*Verifier´s action:*<br>The registered PDD and Data base is checked<br>*Conclusion:*<br>Thus it is concluded that the total area taken for the project is correct.<br>However CAR A1 is raised. | ~~CAR A1~~ | OK |
| **B. Height of tree** | | **H** | | |
| ***a) Measurement / Determination method***<br>***(VVS, §§ 389-393)***<br>*Describe how the monitoring parameter was measured / determined. Focus primarily on the* | /IM01/<br>/PDD/<br>/DS/ | *Description:*<br>The Height of all trees in the sample plot are measured using a graduated poles | ~~CAR B1~~ | OK |

| Checklist Item<br>(incl. guidance for the verification team) | Reference | Verification Team Comments<br>(Means and results of assessment) | Draft Concl. | Final Concl. |
|---|---|---|---|---|
| *original data level (ODL) but also describe the applied data aggregation trails (from ODL to data aggregation level zero (DAL0)).*<br>*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.*<br>*Assess whether the measurement / determination method is in line with the registered monitoring plan of the PDD and the applied methodology.* | /TRN/ | *Verifier´s action:*<br>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.<br>*Conclusion:*<br>*However CAR B1 is raised* | | |
| ***b) Accuracy and QA/QC Procedure (VVS, §§ 394-400)***<br>*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.*<br>*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.*<br>*Include calibration dates and information in validity of the installed monitoring equipment in the table in Annex 2.* | /INS/<br>/ | *Description:*<br>The Measuring tapes used are purchased for individual JFMCs with various lengths at the time of monitoring<br>*Verifier´s action:*<br>The Purchase records are checked and the graduated poles are checked by VT using a metallic tape for the graduations<br>*Conclusion:*<br>However CAR D3 is raised | ~~CAR D3~~ | OK |
| ***c) Correctness (VVS, §§ 389-393)***<br>*Determine whether the value given in the monitoring report is correct or determined in a conservative manner.*<br>*In case of conservative approaches used in lieu of the monitoring as per registered MP detailed assessment* | /IM01/<br>/XLS/<br>/DS/ | ☒ Correct ☐ Not correct (initial assessment)<br>*Description:*<br>The height of the individual trees of each sample plot is mentioned in the CER sheets<br>*Verifier´s action:* | OK | OK |

| Checklist Item<br>(incl. guidance for the verification team) | Reference | Verification Team Comments<br>(Means and results of assessment) | Draft Concl. | Final Concl. |
|---|---|---|---|---|
| *of the conservativeness of the approach used should be given.*<br>*In case of mistakes / deviations pl. provide details and descriptions of the CARs raised.* | | 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.<br>Also observed the measuring techniques by the field level representatives of the PP as per the SOP.<br>*Conclusion:*<br>Thus it is concluded that the height of the trees taken for emission removal calculation is correct. | | |
| **C. Diameter at breast height of tree** | | **DBH** | | |
| ***a) Measurement / Determination method (VVS, §§ 389-393)***<br>*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)).*<br>*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.*<br>*Assess whether the measurement / determination method is in line with the registered monitoring plan of the PDD and the applied methodology.* | /IM01/<br>/PDD/<br>/DS/<br>/TRN/ | *Description:*<br>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<br>*Verifier´s action:*<br>The measurement techniques are checked and the sample trees are checked by the VT during site visit and compared them with the data sheets.<br>*Conclusion:*<br>*However CAR D1 (point 3)is raised* | ~~CAR D1~~ | OK |
| ***b) Accuracy and QA/QC Procedure (VVS, §§ 394-400)***<br>*In case of measured (or estimated) values, check* | /INS/ | *Description:*<br>The Measuring tapes used for measurements are purchased for individual JFMCs with various lengths at the time of monitoring | ~~CAR D3~~ | OK |

| Checklist Item<br>(incl. guidance for the verification team) | Reference | Verification Team Comments<br>(Means and results of assessment) | Draft Concl. | Final Concl. |
|---|---|---|---|---|
| *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.*<br>*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.*<br>*Include calibration dates and information in validity of the installed monitoring equipment in the table in Annex 2.* | | *Verifier´s action:*<br>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.<br>*Conclusion:* However CAR D3 is raised | | |
| ***c) Correctness***<br>***(VVS, §§ 389-393)***<br>*Determine whether the value given in the monitoring report is correct or determined in a conservative manner.*<br>*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.*<br>*In case of mistakes / deviations pl. provide details and descriptions of the CARs raised.* | /IM01/<br>/XLS/ /DS/ | ☐ Correct ☒ Not correct (initial assessment)<br>*Description:*<br>The girth at breast height measured and DBH is calculated from GBH<br>*Verifier´s action:*<br>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.<br>Also observed the measuring techniques by the field level representatives of the PP as per the SOP.<br>*Conclusion:*<br>However the GBH and DBH calculations are wrong for some trees in the data base and CAR D1 is raised | ~~CAR D1~~ | OK |

