



VERIFICATION AND CERTIFICATION REPORT

- 1ST PERIODIC –

M/S MANGALAM TIMBER PRODUCTS LIMITED

REFORESTATION OF DEGRADED LAND BY MTPL IN INDIA

UNFCCC REF. No. : 5016

Monitoring Period: 2001-06-25 to 2011-06-24
(incl. both days)

Report No: 8108367257 – 11/634

Date: 2013-06-27

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Verification Report:	Report No.	Rev. No.	Date of 1st issue:	Date of this rev.
	8108367257 – 11/634	0	2013-06-27	2013-06-27
Project:	Title:		Registration date:	UNFCCC-No.:
	Reforestation of degraded land by MTPL in India		2011-08-01	5016
			Verification No.:	
			1st periodic verification	
	Crediting period:		From:	To:
	<input type="checkbox"/> Renewable (10 y) <input checked="" type="checkbox"/> Fixed (30y)		2001-06-25	2031-06-24
Project Scale:				
<input checked="" type="checkbox"/> Large Scale <input type="checkbox"/> Small Scale				
Project Participant(s):	Client:			
	M/s Mangalam Timber Products Limited			
	Non Annex 1 country:		Annex 1 country:	
	India		-	
	PP from non Annex 1 country:		PP from Annex 1 country:	
Mangalam Timber Products Limited		-		
Applied methodology/ies:	Title:		No.:	Scope(s) / TA(s)
	Afforestation and reforestation of degraded land		AR-ACM 001 ver. 4	14 / 14.1
Monitoring period and monitoring report	Monitoring period (MP):			Monitoring Report:
	From:	To:	No. of days:	Draft version: Final version:
	2001-06-25	2011-06-24	3652	2011-06-14 2013-06-17
Verification team / Technical Review and Final Approval:	Verification Team:		Technical review:	Final approval:
	Lokesh Chandra Dube (TL) Ashwin A.S. (TM)		Alexandra Nebel	Alexandra Nebel
Key dates of verification:	Publication of MR :	DVerR issued:	On-site (from):	On-site (to):
	2012-01-17	2012-03-12	2012-02-20	2012-02-26
Summary of Verification opinion	M/s Mangalam Timber Products Limited has commissioned the TÜV NORD JI/CDM Certification Program to carry out the 1st periodic verification of the project: "Reforestation of degraded land by MTPL in India" with regard to the relevant requirements for CDM project activities.			
	As a result of this verification, the verifier confirms that: <input checked="" type="checkbox"/> all operations of the project are implemented and installed as planned and described in the validated project design document, <input checked="" type="checkbox"/> the monitoring plan is in accordance with the applied approved CDM methodology, <input checked="" type="checkbox"/> the installed equipment essential for measuring parameters required for calculating emission removals are calibrated appropriately, <input checked="" type="checkbox"/> the monitoring system is in place and functional. The project has generated GHG emission reductions, and <input checked="" type="checkbox"/> the GHG emission reductions 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 (tCERs) in the above mentioned reporting period as listed below (verified amount).			
Emission reductions: [t CO_{2e}]	Verified amount		As per draft MR:	As per PDD:
	1,764,076		3,363,269	4,210,087
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	2013-06-27_FVerR_11-634_final.doc			137



Abbreviations:

A/R, A&R, AR	Afforestation/Reforestation
BEF	Biomass Expansion Factor
CA	Corrective Action / Clarification Action
CAR	Corrective Action Request
CDM	Clean Development Mechanism
DBH	Diameter at Breast Height
t-CER	Temporary Certified Emission Reduction
CO₂	Carbon dioxide
CO₂eq	Carbon dioxide equivalent
CL	Clarification Request
ER	Emission Reduction
FAR	Forward Action Request
GBH	Girth at Breast Height
GHG	Greenhouse gas(es)
LULUCF	Land Use, Land Use Change and Forestry
MP	Monitoring Plan
MR	Monitoring Report
MTPL	Mangalam Timber Products Limited
PA	Project Activity
PDD	Project Design Document
PP	Project Participant
PSP	Permanent Sample Plot
QA/QC	Quality Assurance / Quality Control
UNFCCC	United Nations Framework Convention on Climate Change
XLS	Emission Reduction Calculation Spread Sheet

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1. INTRODUCTION

M/s Mangalam Timber Products Limited has commissioned the TÜV NORD JI/CDM Certification Program (CP) to carry out the 1st periodic verification of the project

“Reforestation of degraded land by MTPL in India”

with regard to the relevant requirements for CDM project activities. The verifiers have reviewed the implementation of the monitoring plan (MP) in the registered CDM project.

GHG data for the monitoring period was verified in detailed manner applying the set of requirements, audit practices and principles as required under the Validation and Verification Standard ^{/VVS/} of the UNFCCC.

This report summarizes the findings and conclusions of this 1st periodic verification of the above mentioned UNFCCC registered project activity.

1.1. Objective

The objective of the verification is the review and ex-post determination by an independent entity of the GHG emission reductions. It includes the verification of the:

- implementation and operation of the project activity as given in the PDD,
- compliance with applied approved methodology and the provisions of the monitoring plan,
- data given in the monitoring report by checking the monitoring records, the emissions reduction calculation and supporting evidence,
- accuracy of the monitoring equipment,
- quality of evidence,
- significance of reporting risks and risks of material misstatements.

1.2. Scope

The verification of this registered project is based on the validated project design document ^{/PDD/}, the monitoring report ^{/MR/}, emission reduction calculation spreadsheet ^{/XLS/}, supporting documents made available to the verifier and information collected through performing interviews and during the on-site assessment. Furthermore publicly available information was considered as far as available and required.

The verification is carried out on the basis of the following requirements, applicable for this project activity:

- Article 12 of the Kyoto Protocol ^{/KP/},
- guidelines for the implementation of Article 12 of the Kyoto Protocol as presented in the Marrakech Accords under decision 3/CMP.1 ^{/MA/}, Modalities and procedures



for A&R project activities under the CDM in the first commitment period of the Kyoto Protocol^{/MPAP/} and subsequent decisions made by the Executive Board and COP/MOP,

- other relevant rules, including the host country legislation,
- CDM Validation and Verification Standard^{/VVS/},
- monitoring plan as given in the registered PDD^{/PDD/},
- Approved AR CDM Methodology AR-ACM0001 version 04- Afforestation and reforestation of degraded land.

2. GHG PROJECT DESCRIPTION

2.1. Technical Project Description

The farm forestry project implemented by MTPL is a Reforestation project in seven districts spread across Odisha¹, Andhra Pradesh and Chhattisgarh states of India. Under the project activity, 12,437 parcels of degraded land owned by 12,002 small and marginal farmers are developed for raising plantations with *Eucalyptus tereticornis* in a land area totaling 14,527.27 hectare. These lands are rain fed lands.

The technology employed by this A/R CDM project activity is environmentally safe propagation using saplings, which are developed over a period of time by nursery techniques adopted by MTPL. MTPL distributes planting stock of Eucalyptus developed at its own nurseries to the farmers. Plants of 30-45 cm (excluding container height) with girth of 1-2 cm at collar region are used for planting.

The seedlings of Eucalyptus were produced following standard nursery techniques prevalent in the host country. No clonal plantation is used during the monitoring period.

The soil properties were studied before raising plantation. The project activity is not implemented on organic soil. The planting is done by manually digging 30-35 cm deep pits of 40-45 cm diameter and on the ground. Alignment is done with 3 x 1.5 m spacing (including some variations).

The key parameters of the project are given in Table 2-1:

Table 2-1: Technical data of the project activity

Parameter	Unit	Value
No. of forest sites (discrete land parcels)	-	12,437 (individual land holding of each farmer identified with GPS co-ordinates)
No. of farmers	-	12,002
Total reforested area	ha	14,527.27
Planting by digging pits	cm	30 x 30 x 30 cm
Spacing b/w trees	mxm	3 x 1.5 (and variations)
No. of trees per ha	-	2,222 (and variations)
Tree species (local and scientific name)	Name	<i>Eucalyptus tereticornis</i> Smith
Rotation cycle	Years	5
Reforestation method	-	Direct planting
Silvi-cultural/Agro-forestry practices applied	<input checked="" type="checkbox"/>	Deep ploughing
	<input type="checkbox"/>	Slash and burn
	<input type="checkbox"/>	Mulching
	<input checked="" type="checkbox"/>	Pruning
	<input type="checkbox"/>	Synthetic Fertilizer Application
	<input checked="" type="checkbox"/>	Weeding

¹ Erstwhile Orissa

Parameter	Unit	Value
	<input type="checkbox"/>	Flood irrigation
	<input type="checkbox"/>	Fuel-wood collection
	<input checked="" type="checkbox"/>	Harvesting

2.2. Project Location

The details of the project location are given in Table 2-2:

Table 2-2: Project Location

No.	Project Location
Host Country	India
Region:	Odisha ²
Project location address:	Nabrangpur, Koraput and Malkangiri districts
Latitude:	Please refer to the Enclosure #1 (excel sheet)
Longitude:	Please refer to the Enclosure #1 (excel sheet)

No.	Project Location
Host Country	India
Region:	Andhra Pradesh
Project location address:	Vishakhapatnam, Vizianagaram and Srikakulam districts
Latitude:	Please refer to the Enclosure #1 (excel sheet)
Longitude:	Please refer to the Enclosure #1 (excel sheet)

No.	Project Location
Host Country	India
Region:	Chhattisgarh
Project location address:	Bastar district

² On November 1, 2011 the name of the state was changed from Orissa to Odisha. The Government of India came out with the Gazettee Notification on the passing of the Orissa (Alteration of name) Bill, 2010 and the Constitution (113th Amendment) Bill by the Parliament. The Gazettee Notification mentioned that the change of names came into effect from the 01/11/2011. (<http://orissa.gov.in/e-magazine/Orissareview/2011/Nov/engpdf/9-17.pdf> and <http://www.prsindia.org/uploads/media/Orissa/The%20Orissa%20Alteration%20of%20Name%20Bill%202010.pdf>)



Latitude:	Please refer to the Enclosure #1 (excel sheet)
Longitude:	Please refer to the Enclosure #1 (excel sheet)

2.3. Project Verification History

Essential events since the registration of the project are presented in the following Table 2-3.

Table 2-3: Status of previous Monitoring Periods

#	Item	Time	Status
1	1 st Monitoring period	2001-06-25 to 2011-06-24	Awaiting Issuance Request

No Post Registration changes were identified which requires prior approval of the board. All changes are A/R specific types of changes.

3. METHODOLOGY AND VERIFICATION SEQUENCE

3.1. Verification Steps

The verification consisted of the following steps:

- Contract review
- Appointment of team members and technical reviewers
- Publication of the monitoring report
- A desk review of the Monitoring Report^{/MR/} submitted by the client and additional supporting documents with the use of customised verification protocol^{/CPM/} according to the Validation and Verification Standard^{/VVS/},
- Verification planning,
- On-Site assessment,
- Background investigation and follow-up interviews with personnel of the project developer and its contractors,
- Draft verification reporting
- Resolution of corrective actions (if any)
- Final verification reporting
- Technical review
- Final approval of the verification.

3.2. Contract review

To assure that

- the project falls within the scopes for which accreditation is held,
- the necessary competences to carry out the verification can be provided,
- Impartiality issues are clear and in line with the CDM accreditation requirements

a contract review was carried out before the contract was signed.

3.3. Appointment of team members and technical reviewers

On the basis of a competence analysis and individual availabilities a verification team, consisting of one team leader and 1 additional team members, was appointed.



The list of involved personnel, the tasks assigned and the qualification status are summarized in the Table 3-1 below.

Table 3-1: Involved Personnel

	Name	Company	Function ¹⁾	Qualification Status ²⁾	Scheme competence ³⁾	Technical competence ⁴⁾	Verification competence ⁵⁾	Host country Competence	On-site visit
<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms.	Lokesh Chandra Dube	TUV India Pvt. Ltd.	TL	LA	<input checked="" type="checkbox"/>	14.1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms.	Ashwin A.S.	TUV India Pvt. Ltd.	TM ^{A)}	LA	<input checked="" type="checkbox"/>	14.1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/> Mr. <input checked="" type="checkbox"/> Ms.	Alexandra Nebel	TUV NORD Cert GmbH	TR ^{B)} / FA ^{B)}	SA	<input checked="" type="checkbox"/>	14.1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	-

¹⁾ TL: Team Leader; TM: Team Member, TR: Technical review; OT: Observer-Team, OR: Observer-TR; FA: Final approval

²⁾ GHG Auditor Status: A: Assessor; LA: Lead Assessor; SA: Senior Assessor; T: Trainee; TE: Technical Expert

³⁾ GHG auditor status (at least Assessor)

⁴⁾ As per S01-MU03 or S01-VA070-A2 (such as 1.1, 1.2, ...)

⁵⁾ In case of verification projects

^{A)} Team Member: GHG auditor (at least Assessor status), Technical Expert (incl. Host Country Expert or Verification Expert), not ETE

^{B)} No team member

Entire team contributed to the review of documents, the assessment of the project activity and to the preparation of this report under the leadership of the team leader.

Team leader and team member acted as technical experts and contributed to the assessment of special aspects of the project activity, e.g. technical or host country aspects.

No observers and/or trainees were included.

Statements of competence for the above mentioned team members are enclosed in annex 2 of this report.

3.4. Publication of the Monitoring Report

In accordance with the CDM M&P (§ 62) the draft monitoring report, as received from the project participants, has been made publicly available on the dedicated UNFCCC CDM website prior to the verification activity commenced. Comments received are taken into account in the course of the verification, if applicable.



3.5. Verification Planning

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.

Risk analysis and detailed audit testing planning

For the identification of potential reporting risks and the necessary detailed audit testing procedures for residual risk areas table A-1 is used. The structure and content of this table is given in Table 3-2 below.

Table 3-2: Identification of verification risk areas

Table A-1: GHG calculation procedures and management control testing / Detailed audit testing of residual risk areas and random testing				
Identification of potential reporting risk	Identification, assessment and testing of management controls	Areas of residual risks	Additional verification testing performed	Conclusions and Areas Requiring Improvement (including Forward Action Requests)
<i>The following potential risks were identified and divided and structured according to the possible areas of occurrence.</i>	<i>The potential risks of raw data generation have been identified in the course of the monitoring system implementation. The following measures were taken in order to minimize the corresponding risks. The following measures are implemented:</i>	<i>Despite the measures implemented in order to reduce the occurrence probability the following residual risks remain and have to be addressed in the course of every verification.</i>	<i>The additional verification testing performed is described. Testing may include:</i> <ul style="list-style-type: none"> - Sample cross checking of manual transfers of data - Recalculation - Spreadsheet 'walk throughs' to check links and equations - Inspection of calibration and maintenance records for key equipment - Check sampling analysis results <i>Discussions with process engineers who have detailed knowledge of process uncertainty/error bands.</i>	<i>Having investigated the residual risks, the conclusions should be noted here. Errors and uncertainties are highlighted.</i>

The completed table A-1 is enclosed in Annex 1 (table A-1) to this report.

Project specific verification checklist

In order to ensure transparency and consideration of all relevant assessment criteria, a project specific verification protocol has been developed. The protocol shows, in a transparent manner, criteria and requirements, means and results of the verification. The verification protocol serves the following purposes:

- It organises, details and clarifies the requirements a CDM project is expected to meet for verification
- It ensures a transparent verification process where the verifying DOE documents how a particular requirement has been proved and the result of the verification.

The basic structure of this project specific verification protocol for the periodic verification is described in

Table 3-3.

Table 3-3: Structure of the project specific periodic verification checklist

Table A-2: Periodic verification checklist				
Checklist Item	Reference	Verification Team Comments	Draft Conclusion	Final Conclusion
<i>The checklist items in Table A-2 are linked to the various requirements the monitoring of the project should meet. The checklist is organised in various sections as per the requirements of the topic and the individual project activity. It further includes guidance for the verification team.</i>	<i>Gives reference to the information source on which the assessment is based on.</i>	<i>The section is used to elaborate and discuss the checklist item in detail. It includes the assessment of the verification team and how the assessment was carried out. The reporting requirements of the VVS shall be covered in this section.</i>	<i>Assessment based on evidence provided if the criterion is fulfilled (OK), or a CAR, CL or FAR (see below) is raised. The assessment refers to the draft verification stage.</i>	<i>In case of a corrective action or a clarification the final assessment at the final verification stage is given.</i>

The periodic verification checklist (verification protocol) is the backbone of the complete verification starting from the desk review until final assessment. Detailed assessments and findings are discussed within this checklist and not necessarily repeated in the main text of this report.

The completed verification protocol is enclosed in Annex 1 (table A-2) to this report.

3.6. Desk review

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

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

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

3.7. On-site assessment

As most essential part of the verification exercise it is indispensable to carry out an inspection on site in order to verify that the project is implemented in accordance with the applicable criteria. Furthermore the on-site assessment is necessary to check the monitoring data with respect to accuracy to ensure the calculation of emission reductions. The main tasks covered during the site visit include, but are not limited to:

- The on-site assessment included an investigation of whether all relevant equipment is installed and works as anticipated.
- The operating staff was interviewed and observed in order to check the risks of inappropriate operation and data collection procedures.
- Information processes for generating, aggregating and reporting the selected monitored parameters were reviewed.
- The duly calibration of all metering equipment was checked.
- The monitoring processes, routines and documentations were audited to check their proper application.
- The monitoring data were checked completely.
- The data aggregation trails were checked via spot sample down to the level of the meter recordings.

Before and during the on-site visit the verification team performed interviews with the project participants to confirm selected information and to resolve issues identified in the document review.

Representatives of Mangalam Timber Products Limited and Birla Carbon Management Consulting Company (project consultant) including the operational staff of the plant were interviewed. The main topics of the interviews are summarised in Table 3-4.

Table 3-4: Interviewed persons and interview topics



Interviewed Persons / Entities	Interview topics
1. Projects & Operations Personnel ^{/IM01/} 2. Local Stakeholders ^{/IM03/}	<ul style="list-style-type: none"> - General aspects of the project - Forest management plan and implementation - Plant Species - Growth performance of plantations - Project boundary - Changes since validation - Monitoring and measurement equipment - Data collection - Remaining issues from validation - Calibration procedures - Quality management system - Involved personnel and responsibilities - Training and practice of the operational personnel - Implementation of the monitoring plan - Monitoring data management - Data uncertainty and residual risks - GHG removals calculation - Procedural aspects of the verification - Maintenance and control of plantation sites - Environmental aspects

The list of interviewees is included in chapter 7.4.

3.8. Draft verification reporting

On the basis of the desk review, the on-site visit, follow-up interviews and further background investigation the verification protocol is completed. This protocol together with a general project and procedural description of the verification and a detailed list of the verification findings form the draft verification report. This report is sent to the client for resolution of raised CARs, CLs and FARs.

3.9. Resolution of CARs, CLs and FARs

Nonconformities raised during the verification can either be seen as a non-fulfilment of criteria ensuring the proper implementation of a project or where a risk to deliver high quality emission reductions is identified.

Corrective Action Requests (CARs) are issued, if:

- Non-conformities with the monitoring plan or methodology are found in monitoring and reporting, or if the evidence provided to prove conformity is insufficient;



- Mistakes have been made in applying assumptions, data or calculations of emission reductions which will impair the estimate of emission reductions;
- Issues identified in a FAR during validation or previous verifications requiring actions by the project participants to be verified during verification have not been resolved.

The verification team uses the term Clarification Request (CL), which is issued if:

- information is insufficient or not clear enough to determine whether the applicable CDM requirements have been met.

Forward Action Requests (FAR) indicate essential risks for further periodic verifications. Forward Action Requests are issued, if:

- the monitoring and reporting require attention and / or adjustment for the next verification period.

For a detailed list of all CARs, CLs and FARs raised in the course of the verification pl. refer to chapter 4.

3.10. Final reporting

Upon successful closure of all raised CARs and CLs the final verification report including a positive verification opinion can be issued. In case not all essential issues could finally be resolved, a final report including a negative verification opinion is issued.

The final report summarizes the final assessments w.r.t. all applicable criteria.

3.11. Technical review

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

As a result of the technical review process the verification opinion and the topic specific assessments as prepared by the verification team leader may be confirmed or revised. Furthermore reporting improvements might be achieved.

3.12. Final approval

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

After this step the request for issuance can be started.



4. VERIFICATION FINDINGS

In the following paragraphs the findings from the desk review of the monitoring report^{/MR1/}, the calculation spreadsheet^{/XLS1/}, PDD^{/PDD/}, the Validation Report^{/VAL/} and other supporting documents, as well as from the on-site assessment and the interviews are summarised.

The summary of CAR, CL and FAR issued are shown in Table 4-1:

Table 4-1: Summary of CAR, CL and FAR

Verification topic	No. of CAR	No. of CL	No. of FAR
A – Description of project activity	2	0	0
B – Implementation of project activity	2	1	0
C – Description of monitoring system	4	0	0
D – Data and parameters	9	3	0
E - Calculation of Emission Reductions	8	1	0
SUM	25	5	0

The following tables include all raised CARs, CLs and FARs and the assessments of the same by the verification team. For an in depth evaluation of all verification items it should be referred to the verification protocols (see Annex).

Finding:	A1		
Classification	<input checked="" type="checkbox"/> CAR	<input type="checkbox"/> CL	<input type="checkbox"/> FAR
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	<p>With reference to Annex 34 EB 54 a consolidated CAR is raised on editorial issues of the web hosted MR:</p> <ol style="list-style-type: none"> Harvesting events are not found mentioned under the head: Relevant dates for the project activity in section A.1, of the webhosted MR^{/MR1/}. In the web-hosted MR, in many instances (e.g.: section A.1) 'emission reductions' have been mentioned. The PA does not result in 'emission reductions' as it is an A/R PA. In many instances in the web hosted MR^{/MR1/}, wordings 		



Finding:	A1
	<p>and instructions of the UNFCCC MR template^{/unfccc/} is found repeated.</p> <p>4. Tables and figures are not numbered and do not have with appropriate headings.</p>
<p>Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i></p>	<p>Editorial issues addressed in MR2 as below:</p> <ol style="list-style-type: none"> 1. Harvesting events included in Section A.1. 2. The term “Emission Reduction” replaced by Project Removals” in MR2. 3. Wording & instructions of UNFCCC deleted in MR2. 4. Tables and figures identified with numbers and appropriate headings.
<p>DOE Assessment #1 <i>The assessment shall encompass all open issues in annex A-2. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i></p>	<p>In the MR2 following changes were noted:</p> <ol style="list-style-type: none"> 1. Harvesting frequency is given but not the event. However harvesting events for PSPs is found given in table B.4. 2. Emission reduction is found replaced with GHG removals and is correct. 3. Tables are found numbered and captioned. There is no figure in revised MR. <p>However following CAR points were raised due to change in MR template (from VVM track to VVS track) based on EB66/Annex 20:</p> <ol style="list-style-type: none"> A. On page 1, information on estimated amount of GHG emission reductions or net anthropogenic GHG removals by sinks for this monitoring period in the registered PDD and Actual GHG emission reductions or net anthropogenic GHG removals by sinks achieved in this monitoring period are not provided. B. In section A.1, relevant dates for the project activity not included. Total GHG removals are not included. C. In section A.2 (a) Host Party(ies); (b) Region/ State/ Province, etc.; (c) City/ Town/ Community, etc. are not included. D. In section A.3, host party is not indicated. E. How is the value of 4,363,591 t CO₂e is arrived in section E.5 is not clear.
<p>Corrective Action #2 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i></p>	<ol style="list-style-type: none"> A. Estimated & Actual Net anthropogenic GHG removals by sinks achieved during this monitoring period provided on page1. B. Relevant dates for the project activity and total GHG removals included in section A.1 of MR3. C. Host Party(ies); Region/ State/ Province, etc. and City/

Finding:	A1
	<p>Town/ Community, etc. included in section A.2. D. Host party is already indicated in section A.3 E. Estimated net anthropogenic project removal amounting to 4,363,591 tCO₂e has been taken from the estimation provided in registered PDD, refer table for summary of calculation in section A.9, which is the sum of estimated removal upto 10th year (i.e. 2010). As the monitoring period has been revised till 2011, the estimated removal for the current monitoring period shall include 2011 removal also. Accordingly the estimated removal is 4,210,087 tCO₂e. Details included in section E.5 of MR3.</p>
<p>DOE Assessment #2 <i>The assessment shall encompass all open issues in annex A-2. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i></p>	<p>A. 'Net removals' has not been rounded down and hence is not conservative. Again basis of ex-ante value is not clear. B. Dates of and GHG removals found included in A.1. #B of the CAR is closed. C. a) Host Party(ies); (b) Region/ State/ Province, etc.; (c) City/ Town/ Community, etc. are found correctly included in section A.2. #C of the CAR is closed. D. Host party is correctly indicated. However, section referencing is incorrect in the revised MR. E. Still not clear. Value of 4,210,087 is not referred anywhere in MR.</p>
<p>Corrective Action #3</p>	<p>A. Net Removals rounded down in Project Removal and accordingly figures updated in the revised MR. D. Section referencing corrected in section A of the revised MR. E. The value, 4,210,087 is the estimated net anthropogenic GHG removal by sinks corresponding to the current monitoring period as per registered PDD. The same included as Table E.4 in section E.5 of the revised MR.</p>
<p>DOE Assessment #3</p>	<p>A. The net removals are now rounded down. The same has been checked in the spread sheet and the formulation is correct for rounding down. Annex 5 of the MR is also consistent. #A of the CAR is closed. B. #B of the CAR is already closed. C. #C of the CAR is already closed. D. Section A.3 is correctly referred to now. However the same still does not mention if India is the host party or not. Please refer to F-CDM-MR filling guidelines. E. The estimated 'Net Anthropogenic GHG removals' as per registered PDD is now clearly and transparently presented as table E-4 in the MR. However the same is not traceable in the spreadsheets.</p>
<p>Corrective Action #4</p>	<p>D. Section A.3 updated in MR6 mentioning India as host party. E. Spreadsheet of 'Estimated Net Anthropogenic GHG Removals'</p>



Finding:	A1
	included in Project Removal.
DOE Assessment #4	<p>D. Section A.3 has now been updated. It is now clearly mentioned that India is the host country. #D of the CAR is closed.</p> <p>E. The estimated 'Net Anthropogenic GHG removals' as per registered PDD is now clearly and transparently presented in the spreadsheet as well. However, it is observed that no units are mentioned in many instances e.g. table B.2 given in version 5 of the MR.</p>
Corrective Action #5	E. Units are now mentioned in the revised MR.
DOE Assessment #5	<p>E. Units of measurement are found mentioned in the revised MR/MR6/ correctly. #E of the CAR A1 is closed. However some additional editorial observations are raised on the revised MR:</p> <p>F. As per UNFCCC website the PP's name is M/s M/s Mangalam Timber Product Limited.</p> <p>G. It is not introduced what the meaning of "PSP" is. Over the document it has been used for different issues. D.2 of MR: parameter $A_{sp,i}$ where it says area of $PSP=0.04$ ha, here the meaning is understood as sample plot (20x20m). In Table B.4 a PSP is a sample parcel.</p> <p>H. All changes listed in section B.2 of the MR are specific changes of AR projects as per EB 66 Annex 24 and belong to section B.2.6.</p> <p>I. A "metering" diagram has not been included showing sample design and measurement points.</p> <p>J. In section E, formulae are not referenced with number of formulas in methodology</p>
Corrective Action #6	<p>F. PPs name corrected on front page in the revised MR.</p> <p>G. PSP stands for Permanent Sample Plot (PSP) of 20x20m area identified within a Sample Parcel. In some instances "Sample piece" has also been used for PSP which is corrected now. PSP and sample parcels illustrated in the schematic diagram in section C of MR</p> <p>H. All changes brought under the heading B.2.6 in the revised MR.</p> <p>I. Schematic Diagram of PSP & Sample Parcel included in section C, point 2 of MR7 that also indicates the parameters monitored in PSP.</p> <p>J. All formulae referenced as per the methodology in revised MR.</p>
DOE Assessment #6	<p>F. Name is as per PDD is M/s Mangalam Timber Products Limited. However, name of the PP has been corrected to M/s Mangalam Timber Products Limited which is in accordance with UNFCCC page. #F of CAR A1 is closed.</p> <p>G. PSP means permanent sample plots. PSP is part of a</p>