| Checklist Item<br>(incl. guidance for the verification team) | Reference | Verification Team Comments<br>(Means and results of assessment) | Draft Concl. | Final Concl. |
|---|---|---|---|---|
| **D. *Baseline trees*** | | ***N BSL trees*** | | |
| **a) Measurement / Determination method (VVS, §§ 389-393)**<br><br>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)).<br><br>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.<br><br>Assess whether the measurement / determination method is in line with the registered monitoring plan of the PDD and the applied methodology. | /IM01/<br>/PDD/<br>/XLS/<br><br>/MR/<br><br>/BL/ | Description:<br><br>The Baseline trees are counted at the start of the project activity (and it is the start of the monitoring period for this verification) and included in the monitoring report.<br><br>Verifier´s action:<br><br>The baseline calculation sheets submitted at the time of registration is checked with the MR,<br><br>Conclusion:<br><br>CAR E1 is raised | ~~CAR E1~~ | OK |
| **b) Accuracy and QA/QC Procedure (VVS, §§ 394-400)**<br><br>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.<br><br>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. | /MR/<br><br>/PDD/<br>/XLS/<br>/BL/ | Not applicable, sourced from registered baseline sheets submitted at the time of registration | OK | OK |

| Checklist Item<br>(incl. guidance for the verification team) | Reference | Verification Team Comments<br>(Means and results of assessment) | Draft Concl. | Final Concl. |
|---|---|---|---|---|
| Include calibration dates and information in validity of the installed monitoring equipment in the table in Annex 2. | | | | |
| **c) Correctness (VVS, §§ 389-393)**<br><br>Determine whether the value given in the monitoring report is correct or determined in a conservative manner.<br><br>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.<br><br>In case of mistakes / deviations pl. provide details and descriptions of the CARs raised. | /MR/<br>/XLS/<br>/PDD/<br>/BL/ | ☐ Correct ☒ Not correct (initial assessment)<br>Not applicable as sourced from Registered documents.<br>. | ~~CAR E1~~ | OK |
| ***E. N and wi*** | | **Total number of possible sample plots within the project boundary**<br>**Relative weight of the area of stratum i** | | |
| ***a) Measurement / Determination method (VVS, §§ 389-393)***<br><br>*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)).*<br><br>*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* | /MR/<br>/CER<br>/PDD/<br>/IM01/ | *Description:* The sample plots size is 0.05 ha. (25mx 20m). The total area of the project divided by the sample plot gives the number of sample plots.<br>The relative weight if the ratio between the area of the each stratum and total project area.<br>*Verifier´s action:*<br>The total area of the project under the control of the PP is 506.63 ha. The Area of each stratum is mentioned consistently in excel sheets , PDD and MR. The MR, PDD and CER Sheets are checked.<br>*Conclusion:* | OK | OK |

| Checklist Item<br>(incl. guidance for the verification team) | Reference | Verification Team Comments<br>(Means and results of assessment) | Draft Concl. | Final Concl. |
|---|---|---|---|---|
| *frequency of measurements as per the requirements.*<br><br>*Assess whether the measurement / determination method is in line with the registered monitoring plan of the PDD and the applied methodology.* | | Thus the parameters included for the calculation is correct | | |
| ***b) Accuracy and QA/QC Procedure (VVS, §§ 394-400)***<br>*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.*<br>*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.*<br><br>*Include calibration dates and information in validity of the installed monitoring equipment in the table in Annex 2.* | /MR/<br>/CER<br>/PDD/<br>/IM01/<br>/DS/<br>/vol/ | *Description:*<br>The GPS readings are taken to measure the area of the each stratum to arrive at the total area of the project using the following instruments<br>1. GRAMIN Make eTrex<br>2. GRAMIN Make GPSMAP 76CSx<br>The machines are magnetic based and also self-calibrating<br>*Verifier´s action:*<br>The operational manual of the above 2 GPS meters are checked and found that the machines are self-calibrating<br>*Conclusion:*<br>However CAR D3 is raised | ~~CAR D3~~ | OK |
| ***c) Correctness (VVS, §§ 389-393)***<br>*Determine whether the value given in the monitoring report is correct or determined in a conservative manner.*<br>*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.*<br><br>*In case of mistakes / deviations pl. provide details and descriptions of the CARs raised.* | /IM01/<br>/XLS/<br>/DS/<br>/MR/<br>/PDD/ | ☒ Correct ☐ Not correct (initial assessment)<br>*Description:*<br>The total number of possible sample plots are dependent on the area<br>Relative weight of the area of stratum i is dependent the area of each the stratum and the total area of the stratum.<br>*Verifier´s action:*<br>The area under the project as well as the area of each stratum does not change from the time of validation. The sample GPS readings are checked for each stratum | OK | OK |