Finding:	A1
	<p>sample Parcel. Corrections are observed to have been done in the MR. A schematic diagram is also produced in section C for a clear understanding. #G of the CAR is closed.</p> <p>H. All changes are found described correctly in section B.2.6 of the MR. #H of the CAR is closed.</p> <p>I. A schematic diagram is now provided in section C of the MR. The diagram includes sample design and measurement points (schematic); monitoring parameters Height, Girth and number are found included in the diagram. In opinion of VT this diagram is acceptable in lieu of a metering diagram. #I of the CAR is closed.</p> <p>J. All the formulae are now found to be referenced to the methodology and numbered accordingly. #J of the CAR is closed.</p>
<p>Conclusion Tick the appropriate checkbox</p>	<p><input type="checkbox"/> To be checked during the next periodic verification</p> <p><input type="checkbox"/> Additional action should be taken (finding remains open)</p> <p><input checked="" type="checkbox"/> The finding is closed</p>

Finding:	A2		
Classification	<input checked="" type="checkbox"/> CAR	<input type="checkbox"/> CL	<input type="checkbox"/> FAR
<p>Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i></p>	<p>As per the Guidelines for completing the monitoring report form (Annex 34/EB54), the monitoring report should include reference to the applicable version(s) of relevant methodological tools and relevant EB decisions in section A.5 of the MR. The same are not found mentioned in the web hosted MR.</p>		
<p>Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i></p>	<p>Relevant methodological tools and EB decisions with applicable version(s) included in section A.4 of MR2 updated as per VVS track.</p>		
<p>DOE Assessment #1 <i>The assessment shall encompass all open issues in annex A-2. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i></p>	<p>The detailed tools are not correct since many tools have been updated into EB 65 Annex 5, and EB 68 Annex 31. These are not reflected in section A.4 of the MR.</p>		
<p>Corrective Action #2</p>	<p>Tools corrected in section A.4 of the revised MR.</p>		
<p>DOE Assessment #2</p>	<p>A detailed list of the tools being used is now given in section A.4 of the revised MR. However it is observed that some of the tools are not used for monitoring and verification purpose, but was used during validation of the project activity. Nevertheless the list is found to be complete and hence the finding is closed.</p>		
Conclusion	<input type="checkbox"/> To be checked during the next periodic verification		



Finding:	A2
Tick the appropriate checkbox	<input type="checkbox"/> Additional action should be taken (finding remains open) <input checked="" type="checkbox"/> The finding is closed

Finding:	B1		
Classification	<input checked="" type="checkbox"/> CAR	<input type="checkbox"/> CL	<input type="checkbox"/> FAR
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	A consolidated CAR is raised on initial project implementation. <ol style="list-style-type: none"> With reference to EB 44 Annex 16, the project boundary has to be fixed during the first verification. Project participant is required to demonstrate the actual project boundary confirming with the one outlined in the PDD. The webhosted MR mentions spacing of 3x1.5 meters. The PDD mentions spacing of 3x1.5m, 2x1.5 m and 1.5x1.5m. However different spacing from this was observed during site visit, which is not found reflected in the web hosted MR. 		
Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i>	<ol style="list-style-type: none"> Project boundary has been verified by a Kolkata based party G-Lution India who are one of the pioneer agencies in the field of GIS services. They have submitted the digital boundary of all the 12437 parcels developed through Arc GIS software which can also be seen on Google Earth, provided in “GIS Maps fixing Project Boundary” The registered PDD envisages plantation at a spacing of 3x1.5m across the entire project area. But during implementation the farmers, influenced by local practices, adopted different spacings like 2x2m, 2x1.5m, 1.5x1.5m and 1.5x1m. Very few adopted 2.5x1.5m, 2x1m, 1.5x1m & 1x1m also as detailed in section B.2.6 of MR2. 		
DOE Assessment #1 <i>The assessment shall encompass all open issues in annex A-2. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	<ol style="list-style-type: none"> However awaiting submission of report on project boundary from the GIS consultant if available. Clarification is required on the implication of the implementation of the monitoring plan, especially considering that tree counts are used in actual measurement (calculating trees in a 20 X 20 m sample plot). Further PP to clarify maintaining 244 PSPs instead of 1305 as mentioned in webhosted MR and registered PDD. 		
Corrective Action #2	Report from M/s G Lution India on GIS mapping work included in “GIS Maps fixing Project Boundary”.		
DOE Assessment #2	1. The report submitted by PP shows that the area has reduced in the latest measurements as compared to last measurements presented in the registered PDD. However		



Finding:	B1
	<p>provisions of EB 44/Annex 16 are no more applicable as documentation is based on VVS track. Instead paragraph 109 of PS will be applied which states that when submitting the first monitoring report for verification, the project boundary shall be fixed in such a way that it geographically delineates exclusively the registered CDM A/R project activity under the control of the project participants.</p> <p>Verification team evaluated the issue in light of paragraphs 288 and 289 of VVS (EB70/Annex 3). This is identified as first verification of the AR CDM project activity. In accordance with paragraph 34(d) of the CDM modalities and procedures for Afforestation and Reforestation project activities the verification team confirms those areas of land for which the control over A/R project activity has been established by the project participants since validation. As a part of this (first) verification report, the DOE confirms that the boundary of the A/R project activity geographically delineates exclusively the afforestation or reforestation project activity under the control of the project participants. However the appropriate representation is not done in the MR.</p> <p>2. No corrective action with reference to point 2 received from PP.</p>
<p>Corrective Action #3</p>	<p>1. As laid down in EB66, Annex 24(n) change in area is allowed limited to reduction only and not increase in respect of each discrete parcels rather than the project boundary as a whole. Accordingly area of each discrete parcel has been compared with GIS area mapped in 2009 used at validation stage. Any increase in area of discrete parcels brought to 2009 level resulting into a total reduction of 442.19 hectares in the project area, i.e. from 14,969.46 to 14,527.27 hectares. GIS mapping, SHP file & GIS Report is submitted as GIS Map-2011.</p> <p>Project removal (dated 16.11.12) & MR5 also updated accordingly.</p> <p>2. As per section E.2, sampling design & stratification of registered PDD, the sample plot of 0.04 ha size (constant for all strata) are to be used for monitoring the project activity, identified randomly within the sample parcels to</p>

Finding:	B1
	<p>avoid any bias. Accordingly tree count and tree measurement has been conducted within randomly selected 20m x 20m (=0.04 ha) area of each sample parcel. This led to change in number of sample plots from 1305 (1041 required) to 244. Revised calculation of PSPs is attached.</p> <p>Moreover, this is allowed as per para 4, point (I) of EB 66, Annex 24.</p>
<p>DOE Assessment #3</p>	<ol style="list-style-type: none"> 1. The GPS coordinates of all the plots along with the mapping has been checked and found to be acceptable. Table B.3 of the revised MR clearly represent the project area now, which is acceptable. From the study of the GIS report and ground observations done for 63 parcels of land in the project site by the verification team. The change in the land area is decrease of 2.95% of the land area included in the project activity during validation. The verification team noted that the comparison is done at the parcel level by the GIS consultant and result is found summarised stratawise in the report of year 2011^{/GIS/}. The same figures are reported in the revised MR as 14,527.27 ha and is fixed for the rest of the crediting period in accordance with paragraph 288 and 289 of VVS (EB70/Annex 03). It is noted that the land area cannot be lesser than this and hence is found to be most conservative. However inconsistency is observed in the project area as given in table C.1 and section D of the revised MR. CAR is open. 2. The project activity has sampling plots measuring 20 x 20 m (0.04 ha). All the trees inside the plot are found to be considered and recorded. The sample plots are found to be selected randomly. The parcels are selected by chits and are found to be numbered from 1 to 244. In each of these parcels the sample plot is selected by assigning them in the centre of the parcel, four cardinal directions (North, East, West and South) of the parcel and the corners of the parcel in a continuous manner which results in no bias in selection of sample plots. The re-calculation of sample plots to 244 was checked from the spreadsheet^{/PSP/} submitted by the PP and is found to be acceptable and in line with §4 (m) of Annex 24 EB 66. The verification team confirms that there is no deviation in the species planted or the edaphic features throughout the project boundary. The soil and climatic conditions are very similar and hence the decreased number of sample plots

Finding:	B1
	with the same precision and confidence level is acceptable. The verification team has visited 97 of the sample plots (apart from other parcels which are not PSPs) and the field observations are in line with the sample plot selection methodology. The verification team is confident that the sample plots selected are adequate and shall represent the project removals. However in the corrective action above and the MR the wrong point from Annex 24 EB 66 is found to be referred to. CAR is open.
Corrective Action #4	<ol style="list-style-type: none"> 1. Inconsistency in project area mentioned in Table C.1 and section D removed by entering correct area in Table C.1 of MR6 2. Reference corrected. Instead of point (l), the same is allowed as per point (m), para 4 of EB 66, Annex 24.
DOE Assessment #4	<ol style="list-style-type: none"> 1. The project area is now correctly represented and is internally consistent. #1 of the CAR os closed. 2. The correct reference from Annex 24 EB 66 (i.e. 4 (m)) is now found to b correctly referred. #2 of the CAR is closed.
Conclusion <i>Tick the appropriate checkbox</i>	<input type="checkbox"/> To be checked during the next periodic verification <input type="checkbox"/> Additional action should be taken (finding remains open) <input checked="" type="checkbox"/> The finding is closed

Finding:	B2		
Classification	<input checked="" type="checkbox"/> CAR	<input type="checkbox"/> CL	<input type="checkbox"/> FAR
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	A consolidated CAR is raised on the operation of the PA. <ol style="list-style-type: none"> 1. The webhosted MR mentions that first harvesting shall be done after 5 years. However in some instances, harvesting has been observed to have taken place in lesser time, and in some instances, at a longer time. The net GHG sequestration calculation does not reflect this in all cases. 2. As per section B.1 of the web hosted MR, re-plantation, if required, is to be done after 3 months of plantation. Adherence to this is not demonstrated. 3. Live fencing, which is stated in section A.4 of the web hosted MR as a mechanism to protect from grazing/browsing animals was not observed in all the PSPs during the site visit. 		
Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i>	<ol style="list-style-type: none"> 1. The plants are harvested first time normally after 5 years and subsequently thrice at the interval of 4 years each. However during implementation there has been variation in harvesting cycle of the parcels depending on growth of the crops, farmers' need and local practices prevailing in 		



Finding:	B2
	<p>the area. For this reason harvesting has been earlier in some parcels and delayed in others. Changes in harvesting cycle are reflected in Sections B.1 and B.2.6 of MR2.</p> <p>However changes in harvesting cycle do not have any impact over the net GHG sequestration calculation which has been computed on actual measurement of DBH, tree height and tree count of standing crop on the day of monitoring.</p> <p>2. Re-plantation is done only when survival rate is <90%. Record of re-plantation is maintained in "Sample Plot Register". Section B1 of MR2 updated accordingly</p> <p>3. The plantations are protected by means of live fencing upto maximum one year only to protect the trees from animal browsing. Eucalyptus trees are not eaten by goats, buffaloes etc, therefore fencing is not required afterwards. Section B.1 of MR2 updated accordingly.</p>
<p>DOE Assessment #1 <i>The assessment shall encompass all open issues in annex A-2. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i></p>	<p>1. Only harvesting in PSPs is talked about in the MR. No area in ha given. CAR is open.</p> <p>2. Details of replanting have been evidenced from the sample plot register. #2 of the CAR is closed.</p> <p>3. Traces of live fencing were observed in most of the visited PSPs. In some instances, trenches were also observed^{/PHOTO/}. In this context, the explanation is accepted. #3 of the CAR is closed.</p>
<p>Corrective Action #2 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i></p>	<p>Areas of PSPs harvested in each year is included in Table B.2 of MR3</p>
<p>DOE Assessment #2</p>	<p>1. Area in ha is found included in the MR. #1 of the CAR is closed.</p> <p>2. #2 of the CAR is already closed.</p> <p>3. #3 of the CAR is already closed.</p>
<p>Conclusion <i>Tick the appropriate checkbox</i></p>	<p><input type="checkbox"/> To be checked during the next periodic verification</p> <p><input type="checkbox"/> Additional action should be taken (finding remains open)</p> <p><input checked="" type="checkbox"/> The finding is closed</p>

Finding:	B3
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Finding:	B3		
Classification	<input type="checkbox"/> CAR	<input checked="" type="checkbox"/> CL	<input type="checkbox"/> FAR
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	Clarification required whether re-stratification is deemed necessary and how final stratification for this monitoring has been done, considering that not in all PSPs harvesting has been done in time and thus rotation cycle for these parcels changed in terms of age of plantation. Further it is not clear that the stratum area is correct as harvesting monitoring has only been done on PSP basis and not on whole area basis.		
Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i>	Re-stratification has been done based on variations in harvesting cycle as it impacts project removals. Removals have been computed based on standing crop as on date of monitoring. A recalculation of removals based on re-stratification has also been prepared. The spreadsheet is enclosed.		
DOE Assessment #1 <i>The assessment shall encompass all open issues in annex A-2. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	It is now discussed in the revised MR that how re-stratification was done and final stratification for this monitoring is different from original (as in registered PDD). Change in rotation cycle due to change in the harvesting time is considered in the re-stratification. The stratification was on the basis of year of plantation and not age of the cohort. This has now been changed. Stratum area is found correct. As per the methodology any ex-post adjustment to this stratification will be required when forest management practice occurs at different intensities, dates and spatial locations than originally planned. PP has conducted two monitoring events in the monitoring period under consideration. First monitoring was done in 2006 when the applied methodology (and hence the requirement of re-stratification on change in harvesting plan) was not in place. Second monitoring was done in 2011 after the CDM registration of the project activity on applied methodology and the PP detected departure from original forest management plan prior to this event (2011). It was thus detected in 2011 that the harvesting pattern has actually changed. As per the registered PDD the number of sample plots to be monitored was calculated to be 1041. However based on actual harvesting and to recalculate emission removals. PP has re-stratified the total plantation area as on status of 2011 monitoring and a recalculation of PSPs and NRs was done and was presented by PP at the time of verification. As per this revised calculation, the number of PSPs required is 244. In this context it is observed that the re-stratification process is acceptable. However errors are observed in the calculation of the number		



Finding:	B3
	<p>of PSPs as per the submitted spread sheet and is not in line with Annex 15, EB 58. Please refer §11, §12, §16 and §17 of the tool. CL B3 is open.</p>
<p>Corrective Action #2</p>	<p>Calculations are now made in line with the tool “Calculation of the number of sample plots for measurements within A/R CDM project activities” version 2.1.0 as per EB 58 Annex 15.</p>
<p>DOE Assessment #2</p>	<p>Revisions and corrections of the calculations of PSPs is found made by the PP with reference to the latest version of the tool, ‘Calculation of the number of sample plots for measurements within A/R CDM project activities’ version 02.1.0 (EB 58, Annex 15). As per §11 of this tool, equation (1) was used correctly to calculate the value of n (Number of sample plots required for estimation of biomass stocks within the project activity) to be 38.01. Default values are found to be correctly used, such as t_{VAL} (two-sided Student’s t-value) which is sourced from the tool itself. t_{VAL} is taken at infinite degree of freedom as per §11 of the tool, and at a confidence level of 95%, with reference to the applied methodology. The default value is sourced from table succeeding §18 of the applied tool. Value of Q (Quantity of biomass) used for calculating s_i (standard deviation) is found to be calculated conservatively only till the 5th and 6th year onwards for areas not harvested, in absence of available growth statistics, value of Q is found fixed at the 5th year value, which is also acceptable as this results in a higher number of PSPs. As per §12 of the applied tool, since n is higher than 30, no further iteration is required. PP has used §16 and §17 to further allocate the number of sample plots among strata using equation (4) of the tool, which is also correct and acceptable. The calculation is presented transparently in a spread sheet. The cells are found to be linked appropriately in the spreadsheet. The verification team has also done plausibility checks with reference to the guidance in §14 of the tool (even though this is not required to be applied to the project activity as per §12 of the tool). It was noted that the sampling fraction is less than 5%, but even by applying equation (2) of the tool, the value of n comes to 38.01. In this regard, the value of n is found to be correct. Further applying startawise rounding up results into requiremnet of 48 PSPs to be maintained in total all across the 17 revised strata. Change in the number PSPs from 1,041 to 48 is found acceptable in light of the provisions of EB66/Annex 24.</p>

Finding:	B3
	<p>According to the paragraph 4 (m) of the Guidelines on accounting of specified types of changes in A/R CDM project activities from the description in registered project design documents (version 2.0) changes in number of sample plots and their allocation to strata does not require prior approval by the CDM EB.</p> <p>A/R methodological tool “Calculation of the number of sample plots for measurements within A/R CDM project activities” version 2.1.0 is found correctly applied resulting in requirement of 48 PSPs, whereas 244 PSPs were found maintained by PP. Since numbers of PSPs in each revised stratum being maintained and monitored by PP are higher than what is required as per recalculation of PSPs for re-stratification, the calculation of NRs is acceptable.</p> <p>Considering that the re-stratification (also leading to recalculation of PSPs) has been correctly applied and accordingly tCERs for the monitoring period under consideration have been correctly calculated, the verification team accepted the calculation with re-stratification.</p> <p>In this context the re-stratification and recalculation of the PSPs is acceptable.</p> <p>CL B3 is closed.</p>
<p>Conclusion Tick the appropriate checkbox</p>	<p><input type="checkbox"/> To be checked during the next periodic verification</p> <p><input type="checkbox"/> Additional action should be taken (finding remains open)</p> <p><input checked="" type="checkbox"/> The finding is closed</p>

Finding:	C1		
Classification	<input checked="" type="checkbox"/> CAR	<input type="checkbox"/> CL	<input type="checkbox"/> FAR
<p>Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i></p>	<p>With reference to the registered PDD, explanation against the following plantation management is not provided in the published MR:</p> <p>a) Cleaning and site preparation measures: date, location, area, biomass removed and other measures undertaken;</p> <p>b) Planting: date, location, area, tree species (establishment of the stand models);</p> <p>c) Fertilization: date, location, area, tree species, amount and type of fertilizer applied, etc;</p> <p>d) Harvesting: date, location, area, tree species, volumes or biomass removed.</p> <p>Also, step wise Compliance of Annex 4 of PDD is found missing in section C of the published MR.</p>		
<p>Corrective Action #1 <i>This section shall be filled by</i></p>	Plantation management in detail has been provided in section		



Finding:	C1
<i>the PP. It shall address the corrective action taken in details.</i>	A.4 of MR2. Records of tree sp., location and area, cleaning & site preparation, planting, fertilisation (quantity & type), harvesting date and timber quantity etc have been well maintained in Sample Plot Register. Step wise compliance of Annex 4 of PDD has been included in section B.1 of MR2.
DOE Assessment #1	The revisions could not be traced in A.4. Demonstration of compliance to Annex 4 of PDD in section B.1 of revised MR is still not step wise.
Corrective Action #2.	Plantation management in detail has been provided in section C of MR3. Records of tree sp., location and area, cleaning & site preparation, planting, fertilisation (quantity & type), harvesting date and timber quantity etc have been well maintained in Sample Plot Register. Step wise compliance to Annex 4 included in Section C of MR3.
DOE Assessment #2	The plantation management details are now found to be detailed in section C of the revised MR. This has been checked from the recorded details in the sample plot register. The management practices were also confirmed from site visit interviews with the field staff. The records and the responses from the staff are consistent with the stated management practices in the revised MR. CAR is closed.
Conclusion <i>Tick the appropriate checkbox</i>	<input type="checkbox"/> To be checked during the next periodic verification <input type="checkbox"/> Additional action should be taken (finding remains open) <input checked="" type="checkbox"/> The finding is closed

Finding:	C2		
Classification	<input checked="" type="checkbox"/> CAR	<input type="checkbox"/> CL	<input type="checkbox"/> FAR
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	A consolidated CAR is raised on the management of the monitoring system. 1. QA/QC procedure of field measurement is implemented including hot check and blind check as mentioned in E.1.2 of PDD is not explained in the web hosted MR. 2. As per MR guidelines section C includes data collection procedures (information flow including data generation, aggregation, recording, calculation and reporting) etc, which is absent in the web hosted MR.		
Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i>	1. The QA/QC procedure including 'hot check' and 'blind check' explained in section C of MR2. Also records of hot check and blind check provided in Table C.1 and Table		



Finding:	C2
	<p>C.2 respectively in section C of MR2.</p> <p>2. Procedure of data collection, aggregation, recording, calculation and reporting etc is explained in Section C of MR2.</p>
<p>DOE Assessment #1</p> <p><i>The assessment shall encompass all open issues in annex A-2. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i></p>	<p>1. Hot check and blind checks were found described correctly in the section C of the MR. However results of hot check is not provided in table C.1. Further, results are given as 'OK' in blind check. Clarification required on what error percentage or variation from the actual observation is considered as 'OK' in the case of blind check. Definition of insignificant variations in both the checks is not found included in the revised MR.</p> <p>2. Information flow is not included in the section C of revised MR.</p>
<p>Corrective Action #2</p> <p><i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i></p>	<p>1. Results of Hot Check included in Table C.4. 'OK' given in the table and the insignificant variations are all the same. Allowable variation % which has been considered insignificant is provided in Table C.6 of MR3 as laid down in SOP no FFS-P-04.</p> <p>2. Information flow included in section C under the heading "QA/QC for data entry" of MR3.</p>
<p>DOE Assessment #2</p>	<p>1. The variations are given transparently as table C.6 in the MR. This consistent with the SOP no. FFS-P-04. #1 of the CAR is closed.</p> <p>2. The information flow has been detailed in the MR. The same is evidenced from observations and interviews during the site visit and hence acceptable. #2 of the CAR is closed.</p>
<p>Conclusion</p> <p><i>Tick the appropriate checkbox</i></p>	<p><input type="checkbox"/> To be checked during the next periodic verification</p> <p><input type="checkbox"/> Additional action should be taken (finding remains open)</p> <p><input checked="" type="checkbox"/> The finding is closed</p>

Finding:	C3		
Classification	<input checked="" type="checkbox"/> CAR	<input type="checkbox"/> CL	<input type="checkbox"/> FAR
<p>Description of finding</p> <p><i>Describe the finding in unambiguous style; address the context (e.g. section)</i></p>	<p>A consolidated CAR is raised on the roles and responsibilities of the personnel involved in the PA.</p> <p>1. Consolidated list of personnel including qualification, experience, training and responsibilities involved in the project activity during the monitoring period was not detailed during on site assessment.</p> <p>2. Organization structure given in section C depicts the same person in more than one area. Justify why the same name</p>		



Finding:	C3
	<p>has been given in more than one instance.</p> <p>3. As part of Quality Assurance and Quality Control procedures, appropriate trainings should be provided to the personnel involved in the field measurement works. As per the procedure both classroom examination and field examination will be conducted, and only those who pass the required examination can join the task team. PP shall provide evidence of the same.</p>
<p>Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i></p>	<p>1. List of personnel including qualification, experience, training and responsibilities involved in the project activity during the monitoring period included in tabular form in section C of MR2 as below:</p> <p>Table C.4: Roles & responsibilities of the personnel Table C.5: Competency of the personnel currently involved in monitoring the Project Table C.6: Competency of Ex- employees who participated in the project activity since 2001.</p> <p>2. In the organization structure in section C the names of Mr S K Dhall* and Mr D Das** has appeared more than one instance for the following reason:</p> <p>*Mr S K Dhall, Jr Officer, Borigumma has been temporarily given additional charge of Bastar till the appointment of dedicated officer for the area.</p> <p>**Mr D Das, Senior Officer, Boipariguda has been temporarily given additional charge of Malkangiri till the appointment of dedicated officer for the area.</p> <p>Organisation structure and relevant portion of section C of MR2 amended accordingly.</p> <p>3. Adequate training was conducted for the personnel involved in monitoring activity followed by classroom and field examinations. Training details of the personnel included in Table C.7 at section C of MR2. Training records and examination records submitted to DOE. Personnel who passed the examination were engaged in field measurement work.</p>
<p>DOE Assessment #1 <i>The assessment shall encompass all open issues in annex A-2. In case of non-closure,</i></p>	<p>1. The details regarding qualification, training etc are now found detailed in the MR. These facts have been checked from personnel information which includes short bio-data,</p>



Finding:	C3
<p><i>additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i></p>	<p>details of qualification etc obtained from the PP. The information was further cross checked from site visit interviews^{/IMO1/} and the information provided is found to be correct. It is also noted that qualified (experienced and trained) personnel in the field of plantation, forestry and agriculture are leading the operational team. In this context the verification team confirms that the personnel involved are technically and operationally competent in operation, maintenance, monitoring and reporting activities of the plantation. #1 of the CAR is closed.</p> <p>2. From the site visit interviews^{/IMO1/} it was confirmed that Mr. Dhall and Mr. Das mentioned above have additional responsibilities. However from the response it is still not clear from which date they have been handling the additional responsibilities and till when this may continue.</p> <p>3. Exams were held in 2011 only. Details regarding exams conducted in the earlier years are not provided.</p>
<p>Corrective Action #2 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i></p>	<p>2. Mr S K Dhall has been temporarily given additional charge of Bastar with effect from 2010-11-18 and Mr D Das has been temporarily given additional charge of Malkangiri with effect from 2011-01-14 till the appointment of dedicated officers for the respective areas. Section C of MR3 also updated accordingly.</p> <p>3. Examination also held in 2006. Records of examination held in 2006 submitted to DOE.</p>
<p>DOE Assessment #2</p>	<p>1. #1 of the CAR is already closed. 2. The explanation is acceptable. The same is also reflected in section C of the revised MR. #2 of the CAR is closed. 3. Details of exams conducted in 2006 also have been provided. #3 of the CAR is closed.</p>
<p>Conclusion <i>Tick the appropriate checkbox</i></p>	<p><input type="checkbox"/> To be checked during the next periodic verification <input type="checkbox"/> Additional action should be taken (finding remains open) <input checked="" type="checkbox"/> The finding is closed</p>

Finding:	C4
<p>Classification</p>	<p><input checked="" type="checkbox"/> CAR <input type="checkbox"/> CL <input type="checkbox"/> FAR</p>
<p>Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i></p>	<p>As per Annex 34/ EB 54, relevant emergency procedures for the monitoring system need to be included in the section C of MR. No emergency procedures for the monitoring system was found mentioned in the section C of the published MR^{/MR1/}.</p>
<p>Corrective Action #1 <i>This section shall be filled by the PP. It shall address the cor-</i></p>	<p>Emergency procedures as below included in section C of MR2.</p>



Finding:	C4
<i>rective action taken in details.</i>	<ul style="list-style-type: none"> • Procedures to assess the GHG emissions due to fire, • Procedures to assess the impact of pest infestation and • Procedures to assess impact of weather related disturbances on carbon stocks in the project boundary.
DOE Assessment #1 <i>The assessment shall encompass all open issues in annex A-2. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	Emergency procedure is found included in the section C of revised MR. It is also clarified in the MR by PP that none of the said emergency procedures were used during the monitoring period under consideration. Verification team verified the same through the field records and the on-site interviews. CAR C4 is closed successfully.
Conclusion <i>Tick the appropriate checkbox</i>	<input type="checkbox"/> To be checked during the next periodic verification <input type="checkbox"/> Additional action should be taken (finding remains open) <input checked="" type="checkbox"/> The finding is closed

Finding:	D1		
Classification	<input checked="" type="checkbox"/> CAR	<input type="checkbox"/> CL	<input type="checkbox"/> FAR
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	As per the registered PDD, monitoring of area of each stratum is to be done using GIS data at the start of the PA, and repeated every 5 years then on, with adjustments to the stratum area if any. This has not been demonstrated in the web-hosted MR. Further the accuracy of the GPS machine also has to be provided.		
Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i>	Monitoring of area of each stratum in the years 2001 when the project started, after 5 years in 2006 and again after 5 years in 2011 has been done using GIS technique by external agency M/s G Lution India who are specialist in GIS mapping. Project Boundary - 2001 (407 parcels) Project Boundary - 2006 (9456 parcels) Project Boundary - 2011 (12437parcels) Garmin make eTrax Vista GPS machines were used for obtaining GPS coordinates whose accuracy is mentioned in their product catalogue, accuracy reproduced as below: GPS Accuracy: Position <15 meters, 95% typical.		
DOE Assessment #1	Google map files and consolidation in excel spreadsheet is provided by the PP. However, Report from the external agency i.e. M/s G Lution India is not submitted.		



Finding:	D1
Corrective Action #2	Report from M/s G Lution India on GIS mapping work included in GIS Map_2001, GIS Map_2006 & GIS Map_2011 respectively.
DOE Assessment #2	Report from external agency is submitted by PP. Monitoring of area of each stratum is found done using GIS data at the start of the PA, and repeated every 5 years then on, with adjustments to the stratum area in accordance with the registered PDD. Revised MR clearly mentions the same. Hence CAR is closed.
Conclusion <i>Tick the appropriate checkbox</i>	<input type="checkbox"/> To be checked during the next periodic verification <input type="checkbox"/> Additional action should be taken (finding remains open) <input checked="" type="checkbox"/> The finding is closed

Finding:	D2		
Classification	<input checked="" type="checkbox"/> CAR	<input type="checkbox"/> CL	<input type="checkbox"/> FAR
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	With reference to the registered PDD, the parameter 'Total area of all sample plots in stratum i' is based on the field measurements taken place before the project start and adjusted there after every 5 years. However, the published MR refers to geo-spatial data as the source of the value. Further, the frequency of monitoring mentioned is not in line with the registered PDD,		
Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i>	Monitoring of 'Total area of all sample plots in stratum i' is not required as we are taking 20m x 20m plot as sample plot within each sample parcel and this area is fixed for entire period of the project activity. For this reason we are excluding this parameter from monitoring.		
DOE Assessment #1	No justification is provided whether this is allowed as per prevalent rules in AR CDM.		
Corrective Action #2	This is allowed as per EB decision 63, Annex 27 Version 01.0 "Guidelines on accounting of specified types of changes in A/R CDM project activities from the description in registered project design documents."		
DOE Assessment #2	The referred guidance is not applicable for VVS track. Also exact references (paragraphs etc) are not found mentioned.		
Corrective Action #3	This is allowed as per para 4, point (l) of EB 66, Annex 24 Version 02.0 "Guidelines on accounting of specified types of changes in A/R CDM project activities from the description in registered project design documents".		
DOE Assessment #3	Exclusion of the parameter is accepted in light of EB66/Annex 24. The reference made to Annex 24 EB 66 is acceptable. CAR is closed.		



Finding:	D2
Conclusion <i>Tick the appropriate checkbox</i>	<input type="checkbox"/> To be checked during the next periodic verification <input type="checkbox"/> Additional action should be taken (finding remains open) <input checked="" type="checkbox"/> The finding is closed

Finding:	D3		
Classification	<input checked="" type="checkbox"/> CAR	<input type="checkbox"/> CL	<input type="checkbox"/> FAR
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	As per the approved monitoring plan contained in the registered PDD, years of monitoring activity is a monitoring parameter. The same is found included in the section D.2 of the MR version 01. However value of data is missing for the data/parameter.		
Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i>	The values of the monitoring parameter 'Years of monitoring activity' included in section D2 of MR2 as 2006 & 2011.		
DOE Assessment #1	The monitoring parameter 'years of monitoring activity' is found included in the MR. The years are found to be correctly depicted. The CAR is closed.		
Conclusion <i>Tick the appropriate checkbox</i>	<input type="checkbox"/> To be checked during the next periodic verification <input type="checkbox"/> Additional action should be taken (finding remains open) <input checked="" type="checkbox"/> The finding is closed		

Finding:	D4		
Classification	<input checked="" type="checkbox"/> CAR	<input type="checkbox"/> CL	<input type="checkbox"/> FAR
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	As per the approved monitoring plan contained in the registered PDD land title is a monitoring parameter. However, the details of the same included in section D.2 of the MR version 01 do not include the outcome of the monitoring.		
Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i>	MTPL ensures that the land title is available with all the participating farmers and the results of checking is available in "List of participating farmers".		
DOE Assessment #1 <i>The assessment shall encompass all open issues in annex A-2. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	The verification team has reviewed the submitted <i>patta records</i> (land title deeds). The copy of the land deed is found to be either with the involved farmers or the financing bank. Copy of the same is found to be filed with the PP. The CAR is closed.		
Conclusion <i>Tick the appropriate checkbox</i>	<input type="checkbox"/> To be checked during the next periodic verification <input type="checkbox"/> Additional action should be taken (finding remains open) <input checked="" type="checkbox"/> The finding is closed		



Finding:		D5		
Classification	<input checked="" type="checkbox"/> CAR	<input type="checkbox"/> CL	<input type="checkbox"/> FAR	
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	As per the approved monitoring plan contained in the registered PDD carbon right is a monitoring parameter with frequency of monitoring every 5 years. However, in the MR version 01 stipulates monitoring frequency at each verification. PP shall justify and provide the monitoring data in accordance with the monitoring plan.			
Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i>	Monitoring frequency of Data 7 'Carbon right' corrected in Section D.2 of MR2 as stipulated in registered PDD. The field officers checked the availability of carbon right signed by all individual farmers participating in the project and the results of checking is provided in "List of Participating Farmers" and "Declaration by MTPL".			
DOE Assessment #1	List of participating farmers was checked by verification team against the authorization letters. Though the parameter is included in section D.2 of the MR, its value or monitoring result is not transparently provided. CAR is open.			
Corrective Action #2	Monitoring result of this parameter included in section D.2 of MR6.			
DOE Assessment #2	The list of participating farmers and the declaration by MTPL regarding the participating farmers and their carbon rights agreement with MTPL has been reviewed. It is now correctly represented in the MR that carbon right agreement with all the farmers have been established and are still maintained. CAR is closed.			
Conclusion <i>Tick the appropriate checkbox</i>	<input type="checkbox"/> To be checked during the next periodic verification <input type="checkbox"/> Additional action should be taken (finding remains open) <input checked="" type="checkbox"/> The finding is closed			

Finding:		D6		
Classification	<input checked="" type="checkbox"/> CAR	<input type="checkbox"/> CL	<input type="checkbox"/> FAR	
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	As per the approved monitoring plan contained in the registered PDD, Available Grazing Land (AGL) is a monitoring parameter with frequency of monitoring every 5 years. MR version 01 states that Available grazing land under the control of PP is 2548.42 acres as against the required area of 2409.57. PP shall provide evidence of the same.			
Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i>	Survey was conducted by Maa Samalyi Voluntary Organisation, Nabarangpur on behest of MTPL for livestock population, availability of feed resources & grazing land from October – December, 2011. Their report dated 2012-02-14 concludes that available grazing land is 2840.30 acres as			



Finding:	D6
	against the required area of 2673.40 acres. Figures have changed as the calculation for required grazing land revised based on number of existing and displaced animals provided by the current survey. Revised leakage calculation sheet provided in Project Removal calculation and section E.3 of MR2 updated accordingly.
DOE Assessment #1	Clarification is required as the monitoring frequency is 5 years, only survey of 2011 is referred.
Corrective Action #2 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i>	Survey was also conducted in the year 2006. Previously we submitted for the current year 2011 only. Now survey report of 2006 is also submitted identified as GRZb. The forwarding letters of the survey reports duly authenticated by Mr Purno Chandra Mahapatro, Secretary of the NGO who conducted the surveys, included in the report.
DOE Assessment #2	Sample size does not seem to be included in the report.
Corrective Action #3	Though the sample size was given as “No of farmers visited” in Table 2, the same has now been categorically reflected in Table 1 under the head ‘Study area and Sample size’ of both the reports, reports resubmitted as GRZa (Rev01) and GRZb (Rev01).
DOE Assessment #3	Clarification is now provided that sample size was given under different heading. Now this is also clearly depicted in the revised reports. Appropriate monitoring of the grass lands are found to be conducted by third party. Report is authenticated by the said NGO and list of farmers interviewed is provided. The reports are acceptable. The frequency of the evaluation and the reports are in line with validated monitoring plan. CAR is closed.
Conclusion <i>Tick the appropriate checkbox</i>	<input type="checkbox"/> To be checked during the next periodic verification <input type="checkbox"/> Additional action should be taken (finding remains open) <input checked="" type="checkbox"/> The finding is closed

Finding:	D7		
Classification	<input checked="" type="checkbox"/> CAR	<input type="checkbox"/> CL	<input type="checkbox"/> FAR
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	As per the approved monitoring plan contained in the registered PDD number of animals is a monitoring parameter with frequency of monitoring every 5 years. MR version 01 does not include this monitoring parameter. Similarly, As per the approved monitoring plan contained in the registered PDD existing number of head of animal type is a monitoring parameter. MR version 01 states number of		



Finding:	D7
	cows/ buffalos = 659 and Goats = 508. Displaced number of head of animal type has been given in MR version 01 as cows/ buffalos = 1863 and Goats = 3020. The same is not evidenced.
Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i>	The parameter “no. of existing animals” ($H_{Existing,g,k,t}$) included at serial no 9 in section D of MR2. As per the current survey by Maa Samalyi Voluntary Organisation, number of existing & displaced animals has changed. Now number of existing animals are cows/ buffalos = 756 & goats = 696 and displaced animals are cows/ buffalos = 2062 & goats = 3374 as per the report. Section D and E.3 of MR2 updated accordingly.
DOE Assessment #1	The parameter has been included in section D of the revised MR. Explanation required as frequency of monitoring is 5 years; only data of year 2011 is provided. Please clarify.
Corrective Action #2 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i>	Survey was also conducted in the year 2006. Previously we submitted for the current year 2011 only. Now survey report of 2006 is also submitted, identified as GRZb. The forwarding letters by Mr Purno Chandra Mahapatro, Secretary of the NGO who conducted the surveys authenticating the survey reports included in the report.
DOE Assessment #2	Sample size is not included in the report.
Corrective Action #3	Though the sample size was given as “No of farmers visited” in Table 2, the same has now been categorically reflected in Table 1 under the head ‘Study area and Sample size’ of both the reports, reports resubmitted as GRZa (Rev01) and GRZb (Rev01).
DOE Assessment #3	Clarification is now provided that sample size was given under different heading. Now this is also clearly depicted in the revised reports. Appropriate monitoring of the grass lands are found to be conducted by third party. Report is authenticated by the said NGO and list of farmers interviewed is provided. The reports are acceptable. The frequency of the evaluation and the reports are in line with validated monitoring plan. CAR is closed.
Conclusion <i>Tick the appropriate checkbox</i>	<input type="checkbox"/> To be checked during the next periodic verification <input type="checkbox"/> Additional action should be taken (finding remains open) <input checked="" type="checkbox"/> The finding is closed

Finding:	D8		
Classification	<input checked="" type="checkbox"/> CAR	<input type="checkbox"/> CL	<input type="checkbox"/> FAR

Finding:	D8
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	As per the approved monitoring plan contained in the registered PDD biomass burning is a monitoring parameter with frequency of monitoring every 5 years. MR version 01 refers to a survey for the same. PP shall provide evidence of the same.
Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i>	The survey by Maa Samalyi Voluntary Organisation, Nabarangpur, also includes identification of events of biomass burning in the project area. The survey report states that there has been no biomass burning in the project area.
DOE Assessment #1	Clarification is required as the monitoring frequency is 5 years, only survey of 2011 is referred.
Corrective Action #2 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i>	Survey was also conducted in the year 2006. Previously we submitted for the current year 2011 only. Now survey report of 2006 is also submitted, identified as GRZb. The forwarding letters of the survey reports duly authenticated by Mr Purno Chandra Mahapatro, Secretary of the NGO who conducted the surveys, included in the report.
DOE Assessment #2	Sample size is not included in the report.
Corrective Action #3	Though the sample size was given as “No of farmers visited” in Table 2, the same has now been categorically reflected in Table 1 under the head ‘Study area and Sample size’ of both the reports, reports resubmitted as GRZa (Rev01) and GRZb (Rev01).
DOE Assessment #3	The representation of the sample size has been corrected and is now clear. Report is authenticated by the said NGO and list of farmers interviewed is provided. CAR is closed.
Conclusion <i>Tick the appropriate checkbox</i>	<input type="checkbox"/> To be checked during the next periodic verification <input type="checkbox"/> Additional action should be taken (finding remains open) <input checked="" type="checkbox"/> The finding is closed

Finding:	D9		
Classification	<input checked="" type="checkbox"/> CAR	<input type="checkbox"/> CL	<input type="checkbox"/> FAR
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	Survival rate has been included in the published MR. This is recorded and calculated in the measurement records ^{/MSR/} . However in many instances, the survival rate calculations for sample plots are found to be wrong. Also, the published MR does not explain how the following has been done, with reference to the registered PDD: a) The initial survival rate of planted trees shall be counted three months after the planting, and re-planting shall be conducted if the survival rate is lower than 90 percent of		



Finding:	D9
	the final planting density. b) Final checking three years after the planting;
Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i>	Survival rate calculation in measurement sheets has been corrected. a) Records of initial survival checking after 3 months of plantation and re-plantation if survival <90% is maintained in Sample plot register. Date & number of seedlings replanted is recorded. b) Final survival checking is done after 3 years of plantation. Record maintained in "Sample Plot Register".
DOE Assessment #1 <i>The assessment shall encompass all open issues in annex A-2. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	Project removal has been calculated using average tree height, DBH and total number of trees per hectare in each sample parcel. Hence, it is observed that survival rate has no role in computing project removal. However details are not provided.
Corrective Action #2	Tree volume calculation has been done using the formula $V = -0.0001 + 0.31145D^2H$ (Pg. 226 of Volume Equation for Forests of India, Nepal and Bhutan, Forest Survey of India). Project removal has been calculated using each tree height, DBH and total number of trees in each sample parcel. However monitoring of survival rate as per registered PDD will continue as discussed.
DOE Assessment #2	The same is not found reflected in section D of the MR.
Corrective Action #3	We confirm to continue monitoring of the parameter "survival rate" as per registered PDD. Accordingly this parameter included as 12 th parameter in Section D.2, Data and parameters to be monitored in the revised MR.
DOE Assessment #3	The data and parameter is now added as 12 th parameter in the revised MR. The number of trees are found to be recorded as observed from the field data, and the survival rate is calculated from this. The CAR is closed.
Conclusion <i>Tick the appropriate checkbox</i>	<input type="checkbox"/> To be checked during the next periodic verification <input type="checkbox"/> Additional action should be taken (finding remains open) <input checked="" type="checkbox"/> The finding is closed

Finding:	D10		
Classification	<input type="checkbox"/> CAR	<input checked="" type="checkbox"/> CL	<input type="checkbox"/> FAR
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	1. Coppiced area and Deviation from planting have been included as monitored parameters in the published MR. However these are not parameters to be monitored as per		



Finding:	D10
	<p>the registered PDD. The data from coppicing is mentioned to be used in calculations of project removals. However, as per the registered PDD, coppicing is to be monitored to ensure good forestry management practices. Hence clarification is required on the relevance of including these as monitored parameters.</p> <p>2. The number of trees in each sample plot has been detailed in the measurement records. However this is not a monitored parameter as per the registered PDD. Further, this is inherently linked to survival rate. Hence clarification is required on the relevance of including this as a monitored parameter.</p>
<p>Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i></p>	<p>1. “Coppiced area” and “Deviation from planting” are truly irrelevant for monitoring hence, both excluded in MR2.</p> <p>2. In registered PDD the project removal was estimated using survival % and therefore ‘Number of trees’ was not considered a monitoring parameter. But while computing the actual project removal it was observed that the parameter ‘number of trees’ can be used directly. There is no need of arriving at this figure by multiplication of survival % and number of trees planted. The volume equation used in calculating project removal gives tree volume per hectare, hence the parameter ‘actual no of trees’ is more relevant than ‘survival rate’. Therefore, ‘Number of Trees (Tree_{i,n})’ need to be included as monitoring parameter and survival rate excluded in section D.2 of MR2.</p>
<p>DOE Assessment #1 <i>The assessment shall encompass all open issues in annex A-2. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i></p>	<p>1. Redundant information has been found to be removed from the MR, which is acceptable. #1 of the CAR is closed.</p> <p>2. Ex-ante calculation and ex-post calculation and project removals are done differently. Hence no error identified as the method adopted is in line with the applied methodology and the registered PDD. However clarification required whether the total number of trees is to be made a separate monitoring parameter. Finding is open.</p>



Finding:	D10
<p>Corrective Action #2 <i>This section shall be filled by the PP. It shall address the corrective action taken in details</i></p>	<p>Survival rate is calculated as no of trees available x 100/ No of trees planted. Number of trees is the original data collected from field in order to arrive at survival rate. Monitoring of survival rate is basically monitoring of no of trees.</p> <p>The volume equation used in calculating project removal gives volume per tree. Therefore, project removal is calculated using number of trees' directly by multiplying the volume with 'actual no of trees'. But monitoring of survival rate as per registered PDD will continue as discussed as the same is also used for plantation management.</p>
<p>DOE Assessment #2</p>	<p>The number of trees is found to be recorded as observed from the field data, and the survival rate is calculated from this. Survival rate is also clearly shown as a monitoring parameter. Since the basis of survival rate is number of trees, which is recorded as per the field monitoring data, no discrepancy is observed. The ex-post calculation gives the most precise account of the project removals as each individual tree is accounted. No change in the monitoring of the project activity is required as all the required parameters are found monitored.</p>
<p>Conclusion <i>Tick the appropriate checkbox</i></p>	<p><input type="checkbox"/> To be checked during the next periodic verification <input type="checkbox"/> Additional action should be taken (finding remains open) <input checked="" type="checkbox"/> The finding is closed</p>

Finding:	D11		
Classification	<input type="checkbox"/> CAR	<input checked="" type="checkbox"/> CL	<input type="checkbox"/> FAR
<p>Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i></p>	<p>Tree height is measured using Abney's level. Along with Abney's level, it is observed that in some instances, a graduated bamboo pole is also used. Clarification is required on this practice of measuring tree height. Repercussions on calculations of net removal are also to be clarified.</p>		
<p>Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i></p>	<p>The established procedure of measuring tree height uses Abney's level (Angle Level). But it has been experienced that height of small trees are more conveniently measured using bamboo poles compared to Abney's level. Straight bamboo poles are chosen and prepared for tree height measurement by marking it with measuring tape. So, for few parcels bamboo poles has been used. As far accuracy is concerned it has been confirmed that both way of measurement gives the same result. Hence, there is no impact of bamboo pole measurement on net project removal.</p>		



Finding:	D11
DOE Assessment #1	The verification team confirms that the height of the trees is measured using Abney's level. In some instances, especially if the plantation spacing is close, it is observed that marked bamboo poles are used for measuring the height of nearby trees after the initial measurement using Abney's level. Use of bamboo poles is accepted as long as pole is measured using a standard tape. This is also considered as a good practice. The CAR is closed.
Conclusion <i>Tick the appropriate checkbox</i>	<input type="checkbox"/> To be checked during the next periodic verification <input type="checkbox"/> Additional action should be taken (finding remains open) <input checked="" type="checkbox"/> The finding is closed

Finding:	D12		
Classification	<input type="checkbox"/> CAR	<input checked="" type="checkbox"/> CL	<input type="checkbox"/> FAR
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	Wood density is rather mentioned as fixed parameter in PDD, however is not mentioned in section D.1 of the MR.		
Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i>	We have taken wood density from project database which was onetime assessment. Since the tree species and project boundary remain unchanged throughout the project activity, density does not change. Accordingly this parameter is not considered for monitoring, and is fixed ex-ante, and is mentioned in the MR.		
DOE Assessment #2	Wood density is not a monitoring parameter. It is categorized under Data and parameters not monitored (default or possibly measured one time) in the applied methodology. Accordingly it was measured one time by the PP and was recorded in project database, which was validated by validating DOE and was accepted in registered PDD. Thus ex ante fixed value of wood density has been used which is correct and appropriate in opinion of the verification team. MR has been found revised to include wood density in section D.1. CL is closed.		
Conclusion <i>Tick the appropriate checkbox</i>	<input type="checkbox"/> To be checked during the next periodic verification <input type="checkbox"/> Additional action should be taken (finding remains open) <input checked="" type="checkbox"/> The finding is closed		

Finding:	E1		
Classification	<input checked="" type="checkbox"/> CAR	<input type="checkbox"/> CL	<input type="checkbox"/> FAR
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	All the cells in the ER spread sheet are found not to be linked with each other and between the worksheets. For example, the baseline strata summary is not linked to baseline strata I		

Finding:	E1
	and strata II sheets.
Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i>	Interlinking of cells of all the spread sheets of Project removal calculation done.
DOE Assessment #1 <i>The assessment shall encompass all open issues in annex A-2. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	The cells in the worksheet are all now interlinked. The calculations are found to be transparent and traceable. The CAR is closed.
Conclusion <i>Tick the appropriate checkbox</i>	<input type="checkbox"/> To be checked during the next periodic verification <input type="checkbox"/> Additional action should be taken (finding remains open) <input checked="" type="checkbox"/> The finding is closed

Finding:	E2		
Classification	<input checked="" type="checkbox"/> CAR	<input type="checkbox"/> CL	<input type="checkbox"/> FAR
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	The net GHG sequestration calculation worksheet is inconsistent with the data sheet recorded from sample plots. Links to the sample plot data and sample plot stratum are not found.		
Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i>	Inconsistency removed in GHG sequestration calculation and sample plot data and their interlinking done.		
DOE Assessment #1 <i>The assessment shall encompass all open issues in annex A-2. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	The worksheet is now found to be corrected. The sample plot data and the GHG sequestration calculation are found to be linked. CAR is closed.		
Conclusion <i>Tick the appropriate checkbox</i>	<input type="checkbox"/> To be checked during the next periodic verification <input type="checkbox"/> Additional action should be taken (finding remains open) <input checked="" type="checkbox"/> The finding is closed		

Finding:	E3		
Classification	<input checked="" type="checkbox"/> CAR	<input type="checkbox"/> CL	<input type="checkbox"/> FAR
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	The value of “pi” is given with the formula “22/7” which results in a higher value than π .		
Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i>	For project removal calculation, value of “pi” taken as 3.141592, as available on internet, instead of 22/7 for all project removal calculations.		
DOE Assessment #1	Please give clarification why ‘pi’ function of MS-excel is not		



Finding:	E3
<i>The assessment shall encompass all open issues in annex A-2. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	used.
Corrective Action #2	Project removal calculation revised using pi function of excel.
DOE Assessment #2	Using the 'pi' function in the MS-excel is accepted instead of entering the value of 'pi'. 'pi' function of excel is used which is conservative over 22/7 hence acceptable. The CAR is closed.
Conclusion <i>Tick the appropriate checkbox</i>	<input type="checkbox"/> To be checked during the next periodic verification <input type="checkbox"/> Additional action should be taken (finding remains open) <input checked="" type="checkbox"/> The finding is closed

Finding:	E4		
Classification	<input checked="" type="checkbox"/> CAR	<input type="checkbox"/> CL	<input type="checkbox"/> FAR
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	Equation for net GHG removals calculation provided in page 24 of published MR and page 57 of registered PDD requires calculation of carbon stock in above-ground biomass of tree l of species j in plot sp in stratum i at time t ; in tC tree-1. This calculation is not provided in the net GHG removals calculation. Instead height and DBH values are averaged and average volume is calculated.		
Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i>	Volume equation $V = -2.4726 + 0.4354 B \times H \text{ m}^3/\text{ha}$ gives the volume of biomass per hectare and not the volume of individual tree. Hence, volume of individual tree using their DBH & height can not be calculated with this formula. We require putting average DBH & height per hectare. We have averaged DBH & height of all the trees contained in 20m x 20m area, counted number of trees in 20m x 20m area and calculated number of trees per hectare. With this three data, volume of biomass per hectare has been calculated individually for each sample parcel.		
DOE Assessment #1 <i>The assessment shall encompass all open issues in annex A-2. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	The same is not in conformity with the approach retained in the PDD.		
Corrective Action #2 <i>This section shall be filled by the PP. It shall address the corrective action taken in details</i>	In order to retain the approach of registered PDD, volume equation has been changed to calculate the volume of individual tree. Now tree volume calculated using the formula $V = -0.0001+0.31145D^2H$ (Pg. 226 of Volume Equation for Forests of India, Nepal and Bhutan, Forest Survey of India). So, we are not using the average value of tree DBH and		

Finding:	E4
	height to calculate the tree volume.
DOE Assessment #2	The volume equation chosen is not found justified against EB 67 /Annex 24 in the MR.
Corrective Action #3 <i>This section shall be filled by the PP. It shall address the corrective action taken in details</i>	The appropriateness of the above volume equation has been examined using A/R Methodological Tool “Demonstrating appropriateness of volume equation for estimation of aboveground tree biomass in A/R CDM project activities”, EB 67 Annex 24 . The equation $V = -0.0001 + 0.31145D^2H$ [n=580, $R^2=0.9855$ derived from data set of n = 580 and coefficient of determination $R^2 = 0.9855$ qualifies the criteria laid down in para 5(c) of the tool, hence use of the said equation is fully justified for estimating tree volume. Justification for appropriateness of equation provided in section B.2.3 of MR4 and the tool referred in section A.4.
DOE Assessment #3	Volume equation has been sourced from the published literature and is used in the host country. The change in equation is found to meet §5c of Annex 24 EB 67, and hence is acceptable as per §4 (p) of Annex 24 of EB 66. CAR is closed.
Conclusion <i>Tick the appropriate checkbox</i>	<input type="checkbox"/> To be checked during the next periodic verification <input type="checkbox"/> Additional action should be taken (finding remains open) <input checked="" type="checkbox"/> The finding is closed

Finding:	E5		
Classification	<input checked="" type="checkbox"/> CAR	<input type="checkbox"/> CL	<input type="checkbox"/> FAR
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	Year-wise values of Baseline net GHG removals by sinks provided in spreadsheet and MR do not match with the PDD values.		
Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i>	Baseline net GHG removal corrected in section E.1 of MR2.		
DOE Assessment #1 <i>The assessment shall encompass all open issues in annex A-2. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	The values provided in the PDD and the spread sheet are now internally consistent. However the table in section E.1 does not reflect data as in PDD and excel (e.g: year 2001 = 0 and finally year 2011 is missing).		
Corrective Action #2	Data in Table E.1 corrected as per PDD in the revised MR.		
DOE Assessment #2	Table has been corrected and is consistent with the PDD in all respects. CAR E5 is closed.		
Conclusion <i>Tick the appropriate checkbox</i>	<input type="checkbox"/> To be checked during the next periodic verification <input type="checkbox"/> Additional action should be taken (finding remains open)		



Finding:	E5
	<input checked="" type="checkbox"/> The finding is closed

Finding:	E6		
Classification	<input checked="" type="checkbox"/> CAR	<input type="checkbox"/> CL	<input type="checkbox"/> FAR
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	Per annum removals are calculated using 10 years as denominator; however difference of 2010 and 2001 is 9 years.		
Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i>	We erroneously considered the monitoring period of 10 years from 2001-06-25. to 2010-06-24. As per monitoring plan the monitoring years are 2006 and 2011 till current verification. So, we are revising the monitoring period till 2011 i.e. from 2001-06-25 to 2011-06-24 (10 years 0 months). Accordingly monitoring period corrected in MR2 and per annum project removal also revised.		
DOE Assessment #1 <i>The assessment shall encompass all open issues in annex A-2. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	The per annum removals are now reflecting the actual monitoring period. CAR is closed.		
Conclusion <i>Tick the appropriate checkbox</i>	<input type="checkbox"/> To be checked during the next periodic verification <input type="checkbox"/> Additional action should be taken (finding remains open) <input checked="" type="checkbox"/> The finding is closed		