| Checklist Item<br>(incl. guidance for the verification team) | Reference | Verification Team Comments<br>(Means and results of assessment) | Draft Concl. | Final Concl. |
|---|---|---|---|---|
| | | *Conclusion:*<br>The values taken is correct as it is dependent on the area. | | |
| ***F. $s_i^2$*** | | **Variance of tree biomass per ha in stratum i** | | |
| ***a) Measurement / Determination method (VVS, §§ 389-393)***<br>*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)).*<br>*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.*<br><br>*Assess whether the measurement / determination method is in line with the registered monitoring plan of the PDD and the applied methodology.* | /MR/<br>/XLS/<br>/PDD/<br>/IM01/<br>/DS/ | *Description:*<br>The variance is calculated based the value of tree biomass obtained from sample plots of each stratum. .<br>*Verifier´s action:*<br>The excel calculation sheets are checked<br>*Conclusion:*<br>*The Uncertainty is not calculated*<br>*However CAR E1 is raised* | ~~CAR E1~~ | OK |
| ***b) Accuracy and QA/QC Procedure (VVS, §§ 394-400)***<br>*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.*<br>*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.* | /MR/<br>/CER<br>/PDD/ | Not applicable as the parameter is calculated | OK | OK |

| Checklist Item<br>(incl. guidance for the verification team) | Reference | Verification Team Comments<br>(Means and results of assessment) | Draft Concl. | Final Concl. |
|---|---|---|---|---|
| *Include calibration dates and information in validity of the installed monitoring equipment in the table in Annex 2.* | | | | |
| ***c) Correctness (VVS, §§ 389-393)***<br>*Determine whether the value given in the monitoring report is correct or determined in a conservative manner.*<br>*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.*<br>*In case of mistakes / deviations pl. provide details and descriptions of the CARs raised.* | /IM01/<br>/XLS/ /DS/ /MR/ /PDD/ | ☐ Correct ☒ Not correct (initial assessment)<br>The variance required for the uncertainty is not is calculated hence CAR E1 is raised | OK | OK |
| ***G.*** **$CC_{SHRUB, i}$** | | **Crown cover of shrubs** | | |
| **a) Measurement / Determination method (VVS, §§ 389-393)**<br><br>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)).<br><br>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. | /IM01/ /PDD/ /XLS/<br>/MR/ | Description:<br>The crown cover of shrub biomass is not included as the monitoring parameter in the registered PDD.<br>Verifier´s action:<br>MR and CER sheets are checked.<br>Conclusion:<br>CAR E1 is raised | ~~CAR E1~~ | OK |

| Checklist Item<br>(incl. guidance for the verification team) | Reference | Verification Team Comments<br>(Means and results of assessment) | Draft Concl. | Final Concl. |
|---|---|---|---|---|
| **b) Accuracy and QA/QC Procedure (VVS, §§ 394-400)**<br><br>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.<br><br>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.<br><br>Include calibration dates and information in validity of the installed monitoring equipment in the table in Annex 2. | /MR/<br>/PDD/<br>/XLS/ | CAR E1 is raised | ~~CAR E1~~ | OK |
| **c) Correctness (VVS, §§ 389-393)**<br><br>Determine whether the value given in the monitoring report is correct or determined in a conservative manner.<br><br>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.<br><br>In case of mistakes / deviations pl. provide details and descriptions of the CARs raised. | /MR/<br>/XLS/<br>/PDD/ | ☐ Correct ☒ Not correct (initial assessment)<br>CAR E1 is raised<br>. | ~~CAR E1~~ | OK |

# 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 tape Self-Calibrating** | | | **NA** | ☒ No<br>☐ Yes | From:<br>To: |
| **Measuring Tape** | **Diameter at breast height - DBH** | **Various** | **Standard tapes** | **Standard – New tapes** | | | **NA** | ☒ No<br>☐ Yes | From:<br>To: |
| **Gradated Poles** | **Height of the tree -H** | **Various** | **Standard tapes** | **Standard – New tapes** | | | **NA** | ☒ No<br>☐ Yes | From:<br>To: |

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Document information

| *Version* | *Date* | *Description* |
|---|---|---|
| 02.1 | 11 January 2018 | Editorial revision to correct the numbering of appendices in the instructions. |
| 02.0 | 31 October 2017 | Revision to align with the requirements of the "CDM validation and verification standard for project activities" (version 01.0). |
| 01.0 | 23 March 2015 | Initial publication. |

Decision Class: Regulatory
Document Type: Form
Business Function: Issuance
Keywords: project activities, verifying and certifying

## TÜV NORD Revision history

| *Version* | *Date* | *Description* |
|---|---|---|
| 20.0 | 14.08.2015 | Further adjustments and reduction of redundant information |
| 19.0 | 19.06.2015 | Adoption of UNFCCC template to TÜV NORD guidance and instructions |