Finding:	E7		
Classification	<input type="checkbox"/> CAR	<input checked="" type="checkbox"/> CL	<input type="checkbox"/> FAR
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	Sample parcel area as recorded in the measurement sheets are different from those reported in the ER calculation spreadsheet. PP informed during on site assessment that the area given in spreadsheet is GIS data however, area provided in sheets is administrative (patta) area for reasons of immediate identification and ease during field measurements. Since area based on GIS data is used for calculations, PP shall clarify treatment of area values in the measurement sheets in the field, and any significance of them in the PA.		
Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i>	Patta area has never been used to calculate project removal. It is always the GIS area which is considered for computing the project removal. Patta area is one of the basic attribute for identification of parcels apart from ID no. The farmers and the field officers may not be expected to be familiar with the ID no. For them		

Finding:	E7
	<p>name, village name and the patta area are the means of identification of the parcels. Moreover, bank loan, supply of seedlings, fertilizer etc are linked with patta area. Also while checking the land title, the patta area is required. For this reason patta area is relevant.</p> <p>After GIS mapping, area of each parcel has been calculated using “Mapinfo Professional” software and provided in excel sheet by the mapping agency G-Lution India. Area thus obtained is named as GIS area and used in computing project removal.</p>
DOE Assessment #1	It is clarified that the area as given in the field measurement sheets are only for identification purpose. The actual area of the project activity has been fixed using GPS and ground truthing. The CL is closed.
Conclusion <i>Tick the appropriate checkbox</i>	<input type="checkbox"/> To be checked during the next periodic verification <input type="checkbox"/> Additional action should be taken (finding remains open) <input checked="" type="checkbox"/> The finding is closed

Finding:	E8		
Classification	<input checked="" type="checkbox"/> CAR	<input type="checkbox"/> CL	<input type="checkbox"/> FAR
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	<ol style="list-style-type: none"> In section E.2 of the MR, volume equation has been given, which is found to be inconsistent with formula in page 8 and page 35. In section E.4 of the MR the formulae for net anthropogenic GHG removals is found to be missing. Soil Organic Carbon is accounted in the spreadsheet. However this is not mentioned in the MR. Also, the SOC calculation includes plantation age (11 years) for all the strata which is not correct. 		
Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i>	<ol style="list-style-type: none"> Inconsistency in volume equation at page 8 & 35 corrected in the revised MR. Missing formulae is now provided in section E.4 of the revised MR. Description of Soil Organic Carbon and its assessment included in section E.2 of the revised MR. Calculation is revised in the spreadsheet. 		
DOE Assessment #1	<ol style="list-style-type: none"> Typo error has been found to be corrected. The formula is now internally consistent. #1 of the CAR is closed. The missing formulae have been added now. #2 of the CAR is closed. SOC calculation is found done as per the correct age of each stratum in the revised calculation sheet. This 		



Finding:	E8
	has reduced NR values to 1,620,431 tCO ₂ . Accounting of Soil Organic Carbon is now mentioned in section E.2 of the revised MR. The default value of 0.5 tC/hectare/year as per the applied methodology AR-ACM0001 (version 04) has been used. This is also in line with the registered PDD, and hence acceptable. #3 of the CAR is closed.
Conclusion <i>Tick the appropriate checkbox</i>	<input type="checkbox"/> To be checked during the next periodic verification <input type="checkbox"/> Additional action should be taken (finding remains open) <input checked="" type="checkbox"/> The finding is closed

Finding:	E9		
Classification	<input checked="" type="checkbox"/> CAR	<input type="checkbox"/> CL	<input type="checkbox"/> FAR
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	It is not appropriate to account extra for ER from the year 2006 monitoring. These data are not verifiable anymore. Only the actual status of trees can be accounted for. Please explain intention to do so as it contains double counting.		
Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i>	ER in 2006 and 2011 both calculated on actual status of trees in the respective years of monitoring. Since no verification took place subsequent to 2006 monitoring, both monitoring included in current verification. That's why the monitoring period spreads from 2001 to 2011 and not 2007 to 2011. Accounting for ER in 2006 has been removed.		
DOE Assessment #1	The PP removed data from 2006; only data from 2011 inventory are accounted for. This reduces the achieved ER values in the monitoring period to 1,620,431 tCO ₂ e.		
Conclusion <i>Tick the appropriate checkbox</i>	<input type="checkbox"/> To be checked during the next periodic verification <input type="checkbox"/> Additional action should be taken (finding remains open) <input checked="" type="checkbox"/> The finding is closed		

5. SUMMARY OF VERIFICATION ASSESSMENTS

The following paragraphs include the summary of the final verification assessments after all CARs and CRs are closed out. For details of the assessments pl. refer to the discussion of the verification findings in chapter 4 and the verification protocol (Annex 1).

5.1. Involved Parties and Project Participants

The following parties to the Kyoto Protocol and project participants are involved in this project activity.

Table 5-1: Project Parties and project participants

Characteristic	Party	Project Participant
Non-Annex 1	India	M/s Mangalam Timber Products Limited
Annex 1	-	-

5.2. Implementation of the project

During the verification site visit to the project sites on sample basis were carried out. On the basis of this site visit and the reviewed project documentation it can be confirmed that w.r.t. the PDD^{/PDD/}, the project implementation, as well as the monitoring, recording and monitoring equipments, the PA has been implemented and operated as described in the registered PDD.

The implementation of the A/R CDM PA is by and large found to be in line with the details in the registered PDD^{/PDD/}. The project involves plantation of *Eucalyptus tereticornis* in discrete parcels spread over 14,527.27 ha in the states of Odisha, Andhra Pradesh and Chhattisgarh in India (Host Country). The basic characteristics of the implemented technology are found to be described in section A.4 of the MR^{/MR2/}. The verification team has checked the given description, and confirms it is in line with the site visit observations and the registered PDD^{/PDD/} along with other CDM requirements. The PA has been implemented in line with the SOP, including risk mitigation measures to ensure a successful implementation of the project. The plantation comprises of seedling propagation of *Eucalyptus tereticornis* Smith, which was confirmed from visits to Plantation division of M/s Mangalam Timber Products Limited and the associated nurseries on-site and finally to the plantation sites^{/PHOTO/}. The plantation and its management are found to be in accordance with good forestry practice. Nursery techniques were in line with good practices. Planting of the species, spread over 14,527.27 ha, followed grids starting from 3m x 1.5m with pits of 40-45



cm in diameter and 30-35 cm in depth. The different grids are detailed in table B-4 of the MR^{/MR2/}. The plantation is rain fed with no mechanism for irrigation. However local supervision is found to be in place to ensure growth of the stands. Weeding is found to be mainly done by hand picking and ploughing. Weeding and other management practices were found documented in the logbooks^{/MSR/}. The verification team is convinced that according to the site conditions the best forest practices have been adopted.

Year-wise planting: The plantation is found to be started in 2001-06-25 (Which is the start date for the project). Plantation is found to be done year wise (2001, 2002, 2003, 2004, 2005, 2006 and 2007), as confirmed from the field records of plantations. This is found to be consistent with the information in the registered PDD^{/PDD/}. No variance is observed.

Species composition: As mentioned above, the species planted is observed to be only *Eucalyptus tereticornis*, which is consistent with the registered PDD^{/PDD/}. No other species were observed in the stands. Hence the removal by any tree species other than *Eucalyptus spp.* is not accounted in the t-CER calculations. No change in propagation system (seeding) is observed.

Stocking density: The planation was originally done with a spacing of 3m x 1.5m. However during the site visit variations were observed in spacing. Some plots had a spacing of 2.5m X 1.5m, 2m X 1.5m and 2m X 1.5m. However it is observed that irrespective of the density all the trees falling inside a sample plot have been measured and the measurement recorded appropriately. This is detailed and discussed in Annex-3 of this report. With reference to the Guidelines on Accounting of Specified Types of Changes in A/R CDM Project Activities from the Description in Registered Project Design Documents version 02.0 Annex 24 EB 66, this change does not require prior approval from the EB. Regeneration through coppicing is the practice after harvesting, which results in no change in the stand density. Survival rate is checked, and replantation is done in the initial years if required. No variance is observed from the registered PDD^{/PDD/}.

Timing and choice of silvicultural activities depends on many factors and is found to vary year to year. This is considered as a minor change in accordance with EB 63 Annex 27 and is accepted. No organised collection of non-timber forest products is observed.

5.3. Project history

No FARs were identified during the validation as evidenced from the validation report^{/VAL/}. Since this is the 1st periodic verification no FARs exist during any earlier instances. Hence the verification team concludes that there are no unresolved issues.

5.4. Post registration changes

No post registration changes that require prior approval from the CDM EB applicable for this monitoring period have been observed during the monitoring period. A detailed description of all A/R specific changes can be found in Annex 3 of this report.

5.5. Compliance with the monitoring plan

The monitoring system and all applied procedures are completely in compliance to the registered monitoring plan. Project activity has been implemented as per the description provided in the registered PDD^{/PDD/}. Monitoring is found done in line with the requirements of the monitoring plan contained in the validated registered PDD. No material discrepancies were identified between the PA on site observations and the project description^{/PDD/}. There are no remaining issues from previous validation and no methodology deviations are observed.

Project boundary

The verification team has checked the project boundary from the satellite data and GPS maps plotted at the time of verification and compared it against the information from validation. The verification team observed reduction in project area as compared to the registered PDD^{/PDD/}. The PP has submitted GPS survey report^{/GPS/} confirming the same. The land owners and associated staff were interviewed to ascertain if any beneficiary (farmer) had left the project. No such instance has been detected. The verification team has further checked the GPS coordinates of the corners of the parcels to check the location. Negligible variations (appx 5m) has been observed on ground as compared to the information as per the registered PDD^{/PDD/}. However the verification team is confident that this variation is on account of the accuracy of GPS machine etc. Since in all visited sites, the boundary of the parcels in the PA could be readily delineated from the surrounding land, the verification team confirms that the project boundary has been fixed for the rest of the crediting period. The GPS coordinates submitted along with this verification report confirms the project boundary of the A/R project.

W.r.t Annex 24 EB 66 the verification team confirms the land area for which the control over A/R CDM project activity has been established by the project proponents since validation has changed. This is found acceptable, and is detailed in Annex 3 to this report.

Data measurement collection and recording

Measurements of the data parameters used for calculation of net anthropogenic GHG removals by sinks in the project activity are undertaken by the PP as per the approved monitoring plan given in the validated registered PDD^{/PDD/}. The verification



team checked data measurement procedures including measuring arrangements, collection, reporting/recording and archiving of data at the time of site visit and found the practices in compliance with approved monitoring plan as contained in validated PDD^{/PDD/}. The monitoring team comprises of qualified personnel having forestry related education (at least bachelor degree/diploma graduate) and/or training in the field of forestry. The team recording measurements are also observed to be well trained^{/TRG/}. Only those personnel clearing training examinations are deputed for supervision of data collection. Examination records^{/TRG/} were checked by the verification team. The verification team has observed data collection techniques of the PP and confirms them to meet necessary quality requirements. The personnel involved has demonstrated working knowledge of operating Abney Level (to measure tree height). The DBH has been demonstrated to be taken at a height of 1.37 m (using a measuring stick which is made with comparisons to a calibrated scale) which is acceptable. The basic data (GBH and/or DBH, tree height, survival rate etc) is found to be cross checked on site on the sample plots along with independent checks to cross verify the recorded data. The verification team has witnessed the process of collection of data during site visit and has checked these values with the earlier entries. No abnormalities have been observed, and any anomaly found has been raised as a finding, which was successfully closed. No bias has been observed in data measurement, collection and recording. The sample plots have not been marked, and no identification tags are found on the PSP. However the verification team observed boards placed beside the parcels of lands with the PSP, identifying the same parcel as a part of the A/R CDM project activity. Further the verification team interviewed^{/IM03/} the land owner (farmer; tribal land holder) of the parcel with the PSP to identify any bias in plantation management. The verification team has observed ignorance of the local land owners (who manage the forest) of the location of the PSP, and notes no reasonable doubt for any bias. Further parcels of plantation were also visited which were not a part of sample plots to check any bias. To ensure this the verification team visited a parcel of plot which was not a sample plot and took readings to check variations if any, and confirms that the readings on this plot to be within the expected range observed in the actual sample plots.

The verification team states with reasonable confidence that the data collection techniques of the PP can be trusted and is of acceptable level.

Accuracy of monitoring equipment

Accuracy of monitoring equipment in the project is maintained by means of periodic testing and other measures by the PP as specified in the SOP. The established practices and testing of accuracy of the monitoring equipment was checked at the site by means of calibration certificates and other documentary evidences furnished by the project proponent^{/CAL/} on site and were found appropriate. Calibration procedure and frequency was assessed as appropriate. No event of delayed or missing calibration was observed.

Data collection, measurement, calibration, recording and archiving was found to be carried out as per the monitoring plan as described in the registered PDD^{/PDD/}.

5.6. Compliance with the monitoring methodology

The monitoring system is in compliance with the applied monitoring methodology (AR-ACM0001 version 4). The verification team has observed no deviations.

5.7. Monitoring parameters

During the verification all relevant monitoring parameters (as listed in section E of the AR-CDM-PDD) have been verified with regard to the appropriateness of the applied measurement / determination methods, the correctness of the values applied for ER calculation, the accuracy, and applied QA/QC measures. The results as well as the verification procedure are described parameter-wise in the project specific verification checklist.

After appropriate corrections were carried out by the project participant it can be confirmed that all monitoring parameters have been measured / determined and reported without material misstatements and in line with all applicable standards and relevant requirements.

All the monitoring parameters are monitored as per the monitoring plan as contained in the registered PDD^{/PDD/}. Sample plot locations are found to be monitored during every annual measurement of the plantation at the PSP, which has been checked from the log sheet entries, which has given the geo-coordinates of the PSPs. The validation team based on its local and sectoral expertise confirmed from on site assessments that only trees of *Eucalyptus tereticornis* have been planted and there is no variance. The number of trees in a PSP is counted manually during every monitoring. The tree height of every tree in a PSP is found to be recorded^{/MSR/}. The measuring instrument (Abney Level) is one of the standard equipments for tree height measurement in the host country. The DBH is calculated from the GBH measurement of each tree of a PSP. Since conversion of GBH to DBH is a standard process and does not involve any other monitored parameter, and do not result in decrease of precision, monitored GBH value is acceptable. The measuring tape is found to be calibrated into 0.1 cm, which is an acceptable level of accuracy. Merchantile volume is calculated from the values of monitored parameters. The allometric equation used has been changed, which is discussed in Annex 3 to this report. The changes are acceptable.

As per EB 63 Annex 26, monitoring of fossil fuel is not required, hence the PP has not monitored the fossil fuel consumption. This is in line with the registered PDD. Similarly emissions resulting from clearance or burning of herbaceous vegetation have not been monitored and not accounted for project emissions, which is acceptable. Usage of fertilizers for estimation of emissions of nitrous oxide also has

not been monitored and accounted. Apart from this, the emissions resulting from transportation is also not accounted as per the provisions approved by the CDM EB. The verification team accepts this in light of Annex 31 of EB 68. The above ground biomass (AGB) and Below ground biomass (BGB) and their respective carbon stocks are also found to be monitored, which is rather a calculated figure resulting from the earlier mentioned monitored parameters. Nevertheless, these values are found recorded annually, which is acceptable.

The verification team confirms that all the required parameters are being monitored appropriately.

5.8. Monitoring report

A draft monitoring report^{MR1/} was submitted to the verification team by the project participant. The team has made this report publicly available prior to the start of the verification activities. No comments were received. On site assessment for verification was conducted by the verification team not earlier than two weeks from the date of webhosting.

During the verification, mistakes and needs for clarification were identified. The PP has carried out the requested corrections so that it can be confirmed that the Monitoring report^{MR2/} is complete and transparent and in accordance with the registered PDD^{PDD/} and other relevant requirements.

Further the verification team also notes that there is no separate MR template available for CDM PAs and A/R CDM PAs. In this context, the MR available in the UNFCCC website^{unfccc/} has been used for the A/R project as well, which is acceptable.

5.9. Sampling

5.9.1. Implementation of the sampling plan

As per the registered PDD the number of sample plots to be monitored was calculated to be 1041. However on a revised calculation presented by PP at the time of verification, the number of PSPs required was 244. The verification team found that 244 PSPs were being maintained. On reviewing the calculation for number of PSPs required, it was observed that the calculation was erroneous and re-stratification of plantation area was also to be done as required by the methodology owing to changes in forest management practice (harvesting). After re-stratification according to actual age of the plantations and not the planting year, further revisions and corrections of the calculations of PSPs was made by the PP with reference to the latest version of the tool, "Calculation of the number of sample plots for measurements within A/R CDM project activities" version 02.1.0 (EB 58, Annex 15). As per §11 of this tool, equation (1) was used correctly to calculate the value of n



(Number of sample plots required for estimation of biomass stocks within the project activity) to be 38.01. Default values are found to be correctly used, such as t_{VAL} (two-sided Student's t-value) which is sourced from the tool itself. t_{VAL} is taken at infinite degree of freedom as per §11 of the tool, and at a confidence level of 95%, with reference to the applied methodology. The default value is sourced from table succeeding §18 of the applied tool. Value of Q (Quantity of biomass) used for calculating s_i (standard deviation) is found to be calculated conservatively only till the 5th and 6th year onwards for areas not harvested, in absence of available growth statistics, value of Q is found fixed at the 5th year value, which is also acceptable as this results in a higher number of PSPs. As per §12 of the applied tool, since n is higher than 30, no further iteration is required. PP has used §16 and §17 to further allocate the number of sample plots among strata using equation (4) of the tool, which is also correct and acceptable. The calculation is presented transparently in a spread sheet. The cells are found to be linked appropriately in the spreadsheet.

The verification team has also done plausibility checks with reference to the guidance in §14 of the tool (even though this is not required to be applied to the project activity as per §12 of the tool). It was noted that the sampling fraction is less than 5%, but even by applying equation (2) of the tool, the value of n comes to 38.01. In this regard, the value of n is found to be correct. Further applying strata wise rounding up, results into requirement of 48 PSPs to be maintained in total all across the 17 revised strata.

Change in the number PSPs from 1,041 to 48 is found acceptable in light of the provisions of EB66/Annex 24. According to the paragraph 4 (m) of the Guidelines on accounting of specified types of changes in A/R CDM project activities from the description in registered project design documents (version 2.0) changes in number of sample plots and their allocation to strata does not require prior approval by the CDM EB.

Further, even though the required, as number of sample plots is only 48, since data from 244 PSPs were available, for a more precise and unbiased calculation, data from all the 244 sample plots have been found to be used in the removals calculation, which is also acceptable. This is also found to be clearly mentioned in the MR.

DOE confirms that data from each of the 244 PSPs is being collected appropriately. The PP has also demonstrated that the selection of PSP was random. The 244 PSP of the PA have been randomly selected from lots of a mother list of plots spread over the plantation area. The sample plot selection process has been described in monitoring report. The method of selecting PSPs has been found to be free of biases. The laying of the PSPs has followed a random method of demarcating the PSP along different directions of the 244 selected. Further, the verification team also visited plots which did not contain any sample parcels and made comparisons with sample plots. No bias was observed in the stand of parcels without any sample plots as compared to the sample plots. Details are further given in Annexure 3 of this report.

A CL B3 on re-stratification and CAR B1 on recalculation of PSPs was raised on this and closed successfully.



5.9.2. Sampling approaches during verification

The on site assessment was conducted for actual plantation sites including 97 PSPs and 3 non PSP sites. Out of the 97 PSPs visited it was ensured that all strata have the representation. Project boundary was checked for 63 PSPs.

The sample size was generally calculated in line with G.5.3.12. of IAF Guidance on the Application of ISO/IEC Guide 66 where the square root shall be applied. The square root of 1,041 PSPs (original required, as per PDD) is 32.26 PSPs (conservative = 33).

Assessing the site conditions and accessibility it was decided to visit 39 PSPs for tree measurement and the 63 PSPs for project boundary. For PSPs and the non PSP sites visited, the verification team checked spacing, height and GBH/DBH of trees, GPS location on sample basis.

All 97 Sample plots were selected out of 244 (actually maintained on site) on random basis by the verification team. Simple random sampling approach was applied by the verification team ensuing that all strata are represented. The randomness was assured using random number table. 3 non PSP sites were visited at random for further confidence of the observations.

5.10. ER Calculation

During the verification mistakes in the t-CER calculation were identified. Corresponding CARs were raised. A revised t-CER calculation was prepared by the PP and presented to the verification team. All raised issues were addressed appropriately so that all corresponding CARs could be closed out. Thus it is confirmed that the ER calculation is overall correct.

The formulae and factors used in the calculations of removals are in accordance to the approved methodology AR-ACM0001, version 4^{/ARACM1/}. All aspects related to the GHG removals and emissions relevant to the project have been addressed and calculations are presented in a transparent manner and in line with the applied methodology, tools and registered PDD^{/PDD/}.

Baseline net removals by sinks, project net removals by sinks, actual net GHG removal, project activity emissions and leakage emissions have been calculated appropriately. The set of calculations for the actual net removals of the 1st verification period are transparently computed and presented in the spread sheet of t-CER calculation^{/XLS2/}. GHG emission due to activity displacement has been identified as leakage³ in accordance with the applied methodology. Assumptions of grazing land required for the animals, existing or displaced in the project area are found based on

³ GHG emission due to increase in use of wood posts for fencing is insignificant as per 42nd meeting of the CDM Executive Board, hence is neglected.



survey conducted by an agency (non-governmental organization) contracted by M/s MTPL. Leakage due to conversion of land to grazing land is found nil and is assessed as correct, in light of the survey reports^{/GRZ/} and explanation provided in the monitoring report^{/MR7/}.

Correct and appropriate assumptions, default values etc in accordance with AR-ACM0001 version 4 (including wood densities, biomass expansion factors for project sequestration in accordance with the applied methodology) have been appropriately applied. The sources of project specific original data were cross-checked and found to be correct based on the evidences provided by the PP. The same is listed in table 7-1 of this report.

Following volume equation has been used in calculation, which is found to be in line with the applied methodology and requirements of EB 67/Annex 24:

$$V = -0.0001 + 0.31145 D^2 \times H \quad (n = 580, R^2 = 0.9855)^4$$

Where, V is wood volume of tree in cubic meters, D is DBH and H is height of tree.

The verification team has checked the underlying input values as well as the computation in the spreadsheet^{/XLS2/}. The calculation spreadsheet is found clear, unprotected and traceable. The estimation of the net actual removals by sinks was realized in a transparent and conservative manner. The tCER sheet contains the actual removals under 1st verification for the period 2001-06-25 to 2011-06-24 which is correctly calculated to be **1,764,076** tCO₂ e (=1,764,076 tCERs) against 4,210,087 tCO₂ e estimated in registered PDD..

The removals calculation based available data applying re-stratification^{/RESTRAT/} was examined by verification team. A/R methodological tool “Calculation of the number of sample plots for measurements within A/R CDM project activities“ version 2.1 is found correctly applied resulting in requirement of 48 PSPs, whereas 244 PSPs were found maintained by PP. Since numbers of PSPs in each revised stratum being maintained and monitored by PP are higher than what is required as per recalculation of PSPs for re-stratification, the calculation of NRs is acceptable. Considering that the re-stratification (also leading to recalculation of PSPs) has been correctly applied and accordingly tCERs for the monitoring period under consideration have been correctly calculated, the verification team accepted the calculation with re-stratification.

Evidences produced to determine removals^{/MSR/} as listed in table 7-1 were found correct and authentic. These documents were verified through site visit interviews and found to be authentic. By the interview, it was found that the plantation staff, maintenance staff and supervisors are properly trained for the work assigned to them^{/TRG/}. Verification Team has also verified on site the way of taking measurements

⁴ “Volume Equations for Forests of India, Nepal and Bhutan” published by Forest Survey of India, 1996. P. 226.



and samples therefore. All the log sheet^{/MSR/} are checked during site visit and reported values are found consistent with them.

In addition to this, verification team has cross verified the entered values of the project activity monitoring parameters with the log records from the submitted documents^{/MSR/} and found that all input data values are correctly applied in the calculations of net GHG removals by sinks^{/XLS2/}.

The PP furnished performance records of the project in form of data logs, registers and other documents^{/MSR/}. t-CER Calculation sheet^{/XLS2/} was checked thoroughly by the verification team for correctness of calculation approach. Data input values were also checked from the records maintained by the PP. Result of calculations reported in the monitoring report^{/MR2/} was checked against data values/ figures as available from the PP in t-CER calculation sheet^{/XLS2/}. These data values and other information related to project performance are available in the form of data logs and records duly archived and maintained as per the quality assurance/quality control procedure specified as a part of monitoring plan given in the validated PDD^{/PDD/} and associated SOP.

5.11. Quality Management

Quality Management procedures for measurements, collection and compilation of data, data storage and archiving, calibration, maintenance and training of personnel in the framework of this CDM project activity have been defined. The procedures defined can be assessed as appropriate for the purpose. No significant deviations thereof have been observed during the verification. The MTPL unit has implemented an IMS system, in which the plantation related SOPs are not integrated. However regular internal audits for the plantation unit were found evidenced. SOP has not been revised, and the monitoring team is found to follow the same practices throughout the monitoring period.

5.12. Actual emission reductions during the first commitment period and the period from 1 January 2013 onwards

The MR includes actual ER values achieved up to 31 December 2012 and actual values achieved from 1 January 2013 onwards as follows:

Table 5-2: Emission reductions before and after the end of 2012

	until 2012-12-31 ¹⁾	from 2013-01-01 ¹⁾	Sum
Emission reductions [tCO _{2e}]	1,764,076	0	1,764,076

¹⁾ Both days included



5.13. Comparison with ex-ante estimated emission reductions

The MR includes a comparison of the calculated actual emission reductions with the ex-ante calculated values in the registered PDD.

The ex-post determined value was found to be ~59% lower than the ex-ante calculated value, thus no further justification was required.

5.14. Overall Aspects of the Verification

All necessary and requested documentation was provided by the project participant so that a complete verification of all relevant issues could be carried out.

Access was granted to all sites of the plantation activity which are relevant for the project performance and the monitoring activities.

No issues have been identified indicating that the implementation of the project activity and the steps to claim emission reductions are not compliant with the UNFCCC criteria and relevant guidance provided by the COP/CMP and the CDM EB (clarifications and/or guidance).

5.15. Hints for next periodic Verification

No FARs have been raised in this verification.



6. VERIFICATION AND CERTIFICATION STATEMENT

M/s Mangalam Timber Products Limited has commissioned the TÜV NORD JI/CDM Certification Program to carry out the 1st periodic verification of the project: “Reforestation of degraded land by MTPL in India”, with regard to the relevant requirements for CDM project activities. The project removes GHG emissions due to reforestation of degraded land. This verification covers the period from 2001-06-25 to 2011-06-24 (including both days).

In the course of the verification 25 Corrective Action Requests (CAR) and 5 Clarification Requests (CR) were raised and successfully closed. No FARs are raised. The verification is based on the draft monitoring report, revised monitoring report, the monitoring plan as set out in the registered PDD, the validation report, emission reduction calculation spreadsheet and supporting documents made available to the TÜV NORD JI/CDM CP by the project participant.

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-ACM 001 ver. 4
- the installed equipment essential for measuring parameters required for calculating emission reductions are calibrated appropriately.
- the monitoring system is in place and functional. The project has generated GHG emission reductions.

As the result of the 1st periodic verification, the verifier confirms that the GHG emission reductions are calculated without material misstatements in a conservative and appropriate manner. TÜV NORD JI/CDM CP herewith confirms that the project has achieved emission reductions in the above mentioned reporting period as follows:

Emission reductions: **1,764,076** t CO_{2e}

New Delhi, 2013-06-27

Essen, 2013-06-27

Lokesh Chandra Dube

Alexandra Nebel

TÜV NORD JI/CDM Certification Program

TÜV NORD JI/CDM Certification Program

Verification Team Leader

Final Approval

7. REFERENCES

Table 7-1: Documents provided by the project participant(s)

Reference	Document
/CAL/	<p>Calibration certificates:</p> <ol style="list-style-type: none"> 1. Measuring tape. <ol style="list-style-type: none"> a. Steel tape tag no. MT/ST-01 for the monitoring period. b. Master scale used for calibration of tapes mentioned above 2. Abney's level tag no. MT/AL-01. 3. Weigh bridge (AVERY - E1210) used for weighting the timber harvested from the project boundary issued by Inspector, Legal Metrology, Nabarangpur.
/CARB/	<ol style="list-style-type: none"> 1. Sample copies of chalan/invoices issued by MTPL in the name of the farmer from whom harvested wood has been procured. 2. Bank statements issued on farmers name regarding loan repayment. 3. Undertaking from MTPL regarding the number and list of farmers involved in the PA dated 2012-02-28. 4. Agreement regarding first right of CER between MTPL and the farmers involved in the PA.
/CCI/	Project start date evidence (2001-06-25).
/CR/	Casualty report issued annually on survival rate in every parcel of the project activity since the date of plantation
/GPS/	<ol style="list-style-type: none"> 1. GPS coordinates of all the parcels and sample plots. GIS Mapping Report (December 2001); G Lution India. GIS Mapping Report (November 2006); G Lution India. GIS Mapping Report (December 2011); G Lution India. 2. GPS machine specifications (GARMIN eTrex series).
/GRZ/	<p>Report on survey conducted for assessing number of livestock present, grazing lands & feed resources available and biomass burning events in CDM project area of M/s Mangalam Timber Products Limited, Nabarangpur. Maa Samalyi Voluntary Organisation. October to December, 2011.</p> <p>Report on survey conducted for assessing number of livestock present, grazing lands & feed resources available and biomass burning events in CDM project area of M/s Mangalam Timber Products Limited, Nabarangpur. Maa Samalyi Voluntary Organisation. November 2006.</p>

Reference	Document
/HWD/	<ol style="list-style-type: none"> 1. Payments details of harvested wood. 2. Details and records of harvested wood.
/ISO/	<p>Copies of the following certificates:</p> <ol style="list-style-type: none"> 1. ISO 9001:2008 certificated dated 2009-12-18 2. ISO 14001:2004 certificate dated 2010-08-20. 3. ISO 18001:2007 certificate dated 2009-10-31.
/LAND/	Passbook, patta of the farmers involved with the PA.
/LSC/	<ol style="list-style-type: none"> 1. List of all the beneficiaries with the details of name and land area. 2. Tripartite agreement with the beneficiaries 3. Copies of the land and plantation pass book of the beneficiaries.
/MAP/	GPS mapping of the project boundary with maps, identifying the different strata.
/MR1/	Monitoring report entitled as “REFORESTATION OF DEGRADED LAND BY MTPL IN INDIA.”, version 01, dated 2012-01-12.
/MR2/	Monitoring report version 2 dated 2012-07-16.
/MR3/	Monitoring report version 3 dated 2012-09-06.
/MR4/	Monitoring report version 4 dated 2012-10-08.
/MR5/	Monitoring report version 5 dated 2012-11-16.
/MR6/	Monitoring report version 6 dated 2012-12-06
/MR7/	Monitoring report version 7 dated 2013-03-06
/MR8/	Monitoring report version 8 dated 2013-06-17 based on which final verification opinion has been made.
/MSR/	<p>The Permanent Sample Plot (PSP) Data Collection Register for the monitoring period which records:</p> <ol style="list-style-type: none"> 1. The sample plots with coordinates 2. Year of plantation 3. Strata 4. No. of trees in the sample plots 5. GBH 6. Height

Reference	Document
	7. Mean GBH 8. Mean height 9. Volume of the stand per hectare 10. Standard deviation 11. Survival rate 12. Ploughing details 13. Weed checking 14. Harvested Location
/OM/	Operation Manual of the CDM AR Project Activity Revision 1 dated 2010-08-10
/ORG/	Specific onsite organization chart for the JI/CDM project activity
/PER/	List of personnel involved with the PA since the start date.
/PHOTO/	Photographs of the plantation during the site visit.
/PSP/	Revised Calculation of required number of Permanent Sample Plots
/RESTRAT/	Calculation of net removals based on re-stratification
/SM/	Stratification Map of the project activity
/TRG/	1. Training details of the personnel involved in CDM PA monitoring dated 2002-06-11, 2003-07-23, 2004-09-16, 2005-08-19 & 20, 2006-06-14 & 15, 2006-08-25 & 26, 2007-05-22 & 23, 2008-05-24 to 26, 2009-04-20, 2009-07-24, 2010-02-16, 2011-03-24, 2011-09-29 2. Examination records dated 2011-09-29 and dated 2006-08-26
/XLS1/	1. Emission reduction calculation spreadsheet corresponding to draft monitoring report
/XLS2/	2. Emission reduction calculation spreadsheet corresponding to final monitoring report

Table 7-2: Background investigation and assessment documents

Reference	Document
/ARACM1/	AR-ACM 001 ver. 4, "Afforestation and reforestation of degraded land"

Reference	Document
/CPM/	TÜV NORD JI / CDM CP Manual (incl. CP procedures and forms)
/GLMP/	Guidelines for completing the monitoring report form (EB 66 Annex 20)
/GLC/	Guidelines on Accounting of Specified Types of Changes in A/R Cdm Project Activities from the Description in Registered Project Design Documents version 02.1 (Annex 24 EB 66)
/IPCC/	2006 IPCC Guidelines for National Greenhouse Gas Inventories
/KP/	Kyoto Protocol (1997)
/MA/	Decision 3/CMP. 1 (Marrakesh – Accords)
/MRT/	Monitoring Report Form (F-CDM-MR) Version 2.0
/PDD/	Project Design Document for CDM project: “ <i>Reforestation of degraded land by MTPL in India</i> ” version 9, dated 2011-06-14
/PS/	Project Standard (EB 65 Annex 5)
/VAL/	Validation Report for CDM project “ <i>Reforestation of degraded land by MTPL in India</i> ” revision 1, dated 2011-07-08
/VER/	Documents of previous verifications (Monitoring report, verification report, ER calculation sheet)
/VVS/	UNFCCC Validation and Verification Standard (Version 3.0, EB 70/Annex 3)

Table 7-3: Websites used

Reference	Link	Organisation
/dna/	http://cdmindia.in/	DNA of India
/ipcc/	www.ipcc-nggip.iges.or.jp	IPCC publications
/mtpl/	http://www.mangalamtimber.com/	MTPL
/moef/	http://www.envfor.nic.in/	Ministry of Environment & Forests
/unfccc/	http://cdm.unfccc.int	UNFCCC

Table 7-4: List of interviewed persons

Reference	Mol ¹		Name	Organisation / Function
/IM01/	V	<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms	S. K. Dhall	MTPL/ Sr. Officer
/IM01/	V	<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms.	B. Das	MTPL/ Asst. Officer
/IM01/	V	<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms	Srinivas Rao	MTPL/ Dy. Manager
/IM01/	V	<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms	Digambar Das	MTPL/ Sr. Officer
/IM01/	V	<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms	A. D. Naik	MTPL/ Officer
/IM01/	V	<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms	P. K. Mishra	MTPL/ Officer
/IM01/	V	<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms	B. Bania	MTPL/ Asst. Officer
/IM01/	V	<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms	K. Deepak	MTPL/ Jr. Forester
/IM01/	V	<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms	Trishul Santra	MTPL/ Jr. Officer
/IM01/	V	<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms	G.V.D. Prasad	MTPL/ Manager (Plantation)
/IM01/	V	<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms	P.S. Prasad	MTPL/ CDM manager
/IM01/	V	<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms	D.G. Hegde	MTPL/ Head (Plantation)
/IM01/	V	<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms	P. Ravi Kumar	MTPL/ Sr. Manager (Accounts & Commerce)
/IM01/	V	<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms	Sumat Kumar Ray	MTPL/ Asst. Officer
/IM01/	V	<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms	Krishna Ch. Nayak	MTPL/ Supervisor
/IM01/	V	<input checked="" type="checkbox"/> Mr.	Dibakar Mali	MTPL/ Supervisor

Reference	Mol ¹		Name	Organisation / Function
		<input type="checkbox"/> Ms		
/IM01/	V	<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms	M. Sudhir Kumar	MTPL/ Mate
/IM01/	V	<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms	Bimbadhar Dal	MTPL/ Asst. Officer
/IM01/	V	<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms	Jayaprakash M.	MTPL/ Supervisor
/IM01/	V	<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms	Aishwarya Kumar Takri	MTPL/ Supervisor
/IM01/	V	<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms	Daitori Bisani	MTPL/ Supervisor
/IM01/	V	<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms	Anil Kumar Hota	MTPL/ Supervisor
/IM01/	V	<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms	Lokkamati Badalge	MTPL/ Supervisor
/IM01/	V	<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms	Kurubal Mudali	MTPL/ Supervisor
/IM01/	V	<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms	Rama Srena	MTPL/ Supervisor
/IM01/	V	<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms	M. U. Raju	MTPL/ Sr. Officer
/IM01/	V	<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms	K. Ramu	MTPL/ Officer
/IM03/	V	<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms	Baji Ancnatya	Local Stakeholder/ Beneficiary (farmer)
/IM03/	V	<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms	Bhagarathi Jhankar	Local Stakeholder/ Beneficiary (farmer)
/IM03/	V	<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms	Manohar Batra	Local Stakeholder/ Beneficiary (farmer)
/IM03/	V	<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms	Subhosh Karlia	Local Stakeholder/ Beneficiary (farmer)



Reference	Mol ¹		Name	Organisation / Function
/IM03/	V	<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms	Lachmi Jani	Local Stakeholder/ Beneficiary (farmer)
/IM03/	V	<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms	Sagara Someswara	Local Stakeholder/ Beneficiary

¹⁾ Means of Interview: (Telephone, E-Mail, Visit)



ANNEX

- A1:** Verification Protocol
- A2:** Statements of Competence of involved Personnel



ANNEX 1: VERIFICATION PROTOCOL

Table A-1: GHG calculation procedures and management control testing / detailed audit testing of residual risk areas and random testing

Identification of potential reporting risk	Identification, assessment and testing of management controls	Areas of residual risks	Additional verification testing	Conclusions and Areas Requiring Improvement (including <i>Forward Action Requests</i>)
Raw data generation				
<ul style="list-style-type: none"> • Installation of measuring equipment • Dysfunction of measuring equipment (e.g. Abney's Level) • Maloperation by operational personnel • Downtimes of equipment • Exchange of equipment • Change of measurement equipment characteristic • Insufficient accuracy • Change of 	<ul style="list-style-type: none"> • Installation of modern and state of the art equipment • Process control automation • Internal data review • Regular visual inspections of installed equipment • Only skilled and trained personnel operates the relevant equipment • Daily raw data checks • Immediate exchange of dysfunctional equipment • Stand-by duty is 	<ul style="list-style-type: none"> • Inadequate installation / operation of the monitoring equipment • Inadequate exchange of equipment • Change of personnel • Undetected measurement errors • Inappropriateness of Management system procedures w.r.t. monitoring plan requirements (e.g. substitute value strategies) • Non-application of management system procedures • Insufficient accuracy • Inappropriate QA/QC 	<ul style="list-style-type: none"> • Site – visit • Check of equipment • Check of technical data sheets • Check of suppliers information / guarantees • Check of calibration records, if applicable • Check of maintenance records • Counter-check of raw data and commercial data • Check of CDM management system • Check of CDM related procedures 	<ul style="list-style-type: none"> • See Table A-2



Identification of potential reporting risk	Identification, assessment and testing of management controls	Areas of residual risks	Additional verification testing	Conclusions and Areas Requiring Improvement (including <i>Forward Action Requests</i>)
technology • Accuracy of values supplied by Third Parties	organized • Training • Internal audit procedures • Internal check of QA/QC measures of involved Third Parties	measures of Third Parties	• Application of CDM management system procedures • Check of trainings • Check of responsibilities • Check of QA/QC documentation / evidences of involved Third Parties	
Raw data collection and data aggregation				
• Wrong data transfer from raw data to daily and monthly aggregated reporting forms • IT Systems • Spread sheet programming • Manual data transmission • Data protection • Responsibilities	• Cross-check of data • Plausibility checks of various parameters. • Appropriate archiving system • Clear allocation of responsibilities • Application of CDM Management system procedures • Usage of standard software solutions	• Unintended usage of old data that has been revised • Incomplete documentation • Ex-post corrections of records • Ambiguous sources of information • Non-application of management system procedures • Manual data transfer mistakes	• Check of data aggregation steps • Counter-calculation • Data integrity checks by means of graphical data analysis and calculation of specific performance figures • Check of management system certification • Check of data archiving system	• See Table A-2



Identification of potential reporting risk	Identification, assessment and testing of management controls	Areas of residual risks	Additional verification testing	Conclusions and Areas Requiring Improvement (including <i>Forward Action Requests</i>)
	(Spreadsheets) <ul style="list-style-type: none"> Limited access to IT systems Data protection procedures 	<ul style="list-style-type: none"> Unintended change of spread sheet programming or data base entries Problems caused by updating/upgrading or change of applied software 	<ul style="list-style-type: none"> Check of application of Management system procedures 	
Other calculation parameters				
<ul style="list-style-type: none"> BEF, Root to Shoot ratio, Carbon fraction 	<ul style="list-style-type: none"> The values and data sources applied are defined in the PDD and monitoring plan 	<ul style="list-style-type: none"> Unintended or intended Modification of calculation parameters Wrong application of values Misinterpretations of the applied methodology and/ or the PDD Missing update of applicable regulatory framework (e.g. IPCC values) 	<ul style="list-style-type: none"> Update-check of regulatory framework Countercheck of the applied MP in the MR against the methodology and the PDD 	<ul style="list-style-type: none"> See Table A-2
Calculation Methods				



Identification of potential reporting risk	Identification, assessment and testing of management controls	Areas of residual risks	Additional verification testing	Conclusions and Areas Requiring Improvement (including <i>Forward Action Requests</i>)
<ul style="list-style-type: none"> • Applied formulae • Miscalculation • Mistakes in spreadsheet calculation 	<ul style="list-style-type: none"> • Advanced calculation and reporting tools • A CDM coordinator is in charge of the CDM related calculations • Usage of tested / counterchecked Excel spreadsheets • Involvement of external consultants 	<ul style="list-style-type: none"> • The danger of miscalculation can only be minimized. 	<ul style="list-style-type: none"> • Countercheck on the basis of own calculation. • Spread sheet walk-through. • Plausibility checks • Check of plots 	<ul style="list-style-type: none"> • See Table A-2
Monitoring reporting				
<ul style="list-style-type: none"> • Data transfer to the author of the monitoring report • Data transfer to the monitoring report • Unintended use of outdated versions 	<ul style="list-style-type: none"> • An experienced CDM consultant is responsible for monitoring reporting. • CDM QMS procedures are defined 	<ul style="list-style-type: none"> • The danger of data transfer mistakes can only be minimized • Inappropriate application of QMS procedures 	<ul style="list-style-type: none"> • Counter check with evidences provided. • Audit of procedure application 	<ul style="list-style-type: none"> • See Table A-2



Table A-2: (Project specific) Periodic Verification Checklist

Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
A. Description of the project activity				
<p>A.1. Purpose and general description of the project activity (EB 70, Annex 11, A.1)</p> <p><i>Check if section A.1 of the MR includes the following:</i></p> <ul style="list-style-type: none"> - <i>Purpose of the PA and the measures taken to reduce GHG emissions</i> - <i>Brief description of the installed technology and equipment</i> - <i>Relevant dates for the project activity (e.g. construction, commissioning, continued operation periods etc.)</i> - <i>Total emission reductions achieved in this monitoring period</i> 	/MR/	<p>The verification team has checked section A.1 of the MR and confirms that the information provided is complete and correct with regards to the following:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Purpose of the PA and the measures taken to reduce GHG emissions <input checked="" type="checkbox"/> Brief description of the installed technology and equipments <input checked="" type="checkbox"/> Relevant dates for the project activity (e.g. construction, commissioning, continued operation periods etc) <input type="checkbox"/> Total emission reductions achieved in this monitoring period <p>In this context the following findings have been identified:</p> <ol style="list-style-type: none"> 1. Harvesting events are not found mentioned under the head: Relevant dates for the project activity in section A.1, of the webhosted MR^{/MR1/}. 1. The PA does not result in ‘emission reductions’ as it is an A/R PA. A/R PA involves net GHG sequestration. In the web-hosted MR, in many instances (eg: section A.1) ‘emission reductions’ have been mentioned, which is wrong. 2. In many instances in the web hosted MR^{/MR1/}, wordings and instructions of the UNFCCC MR template^{/unfccc/} is 	CAR A+	OK



Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
		found repeated. 3. Step wise Compliance of Annex 4 of PDD is found missing in the section C of published MR.		
<p>A.2. Location of project activity <i>(EB 70, Annex 11, A.2)</i></p> <p>Check if section A.2 of the MR reflects correctly the following:</p> <ul style="list-style-type: none"> - Host Party(ies) - Region / State / Province etc. - City / Town / Community etc. - Physical / geographical location (e.g. Latitude and Longitude) 	/MR/ /PDD/ /IM/	The verification team has checked section A.2 of the MR and confirms by means of comparison with the information given in the PDD and information gathered during the site visit that the information provided is complete and correct with regards to the following: <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Host Party(ies) <input checked="" type="checkbox"/> Region / State / Province <input checked="" type="checkbox"/> City / Town / Community <input checked="" type="checkbox"/> Physical / Geographical location In this context the following findings have been identified: N/A	OK	OK
<p>A.3. Parties and Project Participants <i>(EB 70, Annex 11, A.3)</i></p> <p>Check if section A.3 of the MR includes the following:</p> <ul style="list-style-type: none"> - All PPs as displayed on the UNFCCC website - A correctly filled table as per the MR template 	/MR/ /unfccc/	The verification team has checked section A.3 of the MR as well as the UNFCCC website and confirms that: <ul style="list-style-type: none"> <input checked="" type="checkbox"/> all PPs as displayed on the project related UNFCCC website are correctly listed <input checked="" type="checkbox"/> the table as per the template MR has been correctly filled In this context the following findings have been identified: N/A	OK	OK



Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
<p>A.4. Reference of applied methodology (EB 70, Annex 11, A.4)</p> <p><i>Check if section A.4 of the MR correctly describes / includes the following:</i></p> <ul style="list-style-type: none"> - <i>Reference to the applicable version of the methodology</i> - <i>Reference to the applicable version(s) of relevant methodological tools</i> - <i>Relevant EB decisions, if applicable</i> 	<p>/MR/ /PDD/ /unfccc/</p>	<p>The verification team has checked section A.4 of the MR and confirms by means of comparison with the information given in the PDD and displayed on the UNFCCC website that the information provided is complete and correct with regards to the following:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Number, title and version of the applicable CDM Methodology <input type="checkbox"/> Name and version of applicable CDM methodological tools <input type="checkbox"/> Relevant EB decisions <p>In this context the following findings have been identified:</p> <p>As per the Guidelines for completing the monitoring report form (Annex 34/EB54) should include reference to the applicable version(s) of relevant methodological tools and relevant EB decisions in section A.5 of the MR. The same are not found mentioned in the published MR.</p>	<p>CAR A2</p>	<p>OK</p>
<p>A.5. Crediting period of project activity (EB 70, Annex 11, A.5)</p> <p><i>Check if section A.5 of the MR correctly includes the following:</i></p> <ul style="list-style-type: none"> - <i>Start date of the crediting period. In this context please check, if applicable, whether post registration changes to the start date have been accepted by the EB.</i> - <i>Length and type of the crediting period</i> 	<p>/MR/ /unfccc/</p>	<p>The verification team has checked section A.5 of the MR and confirms by means of comparison with the information displayed on the UNFCCC website that the information provided is complete and correct with regards to the following:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Start date of the crediting period. <input checked="" type="checkbox"/> Type and length of the crediting period <p>In this context the following findings have been identified:</p>	<p>OK</p>	<p>OK</p>



Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
		N/A		
<p>A.6. Publication of the Monitoring Report (EB 70, Annex 11, 207)</p> <p><i>Check if the monitoring report has been made publicly available on the UNFCCC website before the verification commenced. Check if comments have been received and if yes, how they have been addressed.</i></p>	/unfccc/	<p>The verification team has ensured and confirms by means of checking the respective project information on the UNFCCC website that:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> The draft monitoring report, as received from the project participants, has been made publicly available prior to the start of the verification activities. <input checked="" type="checkbox"/> No comments have been received. <p>In this context the following findings have been identified: N/A</p>	OK	OK
<p>A.7. Compliance with standardized format of the Monitoring Report (EB 70, Annex 11, 212 h)</p> <p><i>Check (only) if the latest applicable MR template has been used. For compliance assessment with the MR guideline pl. refer to the respective MR sections.</i></p>	/MRT/	<p>The verification team has checked all sections of the MR and confirms by means of comparison with the MR template that:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> the standardized MR template has been used <p>In this context the following findings have been identified: N/A</p>	OK	OK
B. Implementation of project activity				
<p>B.1. Description of implemented registered project activity (EB 70, Annex 11, B.1)</p> <p><i>Check if section B.1 of the MR correctly describes / includes the following:</i></p>	/MR/ /PDD/ /PS/ /IM/	<p>The verification team has checked section B.1 of the MR and confirms by means of comparison with the information given in the PDD, the project standard and information gathered during the site visit that:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> the description of the implementation status of the PA is in line with the applicable provisions of the project 	OK	OK



Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
<ul style="list-style-type: none"> - <i>Implementation status of the PA</i> - <i>Detailed description of installed technology(ies) / technical processes and equipment applied</i> - <i>Diagrams (where appropriate)</i> 		standard <input checked="" type="checkbox"/> an appropriate description of the installed technology(ies), technical process and equipment incl.diagrams, where applicable, has been included In this context the following findings have been identified: N/A		
<p>B.1.1. Initial project implementation (EB 70, Annex 11; § 225 a, 226)</p> <p><i>Assess whether the project has been implemented and operated as per the registered PDD and are all physical features of the project in place?</i></p> <p><i>Further focus on the potential phase wise implementation and check the reporting on the corresponding status and starting dates accordingly.</i></p> <p><i>Check if the project is still in compliance with the applicability conditions of the methodology.</i></p> <p><i>Also, discuss – if applicable – any approvals of the necessary request of notification or request for approval of changes from the project activity as described in the registered PDD (EB 48 Annex 66/67).</i></p>	/IM01/ /PDD/	<p><i>Description:</i> The project activity is found implemented on degraded land in Nabrangpur, Koraput and Malkangiri districts of Odisha and Vishakhapatnam, Vizianagaram and Srikakulam of Andhra Pradesh and Bastar of Chhattisgarh in India. The plant species planted is found to be <i>Eucalyptus tereticornis</i>. Plantation started in 2001 and was implemented phase wise; by 2007 all the project area was reforested. On-site observation was compared with the description in registered PDD. The project activity is found to be implemented in line with the project description provided in the registered PDD^{/PDD/}.</p> <p><i>Verifier’s action:</i> The location of the project site and the sample plot were physically verified and found to be same. No changes have been observed related to the project technology, such as the species being planted, silvicultural practices etc.</p> <p><i>Conclusion:</i> However, following CARs were raised:</p> <p>3. With reference to EB 44 Annex 16, the project boundary</p>	CAR B+	OK



Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
		<p>has to be fixed during the first verification. Project participant is required to demonstrate the actual project boundary confirming with the one outlined in the PDD with all the necessary supporting documents.</p> <p>4. The webhosted MR mentions spacing of 3 X 1.5 meters. The PDD mentions spacing of 3 X 1.5m, 2 X 1.5 m and 1.5 X 1.5 m. However different spacing from this was observed during site visit, which is not found reflected in the MR. Further, any impacts there of in net GHG sequestration calculation also to be checked, even though no PSP is observed to have a spacing larger than 3 X 1.5 m.</p>		
<p>B.1.2. Technical equipment changes -(EB 70, Annex 11; § 225 a, 226)</p> <p><i>Check if relevant technical equipment of the project activity has been exchanged or modified during the monitoring period. Further ensure that consistent notations of key equipment (meters etc.) in PDD, MR and calculation spreadsheet are applied</i></p> <p><i>Consider e.g. interviews with operational personnel, QMS records, maintenance records, instrument specifications.</i></p> <p><i>In case of changes, check whether the project is still in line with the registered PDD and assure that these changes have been considered in the monitoring report and the emission reduction calculation.</i></p> <p><i>In case of post registration changes pl. refer to chapter B.2.</i></p>	<p>/IM01/ /PDD/ /MR1/ /XLS1/ /IM03/ /CAL/</p>	<p><i>Description:</i> Species planted on project lands was found to be <i>Eucalyptus tereticornis</i> as specified in the CDM-AR-PDD. Specifications of key monitoring instruments i.e. measuring tape, Abney's scale and GPS instrument were evidenced during the verification site visit. Key equipments at site were found to be consistent with the registered PDD^{/PDD/}, MR^{/MR1/} and calculation spreadsheet^{/XLS1/}.</p> <p><i>Verifier's action:</i> Interview with land owners^{/IM03/} (tribal beneficiaries) were conducted and calibration records^{/CAL/} were checked.</p> <p><i>Conclusion:</i> As evident from site visit observations, interviews and document check that no species planted is changed and no measuring instrument was changed. There is no change from the description provided in the PDD.</p>	<p>OK</p>	<p>OK</p>



Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
<p>B.1.3. Operation of the project activity -(EB 70, Annex 11; § 225 a, 226)</p> <p><i>Check if relevant operation modes of the project activity have been exchanged or modified during the monitoring period.</i></p> <p><i>Consider e.g. interviews with operational personnel, operation log sheets, data management system records.</i></p> <p><i>In case of changes, check whether the project is still in line with the registered PDD and assure that these changes have been considered in the monitoring report and the emission reduction calculation.</i></p> <p><i>In case of post registration changes pl. refer to chapter B.2.</i></p>	<p>/IM01/ /PDD/</p>	<p><i>Description:</i> The monitoring period lasts from 2001-06-25 to 2011-06-24. Both days are included. The first day of the monitoring period is the start date of implementation of forest site which is in this case the start of the crediting period. Reforestation was found done on degraded lands through direct planting. Harvesting is also found done as per the plan stipulated in the PDD i.e. 4 years of rotation cycle.</p> <p>However,</p> <p>4. The webhosted MR mentions that first harvesting shall be done after 5 years. However in some instances, harvesting has been observed to have taken place after 4 years. In some cases, harvesting has been done after 5 years. The net GHG sequestration calculation does not reflect this in all cases..</p> <p>5. As per section B.1 of the web hosted MR, re-plantation, if required, is to be done after 3 months of plantation. Even though the same was referred to in interview responses, adherence to this is not demonstrated in the webhosted MR.</p> <p>6. Live fencing, which is stated in section A.4 of the web hosted MR as a mechanism to protect from grazing/browsing animals was not observed during the site visit.</p> <p><i>Verifier's action:</i> Interview with land owners^{/IM03/} (tribal beneficiaries) and MTPL representatives^{/IM01/} were conducted. Further, the operation manual of the AR CDM PA was reviewed in detail^{/OM/}. Personnel skill development and training procedures, including tests was also reviewed^{/TRG/}. To ensure</p>	<p>CAR B2</p>	<p>OK</p>



Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
		<p>the right operation of the PA, details of the key personnel involved with the PA from the start date was collected through interviews^{/IM01/}. Further adherence to the operation manual was also checked with the the permanent sample plot data collection register for the monitoring period^{/MSR/}.</p> <p><i>Conclusion:</i> CAR B2 was raised.</p>		
<p>B.1.4. Incidents (EB 70, Annex 11; § 225 a, 226)</p> <p><i>Identify if there have been any significant incidents, deviant operation modes and / or downtimes of the equipment?</i></p> <p><i>Consider e.g. interviews with operational personnel, operational log sheets, analysis of performance data.</i></p>	/IM01/	<p><i>Description:</i> There were not found any significant incident recorded that deviates from the designed operation of the project activity.</p> <p><i>Verifier’s action:</i> MTPL representatives and land owners were interviewed. Significant incidents include fire, flood, mortality due to unfavourable weather conditions (eg chill) or losses due to diseases and pests. Further, these may also include conscious land clearing for any reason. From the interviews, no such event is observed to have occurred. There is no reported losses due to fire, flood or chill. All the land owners are found to be the same as identified during validation^{/LSC/}. Further, as observed from the permanent sample plot data collection register for the monitoring period^{/MSR/}, no PSP was observed with 0 survival rate, which also indicates no significant incidents such as wide spread pest attack or losses due to other unforeseen reasons or planned reasons.</p> <p><i>Conclusion:</i> There were no significant incidents occurred during the monitoring period.</p>	OK	OK
<p>B.1.5. Legislation</p>	/IM01/	<p><i>Description:</i> As per the onsite interviews with the</p>	OK	OK



Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
<p>Find out – esp. in the context of methodological requirements - whether relevant legislation with effect on the project activity in the host country has been changed.</p> <p>Assess, in case of changes, whether consequences for the PA with regard to relevant CDM requirements have been accounted for.</p> <p>In case of changes data sources shall be referenced.</p>		<p>representatives of the project participants and verification of various documents, verification team found that the various aspects of project activity w.r.t. the reforestation of degraded land is line with regulatory requirements. Moreover the national/sectoral regulations were verified from Ministry of Environment and Forests^{/MoEF/}. There were no changes in the regulation which can affect the removals by sinks in the project activity. Therefore the verification team confirms that the change in legislation has no impact on the project activity</p> <p><i>Verifier's action:</i> MoEF regulations are publically available documents and were checked by the verifier.</p> <p><i>Conclusion:</i> No relevant legislation with effect on the project activity in the host country has been changed.</p>		
<p>B.1.6. Open issues from validation -(EB 70, Annex 11; § 213)</p> <p><i>Check (esp. in case of 1st periodic verification) whether there are any open issues indicated in the validation report (e.g. FAR)?</i></p>	/VAL/	<p><input checked="" type="checkbox"/> There were no open issues addressed in the validation report</p> <p><input type="checkbox"/> All open issues from the validation have been appropriately addressed.</p> <p><input type="checkbox"/> The following issues related to the validation have not yet been appropriately addressed:</p>	OK	OK
<p>B.1.7. Open issues from previous verification</p>	/VER/	<p><input type="checkbox"/> There were no open issues addressed in the previous verification report</p>	OK	OK



Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
<p>-(EB 70, Annex 11; §§ 213; 284 h)</p> <p><i>Check in case of further periodic verifications whether there are any open issues indicated in previous verification reports (FAR) and take into consideration the guidance as specified in VVS.</i></p>		<p><input type="checkbox"/> All open issues from the previous verification have been appropriately addressed.</p> <p><input type="checkbox"/> The following issues related to the previous verification have not yet been appropriately addressed:</p> <p>This is the 1st periodic verification, and there is no verifications done prior to this.</p>		
<p>B.2. Post registration changes</p>				
<p>B.2.1. Are post registration changes applicable to the proposed project activity?</p>		<p><input type="checkbox"/> No, 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. <i>(Please proceed with section C)</i></p> <p><input checked="" type="checkbox"/> Yes, post registration changes have been identified and are assessed in detail in the subsequent steps. <i>(Please proceed with B.2.2.)</i></p> <p>All post registration changes are A/R specific and are discussed in detail in Annex 3. None of them require prior approval from the EB.</p> <p>Further, clarification required whether re-stratification was deemed necessary and how final stratification for this monitoring has been done, considering that not in all PSPs harvesting has been done in time and thus rotation cycle for these parcels changed in teams of age of plantation. Further it is not clear that the stratum area is correct as harvesting monitoring has only been done on PSP basis and not on whole area basis. CL B3 has been raised on this.</p>	<p>CL B3</p>	<p>OK</p>



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<p>B.2.2. Temporary deviations from the registered monitoring plan or applied methodology (TDfrMP; TDfMM) (EB 70, Annex 11, B.2.1; EB70, Annex 3; §§ 251 - 256)</p> <p><i>Indicate whether any temporary deviations have been applied during this monitoring periods. In cases where approval has been sought from the EB please provide reference. If applied, provide a description of the deviation(s). This should include the reasons for the deviation(s), how it deviates from the monitoring plan and/or applied methodology(ies), the duration for which the deviation(s) is(are) applicable and justification on the conservativeness of the approach. Indicate if the deviation will lead to a reduction in the accuracy and if so, which conservative assumptions and discount factors have been applied. For deviation(s) that require prior approval by the Board, include the date of approval and reference number.</i></p>	<p>/PS/ /unfccc/</p>	<table border="1"> <tr> <td data-bbox="1041 491 1115 564"><input checked="" type="checkbox"/></td> <td data-bbox="1115 491 1807 564">No TDfrMP or TDfMM have been submitted to the UNFCCC prior to the current monitoring period</td> </tr> <tr> <td data-bbox="1041 564 1115 638"><input type="checkbox"/></td> <td data-bbox="1115 564 1807 638">The following TDfrMP or TDfMM have been approved or are under approval by the UNFCCC</td> </tr> <tr> <td data-bbox="1041 638 1115 1023">1</td> <td data-bbox="1115 638 1807 1023"> <table border="1"> <tr> <td data-bbox="1124 644 1173 687">Title</td> <td data-bbox="1173 644 1798 687"></td> </tr> <tr> <td data-bbox="1124 687 1173 730">Status</td> <td data-bbox="1173 687 1798 730"><input type="checkbox"/> under approval; <input type="checkbox"/> approved</td> </tr> <tr> <td data-bbox="1124 730 1173 774">Appr.date</td> <td data-bbox="1173 730 1798 774"></td> </tr> <tr> <td data-bbox="1124 774 1173 817">Ref. 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1	Issue:									
2	Issue:									
<p>B.2.3. Corrections <i>(EB 70, Annex 11, B.2.2; EB70, Annex 3; §§ 257 - 259)</i></p> <p><i>Indicate whether any corrections to project information or parameters fixed at validation have been approved during this monitoring period or submitted with this monitoring report.</i></p>		<div style="border: 1px solid black; padding: 5px;"> <input checked="" type="checkbox"/> During the verification of the current MP no need for corrections has been identified. <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 20px; text-align: center;"><input type="checkbox"/></td> <td colspan="2">The following corrections have been applied:</td> </tr> <tr> <td style="text-align: center;">1</td> <td>Issue:</td> <td></td> </tr> </table> </div>	<input type="checkbox"/>	The following corrections have been applied:		1	Issue:		OK	OK
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<p><i>In cases where the correction(s) and the revised PDD are approved prior to the submission of this monitoring report for request for issuance, provide the approval date and reference number. Otherwise, provide the version number and the completion date of the revised PDD.</i></p> <p><i>Please check and report that the 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.</i></p>		<table border="1" data-bbox="1048 440 1800 496"> <tr> <td data-bbox="1048 440 1120 496"></td> <td data-bbox="1120 440 1176 496">2</td> <td data-bbox="1176 440 1326 496">Issue:</td> <td data-bbox="1326 440 1800 496"></td> </tr> </table> <p><i>Detailed description and justification each correction:</i></p> <p>In this context the following findings have been identified: N/A</p>		2	Issue:																												
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<p>B.2.4. Permanent changes from the registered monitoring plan or applied methodology (PCfrMP; PCfMM) (EB 70, Annex 11, B.2.3; EB70, Annex 3; §§ 262 - 268)</p> <p><i>Indicate whether any permanent changes from the registered monitoring plan or applied methodologies have been approved during this monitoring period or submitted with this monitoring report.</i></p> <p><i>In cases where the change(s) and the revised PDD are approved prior to the submission of this monitoring report for request for issuance, provide the approval date and reference number. Otherwise, provide the version number and the completion date of the revised PDD.</i></p>		<table border="1" data-bbox="1048 879 1800 1362"> <tr> <td data-bbox="1048 879 1120 954"><input checked="" type="checkbox"/></td> <td colspan="3" data-bbox="1120 879 1800 954">No PCfrMP or PCfMM have been submitted to the UNFCCC prior to the current monitoring period</td> </tr> <tr> <td data-bbox="1048 954 1120 1029"><input type="checkbox"/></td> <td colspan="3" data-bbox="1120 954 1800 1029">The following PCfrMP or PCfMM have been approved or are under approval by the UNFCCC</td> </tr> <tr> <td data-bbox="1048 1029 1120 1225" rowspan="4">1</td> <td data-bbox="1120 1029 1326 1077">Title</td> <td colspan="2" data-bbox="1326 1029 1800 1077"></td> </tr> <tr> <td data-bbox="1120 1077 1326 1125">Status</td> <td data-bbox="1326 1077 1800 1125"><input type="checkbox"/> under approval; <input type="checkbox"/> approved</td> </tr> <tr> <td data-bbox="1120 1125 1326 1173">Appr. date</td> <td colspan="2" data-bbox="1326 1125 1800 1173"></td> </tr> <tr> <td data-bbox="1120 1173 1326 1225">Ref. No.</td> <td colspan="2" data-bbox="1326 1173 1800 1225"></td> </tr> <tr> <td data-bbox="1048 1225 1120 1362" rowspan="3">2</td> <td data-bbox="1120 1225 1326 1273">Title</td> <td colspan="2" data-bbox="1326 1225 1800 1273"></td> </tr> <tr> <td data-bbox="1120 1273 1326 1321">Status</td> <td data-bbox="1326 1273 1800 1321"><input type="checkbox"/> under approval; <input type="checkbox"/> approved</td> </tr> <tr> <td data-bbox="1120 1321 1326 1362">Appr. date</td> <td colspan="2" data-bbox="1326 1321 1800 1362"></td> </tr> </table>	<input checked="" type="checkbox"/>	No PCfrMP or PCfMM have been submitted to the UNFCCC prior to the current monitoring period			<input type="checkbox"/>	The following PCfrMP or PCfMM have been approved or are under approval by the UNFCCC			1	Title			Status	<input type="checkbox"/> under approval; <input type="checkbox"/> approved	Appr. date			Ref. No.			2	Title			Status	<input type="checkbox"/> under approval; <input type="checkbox"/> approved	Appr. date			OK	OK
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<p>B.2.5. Changes to the project design of the registered project activity (CoPD) <i>(EB 70, Annex 11, B.2.4; EB70, Annex 3; §§ 269 - 282)</i></p> <p><i>Indicate whether any changes to the project design of the project activity have been approved during this monitoring period or submitted with this monitoring report.</i></p> <p><i>In cases where the change(s) and the revised PDD are approved prior to the submission of this monitoring report for request for issuance, provide the approval date and reference number. Otherwise, provide the version number and the completion date of the revised PDD.</i></p>		<table border="1"> <tr> <td data-bbox="1043 624 1115 699"><input checked="" type="checkbox"/></td> <td data-bbox="1115 624 1805 699">No CoPD has been submitted to the UNFCCC prior to the current monitoring period</td> </tr> <tr> <td data-bbox="1043 699 1115 774"><input type="checkbox"/></td> <td data-bbox="1115 699 1805 774">The following CoPD has been approved or are under approval by the UNFCCC</td> </tr> <tr> <td data-bbox="1043 774 1115 970">1</td> <td data-bbox="1115 774 1805 970"> <table border="1"> <tr> <td data-bbox="1126 774 1328 826">Title</td> <td data-bbox="1328 774 1805 826"></td> </tr> <tr> <td data-bbox="1126 826 1328 874">Status</td> <td data-bbox="1328 826 1805 874"><input type="checkbox"/> under approval; <input type="checkbox"/> approved</td> </tr> <tr> <td data-bbox="1126 874 1328 922">Aprr.date</td> <td data-bbox="1328 874 1805 922"></td> </tr> <tr> <td data-bbox="1126 922 1328 970">Ref. No.</td> <td data-bbox="1328 922 1805 970"></td> </tr> </table> </td> </tr> <tr> <td data-bbox="1043 970 1115 1161">2</td> <td data-bbox="1115 970 1805 1161"> <table border="1"> <tr> <td data-bbox="1126 970 1328 1018">Title</td> <td data-bbox="1328 970 1805 1018"></td> </tr> <tr> <td data-bbox="1126 1018 1328 1066">Status</td> <td data-bbox="1328 1018 1805 1066"><input type="checkbox"/> under approval; <input type="checkbox"/> approved</td> </tr> <tr> <td data-bbox="1126 1066 1328 1114">Aprr.date</td> <td data-bbox="1328 1066 1805 1114"></td> </tr> <tr> <td data-bbox="1126 1114 1328 1161">Ref.No.</td> <td data-bbox="1328 1114 1805 1161"></td> </tr> </table> </td> </tr> <tr> <td data-bbox="1043 1161 1115 1294"><input type="checkbox"/></td> <td data-bbox="1115 1161 1805 1294">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</td> </tr> <tr> <td data-bbox="1043 1294 1115 1399"><input type="checkbox"/></td> <td data-bbox="1115 1294 1805 1399">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.</td> </tr> </table>	<input checked="" type="checkbox"/>	No CoPD has been submitted to the UNFCCC prior to the current monitoring period	<input type="checkbox"/>	The following CoPD has been approved or are under approval by the UNFCCC	1	<table border="1"> <tr> <td data-bbox="1126 774 1328 826">Title</td> <td data-bbox="1328 774 1805 826"></td> </tr> <tr> <td data-bbox="1126 826 1328 874">Status</td> <td data-bbox="1328 826 1805 874"><input type="checkbox"/> under approval; <input type="checkbox"/> approved</td> </tr> <tr> <td data-bbox="1126 874 1328 922">Aprr.date</td> <td data-bbox="1328 874 1805 922"></td> </tr> <tr> <td data-bbox="1126 922 1328 970">Ref. No.</td> <td data-bbox="1328 922 1805 970"></td> </tr> </table>	Title		Status	<input type="checkbox"/> under approval; <input type="checkbox"/> approved	Aprr.date		Ref. No.		2	<table border="1"> <tr> <td data-bbox="1126 970 1328 1018">Title</td> <td data-bbox="1328 970 1805 1018"></td> </tr> <tr> <td data-bbox="1126 1018 1328 1066">Status</td> <td data-bbox="1328 1018 1805 1066"><input type="checkbox"/> under approval; <input type="checkbox"/> approved</td> </tr> <tr> <td data-bbox="1126 1066 1328 1114">Aprr.date</td> <td data-bbox="1328 1066 1805 1114"></td> </tr> <tr> <td data-bbox="1126 1114 1328 1161">Ref.No.</td> <td data-bbox="1328 1114 1805 1161"></td> </tr> </table>	Title		Status	<input type="checkbox"/> under approval; <input type="checkbox"/> approved	Aprr.date		Ref.No.		<input type="checkbox"/>	During the verification of the current MP no need for a CoPD has been identified. The monitoring plan is in accordance with the approved methodology applied by the PA	<input type="checkbox"/>	An approval of the following CoPD.is to be requested from the EB for the current MP as appendix 1 of the project standard does not apply.	OK	OK
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C. Description of monitoring system																			
C.1. Monitoring Plan – PDD Compliance (EB 70 Annex 3, § 233-236)	/MR/ /PDD/	By means of comparison of the MR with the registered PDD (or any revisions thereof) the verification team has checked whether the MP is in compliance with the registered PDD. The	OK	OK															



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<p><i>Check if the monitoring plan is in accordance with the monitoring plan contained in the registered PDD (or any accepted revised MP).</i></p> <p><i>Please check esp. if</i></p> <ul style="list-style-type: none"> - <i>all parameters stated in the MP of the registered PDD have been monitored and updated as applicable</i> - <i>the monitoring equipment has been controlled and calibrated as per the MP</i> - <i>the monitoring results are consistently recorded as per the approved frequency</i> - <i>QA/QC procedures have been applied in accordance with the MP</i> 		<p>outcome is as follows:</p> <table border="1" data-bbox="1048 485 1800 564"> <tr> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td>The MP is completely in accordance with the last registered/approved version of the PDD / MP.</td> </tr> </table> <p>Regarding A/R specific changes please refer to Annex 3.</p> <p>In this context the following findings have been identified:</p> <p>N/A</p>	<input checked="" type="checkbox"/>	The MP is completely in accordance with the last registered/approved version of the PDD / MP.									
<input checked="" type="checkbox"/>	The MP is completely in accordance with the last registered/approved version of the PDD / MP.												
<p>C.2. Monitoring Plan – Meth Compliance (EB 70 Annex 3, § 229-232)</p> <p><i>Check if the monitoring plan is in accordance with the applied methodology.</i></p> <p><i>In case the methodology references applicable tools it has to be ensured that the MP is also compliant with those tools.</i></p> <p><i>Also please specify if monitoring aspects have been identified that are not specified in the methodology but may enhance the level of accuracy and completeness of the monitoring plan – this esp. applies for SSC PAs.</i></p>	<p>/MR/ /PDD/ /AM9/ /T-FFC/ /T-EC/ /T-CAD/</p>	<p>By means of comparison of the MR with the applied CDM methodology and related tools the verification team has checked whether the MP is in compliance with the MP related requirements of the applied methodology. The outcome is as follows:</p> <table border="1" data-bbox="1048 1107 1800 1390"> <tr> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td colspan="2">The MP is completely in accordance with the approved methodology applied by the CDM project (last registered/approved version of the PDD)</td> </tr> <tr> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td colspan="2">The MP is completely in accordance with the applied tools which the methodology references. A breakdown of the referenced tools is as follows:</td> </tr> <tr> <td style="text-align: center;">1</td> <td>Title (of the tool)</td> <td>Tool to calculate project or leakage CO₂ emissions from</td> </tr> </table>	<input checked="" type="checkbox"/>	The MP is completely in accordance with the approved methodology applied by the CDM project (last registered/approved version of the PDD)		<input checked="" type="checkbox"/>	The MP is completely in accordance with the applied tools which the methodology references. A breakdown of the referenced tools is as follows:		1	Title (of the tool)	Tool to calculate project or leakage CO ₂ emissions from	<p>OK</p>	<p>OK</p>
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Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
		<p>of PDD is not explained in the web hosted MR.</p> <p>2. As per MR guidelines section C includes data collection procedures (information flow including data generation, aggregation, recording, calculation and reporting) etc,</p> <p><i>Verifier’s action:</i> MTPL records were checked.</p> <p><i>Conclusion:</i> CAR C2 is raised on this.</p>		
<p>C.4. Metering diagram (EB 70 Annex 3, C; EB 65 Annex 5 §190)</p> <p><i>Check first if the MR includes a metering diagram showing all relevant monitoring points.</i></p> <p><i>Check further if this diagram reflects the actual situation and is in line with the registered PDD and with the requirements of the applied methodology.</i></p>	<p>/PS/ /MR1/</p>	<p><i>Description:</i> The verification team notes that the A/R PA does not involve metering as in non A/R CDM PAs. All A/R PAs involved measurement of annual increment in biomass, which is done by ground measurements.</p> <p>A “metering” diagram has not been included showing sample design and measurement points.</p> <p><i>Verifier’s action:</i> Monitoring report was checked.</p> <p><i>Conclusion:</i> CAR A1-I was raised</p>	<p>OK</p>	<p>OK</p>
<p>C.5. Roles and Responsibilities (EB 70, Annex 11, C; EB 70 Annex 2 §193)</p> <p><i>Check if all roles and positions of each person in the GHG data management process are clearly defined and implemented as stated in the monitoring plan. Please consider the complete data trail from raw data</i></p>	<p>/PS/</p>	<p><i>Description:</i> The core CDM personnel are observed to be qualified and trained. However, the following observations are made:</p> <p>1. Consolidated list of personnel including qualification, experience, training and responsibilities involved in the project activity during the monitoring period was not detailed</p>	<p>CAR G3</p>	<p>OK</p>



Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
<p><i>generation to submission of the final data.</i></p> <p><i>Identify, if relevant personnel w.r.t. monitoring has been exchanged?</i></p> <p><i>If so, have appropriate training measures been carried out.</i></p> <p><i>In case of changes, assure that the implemented monitoring procedures have not been affected.</i></p>		<p>during on site assessment.</p> <p>2. Organization structure given in section C depicts the same person in more than one area. Justify why the same name has been given in more than one instance.</p> <p>3. As part of Quality Assurance and Quality Control procedures, appropriate trainings should be provided to the personnel involved in the field measurement works. As per the procedure both classroom examination and field examination will be conducted, and only those who pass the required examination can join the task team. PP shall provide evidence of the same.</p> <p>The same is raised as CAR C3</p> <p><i>Verifier's action:</i> Records of personnel were checked and interviews were conducted.</p> <p><i>Conclusion:</i> CAR was raised.</p>		
<p>C.6. Emergency procedures for the monitoring system (EB 70 Annex 11, C; EB 70 Annex 2 §193)</p> <p><i>Check, as appropriate, whether relevant emergency procedures for the monitoring system have been included in the MR and assess whether these procedures have been implemented, when required</i></p>	<p>/PS/ /MR1/</p>	<p><i>Description:</i> No emergency procedures for the monitoring system were found mentioned in the section C of the published MR^{/MR1/}. As per Annex 34/ EB 54, relevant emergency procedures for the monitoring system need to be included in the section C of MR.</p> <p><i>Verifier's action:</i> MR was checked.</p> <p><i>Conclusion:</i> CAR C4 is raised on this.</p>	<p>CAR C4</p>	<p>OK</p>
<p>C.7. Data archive and data protection</p>		<p><i>Description:</i> Appropriate measures are in place in order to avoid</p>	<p>OK</p>	<p>OK</p>



Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
<p>(EB 70 Annex 2 §56 b)</p> <p>Check whether all records of monitoring parameters are archived according to the monitoring plan.</p> <p>Assess further whether appropriate measures have been taken in order to avoid unintended or intended manipulation or loss of the measured data.</p>		<p>unintended or intended manipulation of the measured data. The archiving is done in CDs as well as in computer. Moreover regular check up procedure is there.</p> <p><i>Verifier’s action:</i> Confirmed by means of interviews with site personnel and physical verification on site.</p> <p><i>Conclusion:</i> Adequate measures are taken in order to avoid any kind of manipulation of data or information.</p>		
D. Data and parameters				
D.1. Data and Parameters fixed ex ante				
D.1.1.				
<p>a) Compliance with registered PDD (EB 70 Annex 11; D1)</p> <p>Check whether the value applied is in compliance with the registered PDD.</p>		<p><i>Description:</i> 1305 numbers of sample plots are taken into consideration.</p> <p><i>Verifier’s action:</i> Verification team noted that the sample plots are chosen randomly from each stratum. Details of sample plots are found noted in the sample plot register. Data collected from these PSPs are used for calculation of net removals.</p> <p><i>Conclusion:</i> The number of sample plots in the webhosted MR is as per the registered PDD.</p>	OK	OK



Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
<p>b) Compliance with the applied methodology (EB 70 Annex 11; D1)</p> <p><i>Check whether the value applied is in compliance with the applied methodology or any other tool.</i></p>		<p><i>Description:</i> 1041 sample plots were required as per the calculation based on methodological tool, however 1305 plots are being maintained.</p> <p><i>Verifier’s action:</i> Number of sample plots is found calculated as per methodological tool.</p> <p><i>Conclusion:</i> The number of sample plots in the webhosted MR is as per the registered PDD and applied methodology.</p>	OK	OK
<p>D.1.2.</p>		<p>Sample plot ID</p>		
<p>a) Compliance with registered PDD (EB 70 Annex 11; D1)</p> <p><i>Check whether the value applied is in compliance with the registered PDD.</i></p>		<p><i>Description:</i> Sample plot ID of sample plots is found recorded in Sample Plot Register as Alpha Numeric item. Numeric series ID has been assigned to each permanent sample plot.</p> <p><i>Verifier’s action:</i> Verification team noted that the sample plots are chosen randomly from each stratum. Details of sample plots are found noted in the sample plot register. Data collected from these PSPs are used for calculation of net removals.</p> <p><i>Conclusion:</i> Numeric series ID assigned to each permanent sample plot as per the registered PDD.</p>	OK	OK



Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
<p>b) Compliance with the applied methodology (EB 70 Annex 11; D1) <i>Check whether the value applied is in compliance with the applied methodology or any other tool.</i></p>		<p><i>Description:</i> 1041 sample plots were required as per the calculation based on methodological tool, however 1305 plots are being maintained. <i>Verifier's action:</i> Number of sample plots is found calculated as per methodological tool. <i>Conclusion:</i> The number of sample plots in the webhosted MR is as per the registered PDD and applied methodology.</p>	OK	OK
D.1.3.		Confidence level and Precision level		
<p>a) Compliance with registered PDD (EB 70 Annex 11; D1) <i>Check whether the value applied is in compliance with the registered PDD.</i></p>		<p><i>Description:</i> 95% confidence level and +/- 10% precision level was found used. <i>Verifier's action:</i> Confidence level (%) and Precision level (%) are found used for estimating numbers of PSPs for each stratum. <i>Conclusion:</i> The values applied are in compliance with registered PDD.</p>	OK	OK
<p>b) Compliance with the applied methodology (EB 70 Annex 11; D1) <i>Check whether the value applied is in compliance with the applied methodology or any other tool.</i></p>		<p><i>Description:</i> The applied methodology recommends targeted precision level for biomass estimation within each stratum is $\pm 10\%$ of the mean at a 95% confidence level. <i>Verifier's action:</i> Methodological requirement was checked. <i>Conclusion:</i> Confidence level and Precision level in the webhosted MR is as per the registered PDD and applied methodology.</p>	OK	OK



Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
D.1.4.		Standard Deviation of each stratum		
<p>a) Compliance with registered PDD (EB 70 Annex 11; D1) Check whether the value applied is in compliance with the registered PDD.</p>		<p><i>Description:</i> Standard deviation of 30 was found used. <i>Verifier's action:</i> Standard Deviation of each stratum was found used for estimating numbers of PSPs for each stratum. <i>Conclusion:</i> The values applied are in compliance with registered PDD.</p>	OK	OK
<p>b) Compliance with the applied methodology (EB 70 Annex 11; D1) Check whether the value applied is in compliance with the applied methodology or any other tool.</p>		<p><i>Description:</i> The applied methodology recommends standard deviation to be used in sample plot calculation. <i>Verifier's action:</i> Methodological requirement was checked. <i>Conclusion:</i> standard deviation in the webhosted MR is as per the registered PDD and applied methodology.</p>	OK	OK
D.1.5.		Biomass Expansion Factor (BEF)		
<p>a) Compliance with registered PDD (EB 70 Annex 11; D1) Check whether the value applied is in compliance with the registered PDD.</p>		<p><i>Description:</i> Biomass expansion factor for conversion of annual net increment (including bark) in stem biomass to total aboveground tree biomass increment is species specific value of BEF is found taken from IPCC GPG LULUCF. <i>Verifier's action:</i> Value of BEF is taken as 2.0 which was checked from PDD and IPCC GPG for LULUCF (2003) Table-3A.1.10. <i>Conclusion:</i> The values applied are taken as lower value of the range (2.0-9.0). The value is for tropical broadleaf forest. The value is in compliance with registered PDD.</p>	OK	OK



Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
<p>b) Compliance with the applied methodology (EB 70 Annex 11; D1)</p> <p><i>Check whether the value applied is in compliance with the applied methodology or any other tool.</i></p>		<p><i>Description:</i> Biomass expansion factor for conversion of annual net increment (including bark) in stem biomass to total aboveground tree biomass increment is species specific value of BEF is found taken from IPCC GPG LULUCF.</p> <p><i>Verifier’s action:</i> Value of BEF is taken as 2.0 which was checked from PDD and IPCC GPG for LULUCF (2003) Table-3A.1.10. Verifier confirmed that there is no published data on Biomass Expansion Factor for the species available locally or nationally and therefore the IPCC default values have been used. Another registered A/R CDM project activity (UNFCCC Ref No. 4531) from the project region of the host country that involve Eucalyptus clonal plantations, used IPCC default values for Biomass Expansion Factor. The IPCC default values for the tropical broadleaf species have been chosen. While Eucalyptus is conventionally regarded as a temperate species, however the Eucalyptus plantations for the project have been considered as tropical species since the species has been under cultivation in tropical areas of India for the last 100 years. Therefore the species’s phenotypic expressions have been modified for tropical existence. Therefore the IPCC BEF for tropical broadleaf species has been considered for emission reduction calculations. The range of BEF values in the page 3.178 of IPCC GPG 2003 Table 3A.1.10 is given as 2 to 9 with an average of 3.4. Conservatively we have taken the BEF as the least value of the range i.e. 2.</p> <p><i>Conclusion:</i> The values applied are taken as lower value of the range (2.0-9.0). The value is for tropical broadleaf forest. The value is in compliance with AR-ACM001 version 04.</p>	<p>OK</p>	<p>OK</p>



Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
D.1.6.		Carbon Fraction (CF)		
<p>a) Compliance with registered PDD (EB 70 Annex 11; D1)</p> <p>Check whether the value applied is in compliance with the registered PDD.</p>		<p><i>Description:</i> Carbon fraction in dry biomass is taken as 0.5 t C/t dry matter (i.e. 50%).</p> <p><i>Verifier’s action:</i> Value of carbon fraction is taken as 0.5 t C/t dry matter which was checked from PDD.</p> <p><i>Conclusion:</i> The value is in compliance with registered PDD.</p>	OK	OK
<p>b) Compliance with the applied methodology (EB 70 Annex 11; D1)</p> <p>Check whether the value applied is in compliance with the applied methodology or any other tool.</p>		<p><i>Description:</i> Carbon fraction in dry matter is found IPCC default value.</p> <p><i>Verifier’s action:</i> Value of CF is 0.5 which is confirmed from MR and spreadsheet.</p> <p><i>Conclusion:</i> The value is in compliance with AR-ACM001 version 04.</p>	OK	OK
D.1.7.		Root to Shoot Ratio (R)		
<p>a) Compliance with registered PDD (EB 70 Annex 11; D1)</p> <p>Check whether the value applied is in compliance with the registered PDD.</p>		<p><i>Description:</i> RS ratio is a dimensionless value which is used for calculation of belowground biomass. A value of 0.27 is found used for calculation and is reported in the MR.</p> <p><i>Verifier’s action:</i> Value of Root to Shoot ratio is taken as 0.27 which was checked from PDD.</p> <p><i>Conclusion:</i> The value is in compliance with registered PDD.</p>	OK	OK



Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
<p>b) Compliance with the applied methodology (EB 70 Annex 11; D1)</p> <p><i>Check whether the value applied is in compliance with the applied methodology or any other tool.</i></p>		<p><i>Description:</i> 0.27 as R is found IPCC default value (IPCC GPG LULUCF Table- 3A.1.8).</p> <p><i>Verifier's action:</i> Value of R is 0.27 which is confirmed from MR and spreadsheet.</p> <p><i>Conclusion:</i> The value is in compliance with AR-ACM001 version 04.</p>	OK	OK
D.1.8.		Basic Wood Density (D_j)		
<p>a) Compliance with registered PDD (EB 70 Annex 11; D1)</p> <p><i>Check whether the value applied is in compliance with the registered PDD.</i></p>		<p><i>Description:</i> Basic wood density is used for calculation of the volume of the stand. A value of 0.60672 t.d.m. m⁻³ is found used for calculation. However the same is not reported in section D.1 of the MR and a CAR D12 is raised on this..</p> <p><i>Verifier's action:</i> Value of the basic wood density is taken as 0.60672 t.d.m m⁻³ which was checked from PDD.</p> <p><i>Conclusion:</i> The value is in compliance with registered PDD. However pending closure of CAR D12</p>	CAR D12	OK
<p>b) Compliance with the applied methodology (EB 70 Annex 11; D1)</p> <p><i>Check whether the value applied is in compliance with the applied methodology or any other tool.</i></p>		<p><i>Description:</i> 0.60672 t.d.m m⁻³ as D_j is found as per the project data base which was validated during validation and accepted..</p> <p><i>Verifier's action:</i> Value of D_j is 0.60672 t.d.m m⁻³ which is confirmed from the spreadsheet.</p> <p><i>Conclusion:</i> The validated value is in compliance with AR-ACM001 version 04. However pending closure of CAR D12.</p>	CAR D12	OK



Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
D.2. Data and Parameters monitored				
D.2.1. Ai				
<p>a) Measurement / Determination method (EB 70 Annex 3, §§ 233, 236)</p> <p><i>Describe how the monitoring parameter was measured / determined.</i></p> <p><i>Check if relevant equipment has been exchanged and if in cases of failures / downtimes of standard equipment other measurement / determination methods have been used. Furthermore, verify the frequency of measurements as per the requirements.</i></p> <p><i>Assess whether the measurement / determination method is in line with the registered monitoring plan of the PDD and the applied methodology.</i></p>	<p>/IM01/ /PDD/ /ARACM1/ /CARB/ /VAL/ /MR1/</p>	<p><i>Description:</i> Area of stratum is found to be recorded on the basis of the GIS mapping. The GPS mapping is also found to be validated and accepted.</p> <p><i>Verifier’s action:</i> The latest GIS mapping is found to be done in 2010, which is after 2007 plantation. Hence no anomaly is expected in the recording of area of stratum. Further, during the site visits, the verification team found no inconsistency in the plantations of the parcel and the records. To ensure this, the verification team also has visited parcels of plantation without any sample plots. The year of plantation is also corroborated from the bank statements issued in the name of the farmer.</p> <p>However, as per the registered PDD, monitoring of area of each stratum is to be done using GIS data at the start of the PA, and repeated every 5 years then on, with adjustments to the stratum area if any. This has not been demonstrated in the web-hosted MR. Further the accuracy of the GPS machine also has to be provided.</p> <p><i>Conclusion:</i> CAR D1 is raised.</p>	<p>CAR D4</p>	<p>OK</p>
<p>b) Accuracy and QA/QC Procedure (EB 70 Annex 3, §§ 237-241)</p>	<p>/CAL/ /MM/</p>	<p><i>Description:</i> The instrument used to measure the area of the stratum is an electronic GPS machine.</p>	<p>OK</p>	<p>OK</p>



Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
<p><i>In case of measured (or estimated) values, check whether the accuracy of equipment used for monitoring is controlled and calibrated in accordance with the monitoring plan or if significant inaccuracies occur; in this case, make sure that the most conservative assumptions theoretically possible have been made for calculating ERs.</i></p> <p><i>Describe whether all applicable QA/QC procedures are met. Assess further if the calibration of the monitoring equipment has been carried out in line with the latest EB guidance.</i></p>		<p><i>Verifier's action:</i> From the interviews, the GPS accuracy is found to be 4-5 meters.</p> <p><i>Conclusion:</i> Awaiting submission of GPS machine specifications.</p>		
<p>c) Correctness (EB 70 Annex 3, §§ 233, 236)</p> <p><i>Determine whether the value given in the monitoring report is correct or determined in a conservative manner.</i></p> <p><i>In case of conservative approaches used in lieu of the monitoring as per registered MP detailed assessment of the conservativeness of the approach used should be given.</i></p> <p><i>In case of mistakes / deviations pl. provide details and descriptions of the CARs raised.</i></p>	/MR1/	<p><input type="checkbox"/> Correct <input checked="" type="checkbox"/> Not correct (initial assessment)</p> <p><i>Description:</i> Please refer to D.2.1 (a).</p> <p><i>Verifier's action:</i> Webhosted MR was checked.</p> <p><i>Conclusion:</i> CAR D1 was raised.</p>	CAR D1	OK
D.3. Asp i		Description: Total area of all sample plots in stratum i		
a) Measurement / Determination method	/IM01/ /PDD/	<i>Description:</i> Actual area of each stratum is found defined in the	CAR	OK



Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
<p>(EB 70 Annex 3, §§ 233, 236)</p> <p><i>Describe how the monitoring parameter was measured / determined.</i></p> <p><i>Check if relevant equipment has been exchanged and if in cases of failures / downtimes of standard equipment other measurement / determination methods have been used. Furthermore, verify the frequency of measurements as per the requirements.</i></p> <p><i>Assess whether the measurement / determination method is in line with the registered monitoring plan of the PDD and the applied methodology.</i></p>	/ARACM1/ /GPS/	<p>PDD and provided in the spreadsheet^{/XLS1/}. However, as per the monitoring plan the same shall be measured in field before the start of the project and adjusted thereafter every 5-year. However, in MR it is noted that the same has been measured using geospatial data. Further, in the MR, it is mentioned that measurement frequency is 5 years after 1st verification, which is not in line with the registered PDD^{/PDD/}. CAR D2 is raised on this.</p> <p><i>Verifier's action:</i> The verification team has checked the latest geo-spatial information provided on the basis of GIS data from which the area for the sample plots in each stratum is estimated.</p> <p><i>Conclusion:</i> CAR D2</p>	<p>D2</p>	
<p>b) Accuracy and QA/QC Procedure (EB 70 Annex 3, §§ 237-241)</p> <p><i>In case of measured (or estimated) values, check whether the accuracy of equipment used for monitoring is controlled and calibrated in accordance with the monitoring plan or if significant inaccuracies occur; in this case, make sure that the most conservative assumptions theoretically possible have been made for calculating ERs.</i></p> <p><i>Describe whether all applicable QA/QC procedures are met. Assess further if the calibration of the monitoring equipment has been carried out in line with</i></p>	/GPS/	<p><i>Description:</i> The verification team considers electronically derived data from the GIS system to be of high accuracy. The verification team also has checked the GIS positions of the sample plots and finds it to corroborate with the readings on which the area is based upon. Still, pending CAR D2.</p> <p><i>Verifier's action:</i> The verification team has checked the latest geo-spatial information provided on the basis of GIS data from which the area for the sample plots in each stratum is estimated.</p> <p><i>Conclusion:</i> Pending closure of CAR.</p>	<p>CAR D2</p>	<p>OK</p>



Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
<i>the latest EB guidance.</i>				
<p>c) Correctness (EB 70 Annex 3, §§ 233, 236)</p> <p><i>Determine whether the value given in the monitoring report is correct or determined in a conservative manner.</i></p> <p><i>In case of conservative approaches used in lieu of the monitoring as per registered MP detailed assessment of the conservativeness of the approach used should be given.</i></p> <p><i>In case of mistakes / deviations pl. provide details and descriptions of the CARs raised.</i></p>	/MR1/ /GPS/	<p><input type="checkbox"/> Correct <input type="checkbox"/> Not correct</p> <p><i>Description:</i> Please refer to the item D.2.a).</p> <p><i>Verifier's action:</i> <i>Conclusion:</i></p>	CAR D2	OK
D.4. DBH		Description: Diameter breast height of tree		
<p>a) Measurement / Determination method (EB 70 Annex 3, §§ 233, 236)</p> <p><i>Describe how the monitoring parameter was measured / determined.</i></p> <p><i>Check if relevant equipment has been exchanged and if in cases of failures / downtimes of standard equipment other measurement / determination methods have been used. Furthermore, verify the frequency of measurements as per the requirements.</i></p> <p><i>Assess whether the measurement / determination method is in line with the registered monitoring plan of</i></p>	/IM01/ /PDD/ /ARACM1/ /PHOTO/ /MSR/	<p><i>Description:</i> DBH is found correctly calculated from measured GBH for 100% trees in all PSPs.</p> <p><i>Verifier's action:</i> Annual measurement register mentions the DBH. This register is available for all years in monitoring period. The register is compilation of datasheets from all PSPs. Format of this datasheet is also found provided in the published MR. The verification team has taken sample measurements at each of the sample plots visited and finds the observed measurement data to be in line with the latest measured values. There was no mismatch, or deviations.</p>	OK	OK



Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
<i>the PDD and the applied methodology.</i>		<i>Conclusion:</i> The measurement of the tree girth/diameter at breast height is found to be performed correctly.		
<p>b) Accuracy and QA/QC Procedure (EB 70 Annex 3, §§ 237-241)</p> <p><i>In case of measured (or estimated) values, check whether the accuracy of equipment used for monitoring is controlled and calibrated in accordance with the monitoring plan or if significant inaccuracies occur; in this case, make sure that the most conservative assumptions theoretically possible have been made for calculating ERs.</i></p> <p><i>Describe whether all applicable QA/QC procedures are met. Assess further if the calibration of the monitoring equipment has been carried out in line with the latest EB guidance.</i></p>	<p>/CAL/ /MSR/ /TRG/ /IM01/</p>	<p><i>Description:</i> The measuring tape is calibrated. All applicable QA/QC requirements are found followed. Field checks are found to be followed by double checks and 'hot checks'^{/MSR/}. Further the personnel involved in measurements are found to be trained^{/TRG/}, and experienced in the field of plantation management^{/IM01/}. Any conversion of GBH to DBH is found to be centrally computed electronically by a single person to eradicate any mistakes.</p> <p><i>Verifier's action:</i> The verification team has checked the calibrations against the tag numbers of each of the measuring tape used. The training records have been verified. Details of double check performed on the field notes have been verified from the field measurement sheets, which also has the initials of the superior who has checked the measurements, with the date. Any corrections thereof are also found to be clearly marked. The field personnel are found to be in service with MTPL plantation division for a long period of time, and hence the verification team is confident about their exposure to plantation management.</p> <p><i>Conclusion:</i> The measuring tapes are calibrated to 0.1 cm, which is acceptable level of accuracy. The QAQC procedures regarding DBH is found to be of acceptable standard.</p>	OK	OK
<p>c) Correctness (EB 70 Annex 3, §§ 233, 236)</p>	<p>/MR1/ /MSR/</p>	<p><input checked="" type="checkbox"/> Correct <input type="checkbox"/> Not correct</p> <p><i>Description:</i> The verification team has taken sample measurements at each of the sample plots visited and finds the</p>	OK	OK



Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
<p><i>Determine whether the value given in the monitoring report is correct or determined in a conservative manner.</i></p> <p><i>In case of conservative approaches used in lieu of the monitoring as per registered MP detailed assessment of the conservativeness of the approach used should be given.</i></p> <p><i>In case of mistakes / deviations pl. provide details and descriptions of the CARs raised.</i></p>		<p>observed measurement data to be in line with the latest measured values. There was no significant mismatch, or deviations. Field checks are found to be followed by double checks and 'hot checks'^{/MSR/}. Further the personnel involved in measurements are found to be trained^{/TRG/}, and experienced in the field of plantation management^{/IM01/}. Any conversion of GBH to DBH is found to be centrally computed electronically by a single person to eradicate any mistakes. Further, The measuring tape is found calibrated appropriately.</p> <p><i>Verifier's action:</i> The verification team, apart from interviews and field measurement checks, has also verified calibration certificates, MSR data sheets, training records etc.</p> <p><i>Conclusion:</i> The verification team is confident that the data being monitored is correct and is acceptable. No over estimation, or wrong entry is found observed.</p>		
<p>D.5. H</p>		<p>Description: Height of tree</p>		
<p>a) Measurement / Determination method (EB 70 Annex 3, §§ 233, 236)</p> <p><i>Describe how the monitoring parameter was measured / determined.</i></p> <p><i>Check if relevant equipment has been exchanged and if in cases of failures / downtimes of standard equipment other measurement / determination methods have been used. Furthermore, verify the frequency of measurements as per the requirements.</i></p>	<p>/IM01/ /PDD/ /ARACM1/ /MSR/</p>	<p><i>Description:</i> The height of tree is being determined by Abney's level. During site inspection, it is observed that after measurement of some trees using abney's level, the field measuring team measures the tree height using gradated bamboo poles. The verification team has checked the gradations and finds it to be comparable to the calibrated tapes. No ocular estimation of tree height was observed. While using the Abney's level, the field measurement team is found to fix the level at eye height correctly. It is observed that a ranging pole at eye level is not used for this, even though it is not required for experienced and trained surveyors. With reference to the</p>	<p>CL-D14</p>	<p>OK</p>



Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
<p><i>Assess whether the measurement / determination method is in line with the registered monitoring plan of the PDD and the applied methodology.</i></p>		<p>discussion in volume 12 of the <i>Forest Quarterly</i> (Page no. 370) published by the New York State College of Forestry, the method of using Abney's level is acceptable. However a clarification is raised on the use of graduated bamboo ranging poles for tree height measurement. CL D11 is raised on this.</p> <p><i>Verifier's action:</i> Annual measurement register mentions the age of plantation.</p> <p><i>Conclusion:</i> Pending closure of CL D11</p>		
<p>b) Accuracy and QA/QC Procedure (EB 70 Annex 3, §§ 237-241)</p> <p><i>In case of measured (or estimated) values, check whether the accuracy of equipment used for monitoring is controlled and calibrated in accordance with the monitoring plan or if significant inaccuracies occur; in this case, make sure that the most conservative assumptions theoretically possible have been made for calculating ERs.</i></p> <p><i>Describe whether all applicable QA/QC procedures are met. Assess further if the calibration of the monitoring equipment has been carried out in line with the latest EB guidance.</i></p>	<p>/CAL/ /QAQC/</p>	<p><i>Description:</i> Abney's level is calibrated. All applicable QA/QC requirements are found followed. Field checks are found to be followed by double checks and 'hot checks'^{/MSR/}. Further the personnel involved in measurements are found to be trained^{/TRG/}, and experienced in the field of plantation management^{/IM01/}. Except in two cases, the field measurement team members were found to be comfortable with trigonometric calculations to arrive at the tree height. In those instances, where the surveyor is not comfortable with trigonometric calculation, it is observed that the recorded values are handed over to the MTPL office, where further calculations are done and recorded. This is acceptable. However, pending closure of CL D11.</p> <p><i>Verifier's action:</i> The verification team has checked the calibrations against the tag numbers of each of the measuring tape used. The training records have been verified. Details of double check performed on the field notes have been verified from the field measurement sheets, which also has the initials of</p>	<p>CL-D11</p>	<p>OK</p>



Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
		the superior who has checked the measurements, with the date. The field personnel are found to be in service with MTPL plantation division for a long period of time, and hence the verification team is confident about their exposure to plantation management. <i>Conclusion:</i> The measuring tapes are calibrated to 0.1 cm, which is acceptable level of accuracy. The QAQC procedures regarding tree height is found to be of acceptable standard. However conclusion is pending on closure of CL D11.		
<p>c) Correctness (EB 70 Annex 3, §§ 233, 236)</p> <p><i>Determine whether the value given in the monitoring report is correct or determined in a conservative manner.</i></p> <p><i>In case of conservative approaches used in lieu of the monitoring as per registered MP detailed assessment of the conservativeness of the approach used should be given.</i></p> <p><i>In case of mistakes / deviations pl. provide details and descriptions of the CARs raised.</i></p>	/MR1/	<input type="checkbox"/> Correct <input type="checkbox"/> Not correct <i>Description:</i> Please refer to the item D.5. a), b) and c).	CL-D11	OK
D.6. t2 and t1		Description: Years of the monitoring activity		
<p>a) Measurement / Determination method (EB 70 Annex 3, §§ 233, 236)</p> <p><i>Describe how the monitoring parameter was measured / determined.</i></p> <p><i>Check if relevant equipment has been exchanged and</i></p>	/IM01/ /PDD/ /ARACM1/	<i>Description:</i> As per the approved monitoring plan contained in the registered PDD Years of the monitoring activity is a monitoring parameter. The same is found included in the section D.2 of the MR version 01. However value of data is missing for the data/parameter. CAR D3 is raised on this.	CAR D3	OK



Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
<p><i>if in cases of failures / downtimes of standard equipment other measurement / determination methods have been used. Furthermore, verify the frequency of measurements as per the requirements.</i></p> <p><i>Assess whether the measurement / determination method is in line with the registered monitoring plan of the PDD and the applied methodology.</i></p>		<p><i>Verifier's action:</i> Registered PDD has been desk reviewed.</p> <p><i>Conclusion:</i> CAR D3 was raised.</p>		
<p>b) Accuracy and QA/QC Procedure (EB 70 Annex 3, §§ 237-241)</p> <p><i>In case of measured (or estimated) values, check whether the accuracy of equipment used for monitoring is controlled and calibrated in accordance with the monitoring plan or if significant inaccuracies occur; in this case, make sure that the most conservative assumptions theoretically possible have been made for calculating ERs.</i></p> <p><i>Describe whether all applicable QA/QC procedures are met. Assess further if the calibration of the monitoring equipment has been carried out in line with the latest EB guidance.</i></p>	/QAQC/	<p><i>Description:</i> Please refer to the item D.5. a).</p>	CAR D3	OK
<p>c) Correctness (EB 70 Annex 3, §§ 233, 236)</p> <p><i>Determine whether the value given in the monitoring report is correct or determined in a conservative manner.</i></p>	/MR1/	<p><input type="checkbox"/> Correct <input type="checkbox"/> Not correct</p> <p><i>Description:</i> Please refer to the item D.5. a).</p>	CAR D3	OK



Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
<p><i>In case of conservative approaches used in lieu of the monitoring as per registered MP detailed assessment of the conservativeness of the approach used should be given.</i></p> <p><i>In case of mistakes / deviations pl. provide details and descriptions of the CARs raised.</i></p>				
<p>D.7. Land title</p>		<p>Description: Land ownership through Land Patta or Land Passbook</p>		
<p>a) Measurement / Determination method (EB 70 Annex 3, §§ 233, 236)</p> <p><i>Describe how the monitoring parameter was measured / determined.</i></p> <p><i>Check if relevant equipment has been exchanged and if in cases of failures / downtimes of standard equipment other measurement / determination methods have been used. Furthermore, verify the frequency of measurements as per the requirements.</i></p> <p><i>Assess whether the measurement / determination method is in line with the registered monitoring plan of the PDD and the applied methodology.</i></p>	<p>/IM01/ /PDD/ /LAND/</p>	<p><i>Description:</i> As per the approved monitoring plan contained in the registered PDD land title is a monitoring parameter. The details are found provided in section D.2 of the MR version 01. However, the value is missing the table in section D.2, as to the number of farmers/total land holding etc. CAR D4 is raised on this.</p> <p><i>Verifier's action:</i> The verification team has reviewed the passbooks and sample copies of land patta during site visit.</p> <p><i>Conclusion:</i> CAR D4 was raised.</p>	<p>CAR D4</p>	<p>OK</p>
<p>b) Accuracy and QA/QC Procedure (EB 70 Annex 3, §§ 237-241)</p> <p><i>In case of measured (or estimated) values, check whether the accuracy of equipment used for</i></p>	<p>/QAQC/</p>	<p><i>Description:</i> Please refer to the item D.6. a).</p>	<p>CAR D4</p>	<p>OK</p>



Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
<p><i>monitoring is controlled and calibrated in accordance with the monitoring plan or if significant inaccuracies occur; in this case, make sure that the most conservative assumptions theoretically possible have been made for calculating ERs.</i></p> <p><i>Describe whether all applicable QA/QC procedures are met. Assess further if the calibration of the monitoring equipment has been carried out in line with the latest EB guidance.</i></p>				
<p>c) Correctness (EB 70 Annex 3, §§ 233, 236)</p> <p><i>Determine whether the value given in the monitoring report is correct or determined in a conservative manner.</i></p> <p><i>In case of conservative approaches used in lieu of the monitoring as per registered MP detailed assessment of the conservativeness of the approach used should be given.</i></p> <p><i>In case of mistakes / deviations pl. provide details and descriptions of the CARs raised.</i></p>	/MR1/	<input type="checkbox"/> Correct <input type="checkbox"/> Not correct <i>Description: Please refer to the item D.6. a).</i>	CARD4	OK
<p>D.8. Carbon right</p>		<p>Description: Authorization for claiming Carbon Credit</p>		
<p>a) Measurement / Determination method (EB 70 Annex 3, §§ 233, 236)</p>	/IM01/ /PDD/ /CARB/	<p><i>Description: As per the approved monitoring plan contained in the registered PDD carbon right is a monitoring parameter with frequency of monitoring every 5 years. However, in the MR version 01 stipulates monitoring frequency at each verification.</i></p>	CARD5	OK



Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
<p><i>Describe how the monitoring parameter was measured / determined.</i></p> <p><i>Check if relevant equipment has been exchanged and if in cases of failures / downtimes of standard equipment other measurement / determination methods have been used. Furthermore, verify the frequency of measurements as per the requirements.</i></p> <p><i>Assess whether the measurement / determination method is in line with the registered monitoring plan of the PDD and the applied methodology.</i></p>		<p>PP shall justify and provide the monitoring data in accordance with the monitoring plan. CAR D5 has been raised on this.</p> <p><i>Verifier’s action:</i> The verification team has reviewed the carbon credit claim authorisation agreement during the site visit.</p> <p><i>Conclusion:</i> CAR D5 is raised</p>		
<p>b) Accuracy and QA/QC Procedure (EB 70 Annex 3, §§ 237-241)</p> <p><i>In case of measured (or estimated) values, check whether the accuracy of equipment used for monitoring is controlled and calibrated in accordance with the monitoring plan or if significant inaccuracies occur; in this case, make sure that the most conservative assumptions theoretically possible have been made for calculating ERs.</i></p> <p><i>Describe whether all applicable QA/QC procedures are met. Assess further if the calibration of the monitoring equipment has been carried out in line with the latest EB guidance.</i></p>	/CARB/	<p><i>Description:</i> Please refer to the item D.7. a).</p>		
<p>c) Correctness (EB 70 Annex 3, §§ 233, 236)</p> <p><i>Determine whether the value given in the monitoring</i></p>	/MR1/	<p><input type="checkbox"/> Correct <input type="checkbox"/> Not correct</p> <p><i>Description:</i> Please refer to the item D.7. a).</p>	<p>CAR D5</p>	<p>OK</p>



Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
<p><i>report is correct or determined in a conservative manner.</i></p> <p><i>In case of conservative approaches used in lieu of the monitoring as per registered MP detailed assessment of the conservativeness of the approach used should be given.</i></p> <p><i>In case of mistakes / deviations pl. provide details and descriptions of the CARs raised.</i></p>				
<p>D.9. Number of Trees</p>		<p>Description: Number of trees in the sample parcels</p>		
<p>a) Measurement / Determination method (EB 70 Annex 3, §§ 233, 236)</p> <p><i>Describe how the monitoring parameter was measured / determined.</i></p> <p><i>Check if relevant equipment has been exchanged and if in cases of failures / downtimes of standard equipment other measurement / determination methods have been used. Furthermore, verify the frequency of measurements as per the requirements.</i></p> <p><i>Assess whether the measurement / determination method is in line with the registered monitoring plan of the PDD and the applied methodology.</i></p>	<p>/IM01/ /PDD/ /MSR/</p>	<p><i>Description:</i> The number of trees in each sample plot has been detailed in the MSR records. However this is not a monitored parameter as per the registered PDD. Further, this is inherently linked to survival rate. So this information seems to be repetition, A clarification is raised on this.</p> <p><i>Verifier´s action:</i></p> <p><i>Conclusion:</i> CL D10 is raised</p>	<p>CL-D10</p>	<p>OK</p>
<p>b) Accuracy and QA/QC Procedure (EB 70 Annex 3, §§ 237-241)</p>	<p>/MSR/</p>	<p><i>Description:</i> please refer to D.8 a)</p> <p><i>Verifier´s action:</i></p>	<p>CL-D10</p>	<p>OK</p>



Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
<p><i>In case of measured (or estimated) values, check whether the accuracy of equipment used for monitoring is controlled and calibrated in accordance with the monitoring plan or if significant inaccuracies occur; in this case, make sure that the most conservative assumptions theoretically possible have been made for calculating ERs.</i></p> <p><i>Describe whether all applicable QA/QC procedures are met. Assess further if the calibration of the monitoring equipment has been carried out in line with the latest EB guidance.</i></p>		<p>Conclusion: CL D10 is raised</p>		
<p>c) Correctness (EB 70 Annex 3, §§ 233, 236)</p> <p><i>Determine whether the value given in the monitoring report is correct or determined in a conservative manner.</i></p> <p><i>In case of conservative approaches used in lieu of the monitoring as per registered MP detailed assessment of the conservativeness of the approach used should be given.</i></p> <p><i>In case of mistakes / deviations pl. provide details and descriptions of the CARs raised.</i></p>	<p>/MR1/ /MSR/</p>	<p><input type="checkbox"/> Correct <input type="checkbox"/> Not correct</p> <p>Description: please refer to D.8 a)</p>	<p>CL-D10</p>	<p>OK</p>
<p>D.10. Survival Rate</p>		<p>Description: Survival rate of the trees planted</p>		
<p>a) Measurement / Determination method</p>	<p>/IM01/ /PDD/</p>	<p>Description: Survival rate has been included in the published MR. This is recorded and calculated in the measurement</p>	<p>CAR D9</p>	<p>OK</p>



Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
<p>(EB 70 Annex 3, §§ 233, 236)</p> <p><i>Describe how the monitoring parameter was measured / determined.</i></p> <p><i>Check if relevant equipment has been exchanged and if in cases of failures / downtimes of standard equipment other measurement / determination methods have been used. Furthermore, verify the frequency of measurements as per the requirements.</i></p> <p><i>Assess whether the measurement / determination method is in line with the registered monitoring plan of the PDD and the applied methodology.</i></p>	<p>/MSR/ /MR1/</p>	<p>records^{MSR/}. Correct counting method is found to be employed, which includes counting 100% of trees surviving in the 20 x 20 m sample plots. However in three instances, the survival rate calculation for sample plots have been found to be wrong, resulting in under estimation in two cases and over estimation in one case.</p> <p>Also, the published MR does not explain how the following has been done, with reference to the registered PDD:</p> <p>1) The initial survival rate of planted trees shall be counted three months after the planting, and re-planting shall be conducted if the survival rate is lower than 90 percent of the final planting density.</p> <p>2) Final checking three years after the planting;</p> <p>The same has to be corrected, and is raised as CAR D9.</p> <p><i>Verifier's action:</i> The verification team has checked the following:</p> <ol style="list-style-type: none"> 1. Reviewing data entry in the measurement records. 2. Checking calculations as per the data entry against no. Of surviving trees in a sample plot. 3. Doing cross check by actual count of live trees in the sample plots. Further, the verification team also surveyed two non-PSP parcels to objectively study the bias in survival rate if any. <p><i>Conclusion:</i> No bias was observed. However, CAR D9 raised.</p>		



Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
<p>b) Accuracy and QA/QC Procedure (EB 70 Annex 3, §§ 237-241)</p> <p><i>In case of measured (or estimated) values, check whether the accuracy of equipment used for monitoring is controlled and calibrated in accordance with the monitoring plan or if significant inaccuracies occur; in this case, make sure that the most conservative assumptions theoretically possible have been made for calculating ERs.</i></p> <p><i>Describe whether all applicable QA/QC procedures are met. Assess further if the calibration of the monitoring equipment has been carried out in line with the latest EB guidance.</i></p>	/MSR/ /MR1/	<p><i>Description:</i> Please refer to D9 a)</p> <p><i>Verifier's action:</i></p> <p><i>Conclusion:</i> CAR D9 is raised</p>	CAR D9	OK
<p>c) Correctness (EB 70 Annex 3, §§ 233, 236)</p> <p><i>Determine whether the value given in the monitoring report is correct or determined in a conservative manner.</i></p> <p><i>In case of conservative approaches used in lieu of the monitoring as per registered MP detailed assessment of the conservativeness of the approach used should be given.</i></p> <p><i>In case of mistakes / deviations pl. provide details and descriptions of the CARs raised.</i></p>	/MR1/ /MSR/	<p><input type="checkbox"/> Correct <input type="checkbox"/> Not correct</p> <p><i>Description:</i> Please refer to the item D.9. a).</p>	CAR D9	OK
D.11. Coppicing Area		Description: Area coppiced		



Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
<p>a) Measurement / Determination method (EB 70 Annex 3, §§ 233, 236)</p> <p><i>Describe how the monitoring parameter was measured / determined.</i></p> <p><i>Check if relevant equipment has been exchanged and if in cases of failures / downtimes of standard equipment other measurement / determination methods have been used. Furthermore, verify the frequency of measurements as per the requirements.</i></p> <p><i>Assess whether the measurement / determination method is in line with the registered monitoring plan of the PDD and the applied methodology.</i></p>	/IM01/ /PDD/ /MSR/	<p><i>Description:</i> Coppiced area has been included as a monitoring parameter in the published MR. However this is not a monitored parameter as per the registered PDD. The data from coppicing is mentioned to be used in calculations of project removals. However, as per the registered PDD and the applied methodology, this is not required. Further, as per the registered PDD, coppicing is to be monitored to ensure good forestry management practices, CL D10 has been raised on this.</p> <p><i>Verifier's action:</i></p> <p><i>Conclusion:</i> CL D10 is raised</p>	CL-D10	OK
<p>b) Accuracy and QA/QC Procedure (EB 70 Annex 3, §§ 237-241)</p> <p><i>In case of measured (or estimated) values, check whether the accuracy of equipment used for monitoring is controlled and calibrated in accordance with the monitoring plan or if significant inaccuracies occur; in this case, make sure that the most conservative assumptions theoretically possible have been made for calculating ERs.</i></p> <p><i>Describe whether all applicable QA/QC procedures are met. Assess further if the calibration of the monitoring equipment has been carried out in line with the latest EB guidance.</i></p>	/IM01/ /PDD/ /MSR/	<p><i>Description:</i> Please refer to D.10 a) of this report</p>	CL-D10	OK
<p>c) Correctness</p>	/MR1/	<input type="checkbox"/> Correct <input type="checkbox"/> Not correct	CL-D10	OK



Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
<p>(EB 70 Annex 3, §§ 233, 236)</p> <p><i>Determine whether the value given in the monitoring report is correct or determined in a conservative manner.</i></p> <p><i>In case of conservative approaches used in lieu of the monitoring as per registered MP detailed assessment of the conservativeness of the approach used should be given.</i></p> <p><i>In case of mistakes / deviations pl. provide details and descriptions of the CARs raised.</i></p>	/MSR/	<p><i>Description:</i> Please refer to the item D.10. a).</p>		
<p>D.12. Deviation from Planting</p>		<p>Description: Deviations from planting as planned</p>		
<p>a) Measurement / Determination method (EB 70 Annex 3, §§ 233, 236)</p> <p><i>Describe how the monitoring parameter was measured / determined.</i></p> <p><i>Check if relevant equipment has been exchanged and if in cases of failures / downtimes of standard equipment other measurement / determination methods have been used. Furthermore, verify the frequency of measurements as per the requirements.</i></p> <p><i>Assess whether the measurement / determination method is in line with the registered monitoring plan of the PDD and the applied methodology.</i></p>	/IM01/ /PDD/ /MSR/	<p><i>Description:</i> Deviations from planting has been included as a monitoring parameter in the published MR. However this is not a monitored parameter as per the registered PDD. The data from coppicing is mentioned to be used in calculations of project removals. However, as per the registered PDD and the applied methodology, this is not required. Further, as per the registered PDD, coppicing is to be monitored to ensure good forestry management practices, CL D10 has been raised on this.</p> <p><i>Verifier's action:</i></p> <p><i>Conclusion:</i> CL D10 is raised</p>	<p>CL-D10</p>	<p>OK</p>
<p>b) Accuracy and QA/QC Procedure</p>	/IM01/	<p><i>Description:</i> Please refer to D.11 a) of this report</p>	<p>CL-D10</p>	<p>OK</p>



Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
<p>(EB 70 Annex 3, §§ 237-241)</p> <p><i>In case of measured (or estimated) values, check whether the accuracy of equipment used for monitoring is controlled and calibrated in accordance with the monitoring plan or if significant inaccuracies occur; in this case, make sure that the most conservative assumptions theoretically possible have been made for calculating ERs.</i></p> <p><i>Describe whether all applicable QA/QC procedures are met. Assess further if the calibration of the monitoring equipment has been carried out in line with the latest EB guidance.</i></p>	/PDD/ /MSR/			
	/IM01/ /PDD/ /MSR/	Description: Please refer to D.11 a) of this report	CL-D10	OK
<p>d) Correctness (EB 70 Annex 3, §§ 233, 236)</p> <p><i>Determine whether the value given in the monitoring report is correct or determined in a conservative manner.</i></p> <p><i>In case of conservative approaches used in lieu of the monitoring as per registered MP detailed assessment of the conservativeness of the approach used should be given.</i></p> <p><i>In case of mistakes / deviations pl. provide details and descriptions of the CARs raised.</i></p>	/MR1/ /MSR/	<input type="checkbox"/> Correct <input type="checkbox"/> Not correct Description: Please refer to the item D.11. a).	CL-D10	OK



Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
D.13. Available Grazing Land (AGL)		Description: Land available for grazing under the control of PP		
<p>a) Measurement / Determination method (EB 70 Annex 3, §§ 233, 236)</p> <p><i>Describe how the monitoring parameter was measured / determined.</i></p> <p><i>Check if relevant equipment has been exchanged and if in cases of failures / downtimes of standard equipment other measurement / determination methods have been used. Furthermore, verify the frequency of measurements as per the requirements.</i></p> <p><i>Assess whether the measurement / determination method is in line with the registered monitoring plan of the PDD and the applied methodology.</i></p>	/IM01/ /PDD/ /MR1/	<p><i>Description:</i> As per the approved monitoring plan contained in the registered PDD AGL is a monitoring parameter with frequency of monitoring every 5 years. MR version 01 states that Available grazing land under the control of PP is 2548.42 acres as against the required area of 2409.57. PP shall provide evidence of the same.</p> <p><i>Verifier's action:</i> CAR D6 is raised.</p> <p><i>Conclusion:</i> CAR D6 was raised.</p>	CAR D6	OK
<p>b) Accuracy and QA/QC Procedure (EB 70 Annex 3, §§ 237-241)</p> <p><i>In case of measured (or estimated) values, check whether the accuracy of equipment used for monitoring is controlled and calibrated in accordance with the monitoring plan or if significant inaccuracies occur; in this case, make sure that the most conservative assumptions theoretically possible have been made for calculating ERs.</i></p> <p><i>Describe whether all applicable QA/QC procedures are met. Assess further if the calibration of the monitoring equipment has been carried out in line with</i></p>	/GRZ/	<p><i>Description:</i> Please refer to the item D.8. a).</p>	CAR D6	OK



Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
<i>the latest EB guidance.</i>				
<p>c) Correctness (EB 70 Annex 3, §§ 233, 236)</p> <p><i>Determine whether the value given in the monitoring report is correct or determined in a conservative manner.</i></p> <p><i>In case of conservative approaches used in lieu of the monitoring as per registered MP detailed assessment of the conservativeness of the approach used should be given.</i></p> <p><i>In case of mistakes / deviations pl. provide details and descriptions of the CARs raised.</i></p>	<p>/MR1/ /GRZ/</p>	<p><input type="checkbox"/> Correct <input type="checkbox"/> Not correct</p> <p><i>Description:</i> Please refer to the item D.8. a).</p>	<p>CAR D6</p>	<p>OK</p>
<p>D.14. Number of animals of different types in the grazing land</p>		<p>Description: Different animal head in the available grazing land both for the PP and others</p>		
<p>a) Measurement / Determination method (EB 70 Annex 3, §§ 233, 236)</p> <p><i>Describe how the monitoring parameter was measured / determined.</i></p> <p><i>Check if relevant equipment has been exchanged and if in cases of failures / downtimes of standard equipment other measurement / determination methods have been used. Furthermore, verify the frequency of measurements as per the requirements.</i></p> <p><i>Assess whether the measurement / determination method is in line with the registered monitoring plan of</i></p>	<p>/IM01/ /PDD/ /ARACM1/ /GRZ/</p>	<p><i>Description:</i> As per the approved monitoring plan contained in the registered PDD number of animals is a monitoring parameter with frequency of monitoring every 5 years. MR version 01 does not include this monitoring parameter. CAR D7 was raised on this.</p> <p><i>Verifier's action:</i></p> <p><i>Conclusion:</i> CAR D7 was raised.</p>	<p>CAR D7</p>	<p>OK</p>



Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
<i>the PDD and the applied methodology.</i>				
<p>b) Accuracy and QA/QC Procedure (EB 70 Annex 3, §§ 237-241)</p> <p><i>In case of measured (or estimated) values, check whether the accuracy of equipment used for monitoring is controlled and calibrated in accordance with the monitoring plan or if significant inaccuracies occur; in this case, make sure that the most conservative assumptions theoretically possible have been made for calculating ERs.</i></p> <p><i>Describe whether all applicable QA/QC procedures are met. Assess further if the calibration of the monitoring equipment has been carried out in line with the latest EB guidance.</i></p>	/GRZ/	Description: Please refer to the item D.9. a).	CARD7	OK
<p>c) Correctness (EB 70 Annex 3, §§ 233, 236)</p> <p><i>Determine whether the value given in the monitoring</i></p>	/MR1/ /GRZ/	<input type="checkbox"/> Correct <input type="checkbox"/> Not correct Description: Please refer to the item D.9. a).	CARD7	OK



Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
<p><i>report is correct or determined in a conservative manner.</i></p> <p><i>In case of conservative approaches used in lieu of the monitoring as per registered MP detailed assessment of the conservativeness of the approach used should be given.</i></p> <p><i>In case of mistakes / deviations pl. provide details and descriptions of the CARs raised.</i></p>				
<p>D.15. Biomass burning</p>		<p>Description: Biomass burning can be a potential emission source.</p>		
<p>a) Measurement / Determination method (EB 70 Annex 3, §§ 233, 236)</p> <p><i>Describe how the monitoring parameter was measured / determined.</i></p> <p><i>Check if relevant equipment has been exchanged and if in cases of failures / downtimes of standard equipment other measurement / determination methods have been used. Furthermore, verify the frequency of measurements as per the requirements.</i></p> <p><i>Assess whether the measurement / determination method is in line with the registered monitoring plan of the PDD and the applied methodology.</i></p>	<p>/IM01/ /PDD/ /ARACM1/</p>	<p><i>Description:</i> As per the approved monitoring plan contained in the registered PDD biomass burning is a monitoring parameter with frequency of monitoring every 5 years. MR version 01 refers to a survey for the same. PP shall provide evidence of the same. CAR D8 is raised on this.</p> <p><i>Verifier's action:</i></p> <p><i>Conclusion:</i> CAR was raised.</p>	<p>CAR D8</p>	<p>OK</p>
<p>b) Accuracy and QA/QC Procedure (EB 70 Annex 3, §§ 237-241)</p> <p><i>In case of measured (or estimated) values, check</i></p>	<p>/MR1/</p>	<p><i>Description:</i> Please refer to the item D.10. a).</p>	<p>CAR D8</p>	<p>OK</p>



Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
<p><i>whether the accuracy of equipment used for monitoring is controlled and calibrated in accordance with the monitoring plan or if significant inaccuracies occur; in this case, make sure that the most conservative assumptions theoretically possible have been made for calculating ERs.</i></p> <p><i>Describe whether all applicable QA/QC procedures are met. Assess further if the calibration of the monitoring equipment has been carried out in line with the latest EB guidance.</i></p>				
<p>c) Correctness (EB 70 Annex 3, §§ 233, 236)</p> <p><i>Determine whether the value given in the monitoring report is correct or determined in a conservative manner.</i></p> <p><i>In case of conservative approaches used in lieu of the monitoring as per registered MP detailed assessment of the conservativeness of the approach used should be given.</i></p> <p><i>In case of mistakes / deviations pl. provide details and descriptions of the CARs raised.</i></p>	/MR1/	<input type="checkbox"/> Correct <input type="checkbox"/> Not correct <i>Description: Please refer to the item D.10. a).</i>	CAR D8	OK
<p>D.16. $H_{Existing,g,k,t}$</p>		<p>Description: Number of head of animal type g existing on parcel k and/or being fed by fodder produced on parcel k before displacement of animals in year t</p>		
<p>a) Measurement / Determination method</p>	/IM01/	<p><i>Description: As per the approved monitoring plan contained in</i></p>	CAR	OK



Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
<p>(EB 70 Annex 3, §§ 233, 236)</p> <p><i>Describe how the monitoring parameter was measured / determined.</i></p> <p><i>Check if relevant equipment has been exchanged and if in cases of failures / downtimes of standard equipment other measurement / determination methods have been used. Furthermore, verify the frequency of measurements as per the requirements.</i></p> <p><i>Assess whether the measurement / determination method is in line with the registered monitoring plan of the PDD and the applied methodology.</i></p>	/PDD/ /GRZ/	<p>the registered PDD existing number of head of animal type is a monitoring parameter. MR version 01 states number of cows/ bufallos = 659 and Goats = 508. PP shall provide evidence of the same.</p> <p><i>Verifier's action:</i> MR was checked against PDD.</p> <p><i>Conclusion:</i> CAR was raised.</p>	D7	
<p>b) Accuracy and QA/QC Procedure (EB 70 Annex 3, §§ 237-241)</p> <p><i>In case of measured (or estimated) values, check whether the accuracy of equipment used for monitoring is controlled and calibrated in accordance with the monitoring plan or if significant inaccuracies occur; in this case, make sure that the most conservative assumptions theoretically possible have been made for calculating ERs.</i></p> <p><i>Describe whether all applicable QA/QC procedures are met. Assess further if the calibration of the monitoring equipment has been carried out in line with the latest EB guidance.</i></p>	/GRZ/	<p><i>Description:</i> Please refer to the item D.11. a).</p>	CAR D7	OK
<p>c) Correctness (EB 70 Annex 3, §§ 233, 236)</p>	/MR1/ /GRZ/	<p><input type="checkbox"/> Correct <input type="checkbox"/> Not correct</p> <p><i>Description:</i> Please refer to the item D.11. a).</p>	CAR D7	OK



Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
<p><i>Determine whether the value given in the monitoring report is correct or determined in a conservative manner.</i></p> <p><i>In case of conservative approaches used in lieu of the monitoring as per registered MP detailed assessment of the conservativeness of the approach used should be given.</i></p> <p><i>In case of mistakes / deviations pl. provide details and descriptions of the CARs raised.</i></p>				
<p>D.17. Hg,k,t</p>		<p>Description: Number of head of animal type g displaced and/or the number of animals of type g fed by fodder for which production is displaced to parcel k in year t.</p>		
<p>a) Measurement / Determination method (EB 70 Annex 3, §§ 233, 236)</p> <p><i>Describe how the monitoring parameter was measured / determined.</i></p> <p><i>Check if relevant equipment has been exchanged and if in cases of failures / downtimes of standard equipment other measurement / determination methods have been used. Furthermore, verify the frequency of measurements as per the requirements.</i></p> <p><i>Assess whether the measurement / determination method is in line with the registered monitoring plan of the PDD and the applied methodology.</i></p>	<p>/IM01/ /PDD/ /GRZ/</p>	<p><i>Description:</i> As per the approved monitoring plan contained in the registered PDD displaced number of head of animal type is a monitoring parameter. MR version 01 states number of cows/ buffalos = 1863 and Goats = 3020. PP shall provide evidence of the same. This is raised in CAR D7.</p> <p><i>Verifier's action:</i> MR was checked against PDD</p> <p><i>Conclusion:</i> CAR was raised.</p>	<p>CAR D7</p>	<p>OK</p>
<p>b) Accuracy and QA/QC Procedure</p>	<p>/GRZ/</p>	<p><i>Description:</i> Please refer to the item D.12. a).</p>	<p>CAR</p>	<p>OK</p>



Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
<p>(EB 70 Annex 3, §§ 237-241)</p> <p><i>In case of measured (or estimated) values, check whether the accuracy of equipment used for monitoring is controlled and calibrated in accordance with the monitoring plan or if significant inaccuracies occur; in this case, make sure that the most conservative assumptions theoretically possible have been made for calculating ERs.</i></p> <p><i>Describe whether all applicable QA/QC procedures are met. Assess further if the calibration of the monitoring equipment has been carried out in line with the latest EB guidance.</i></p>			D7	
<p>c) Correctness (EB 70 Annex 3, §§ 233, 236)</p> <p><i>Determine whether the value given in the monitoring report is correct or determined in a conservative manner.</i></p> <p><i>In case of conservative approaches used in lieu of the monitoring as per registered MP detailed assessment of the conservativeness of the approach used should be given.</i></p> <p><i>In case of mistakes / deviations pl. provide details and descriptions of the CARs raised.</i></p>	/MR1/ /GRZ/	<input type="checkbox"/> Correct <input type="checkbox"/> Not correct <i>Description: Please refer to the item D.12. a).</i>	CAR D7	OK
D.3 Sampling				
<p>a) Implementation of sampling plan</p>		<input type="checkbox"/> No sampling approach has been used by the PP to determine the monitored parameters	OK	OK



Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
<p>(EB70 Annex 11; D3)</p> <p><i>Check whether the PP has applied a sampling approach to determine the monitored values (as per section D.2 above).</i></p> <p><i>If this is the case, please provide an assessment whether the PPs have correctly and sufficiently described the implemented sampling plan including</i></p> <p><i>a) Description of the implemented sampling design</i></p> <p><i>b) Collected data</i></p> <p><i>c) Analysis of collected data</i></p> <p><i>Demonstration on whether the required confidence/precision has been met.</i></p>		<p>OR.</p> <p><input checked="" type="checkbox"/> A sampling approach has been taken for the following monitored parameter:</p> <p>Parameter: DBH, H, Survival rate</p> <p><i>Description:</i> PP has monitored all the said growth parameters of trees in permanent sample plots. A stratified random sampling approach was employed. Sampling design has changed from original as described in registered PDD. Recalculation of sample plots has been correctly described in the monitoring report. Data is collected as per the mentoring plan and is processed to arrive at the values of net removals by sinks. It was found that the recalculated sampling design has met the required confidence/precision levels.</p> <p><i>Verifier's action:</i> Monitoring report was checked.</p> <p><i>Conclusion:</i> The implemented sampling plan is sufficiently described in the monitoring report.</p>		
<p>b) Sampling during verification</p> <p><i>In case the VT has applied a sampling approach in the course of the verification the approach shall be described for each parameter.</i></p>		<p><input type="checkbox"/> No sampling approach has been used by the VT to verify the monitored parameters</p> <p>OR.</p> <p><input checked="" type="checkbox"/> A sampling approach has been applied by the VT for the following monitored parameter:</p> <p>Parameter: DBH, H, Survival rate</p> <p><i>Description:</i> In order to verify PP data recorded in last</p>		



Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
		monitoring with field observations, a visit to PSPs and non PSP sites were conducted by the VT. <i>Conclusion:</i> VT has applied a sampling approach in the course of the verification.		
E. Calculation of Emission reductions				
E.1. Traceability (EB 70 Annex 3, §§ 212, 214) <i>Assess if the calculation is fully traceable. In case of complex calculations an Excel calculation spreadsheet shall be used. All applied formulae must be visible.</i>	/XLS1/	<i>Description:</i> A readable, unprotected GHG removal calculation spreadsheet is submitted by the PP. Applied formulae are visible. However all the cells in the ER spread sheet are not linked with each other and the worksheets. For example, the baseline strata summary is not linked to baseline strata I and strata II sheets. CAR E1 is raised on this. <i>Verifier's action:</i> Spreadsheet was desk reviewed. <i>Conclusion:</i> CAR E1 is raised.	CAR E1	OK
E.2. Parameter consistency (EB 70 Annex 3, § 214) <i>Assess whether all internal and external parameters and data used for calculation are applied consistently in the monitoring report and the calculation</i>	/XLS1/ /MR1/	<i>Description:</i> All the data are correctly presented in MR ^{MR1} as well as in excel sheet. Moreover consistent designations for parameters are mentioned in PDD, MR and excel sheet. However, the net GHG sequestration calculation worksheet is		OK



Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
<p><i>spreadsheet?</i></p> <p><i>Consider only the correct data exchange between the monitoring report and the calculation spreadsheet (if any). Further ensure the consistency of notations for all parameters in the PDD, MR, calculation spreadsheet.</i></p>		<p>inconsistent with the data sheet recorded from sample plots. Links to the sample plot data and sample plot stratum are not found.</p> <p>Further, in section E.2 of the MR, volume equation has been given, which is found to be inconsistent with formula in page 8 and page 35. Also, soil organic carbon is accounted in the spreadsheet. However this is not mentioned in the MR. These are raised as #1 and #3 of CAR E8.</p> <p><i>Verifier's action:</i> The MR^{/MR1/} has been crosschecked with the provided excel sheet^{/XLS1/} during the desk review.</p> <p><i>Conclusion:</i> CAR E2 is raised.</p>	<p>CAR E2</p> <p>CAR E8</p>	
<p>E.3. Correctness of calculation (EB 70 Annex 3, §§ 235-236)</p> <p><i>Check if the applied formulae and methods for calculating baseline emissions, project emissions and leakage are in accordance with the monitoring plan and / or the approved methodology.</i></p> <p><i>Assess whether the provided calculations are complete and reflect all requirements of the monitoring plan.</i></p> <p><i>Check especially that no standard or old values have been used for calculation where calculations based on up-to-date data is required.</i></p>	<p>/XLS1/ /MR/ /PDD/</p>	<p><i>Description:</i> The equations provided in the registered PDD^{/PDD/} have been found to be correctly applied in the ER calculation spread sheet.</p> <p>However following observations were raised:</p> <ol style="list-style-type: none"> 1. Sample parcel area as recorded in the measurement sheets are different from those reported in the ER calculation spreadsheet. PP informed during on site assessment that the area given in spreadsheet is GIS data however, area provided in sheets is administrative (patta) area. Since area based on GIS data is used for calculations, PP shall clarify treatment of area values in the measurement sheets in the field. <p>This is raised as CL E7</p>	<p>CAR E4</p>	<p>OK</p>



Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
		<p>2. The value of “pi” is given with the formula “22/7” what results in a value of 3,1429.</p> <p>This is raised as CAR E3</p> <p>3. Equation for net removals calculation provided in page 24 of published MR and page 57 of registered PDD requires calculation of Carbon stock in above-ground biomass of tree l of species j in plot sp in stratum i at time t; in t C tree-1. This calculation is not provided. Instead height and DBH values are averaged and average volume is calculated.</p> <p>This is raised as CAR E4.</p> <p><i>Verifier’s action:</i> Calculation spreadsheet was checked. <i>Conclusion:</i> Pending closure of CAR.</p>		
<p>E.4. Emission reductions table (EB 70, Annex 11, E.4)</p> <p><i>Check if the MR includes a summary table of the emission reductions calculation specifying separately</i></p> <ul style="list-style-type: none"> - Total baseline emissions - Total project emissions: - Total leakage - Total emission reductions. <p><i>Assess whether the values are correct or need to be revised as a consequence of issues identified above.</i></p>	/XLS1/	<ul style="list-style-type: none"> <input checked="" type="checkbox"/> The MR includes in section E.4 a summary table of the emission reductions calculation. <input checked="" type="checkbox"/> The summary table specified the total baseline, project and leakage emissions as well as the total emission reductions separately. <input type="checkbox"/> The values as specified in the ER summary table are correct; no issues have been identified during the verification which require changes in the ER calculation. <input checked="" type="checkbox"/> During the verification issues with impact on the ER calculation have been identified. Thus subject to the closure of above listed findings the summary table in E.4 	<p>CAR E5</p> <p>CAR E8</p>	OK




Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
		<p>needs to be revised.</p> <p>In this context the following additional findings have been identified:</p> <ol style="list-style-type: none"> Year-wise values of Baseline net GHG removals by sinks provided in spreadsheet and MR do not match with the PDD values. <p>This is raised as CAR E5</p> <ol style="list-style-type: none"> Per annum removals are calculated using 10 years as denominator; however difference of 2010 and 2001 is 9 years. This is raised as CAR E6. <p>Further, in section E.4 of the MR the formulae for net anthropogenic GHG removals is found to be missing. This is raised as #2 of CAR E8.</p>		
<p>E.5. Comparison with ex-ante determined emission reductions (EB 70, Annex 11, E.5; E.6)</p> <p><i>Check if the MR includes a comparison of actual values of the monitoring period with the estimations in the registered PDD.</i></p> <p><i>Check further whether in case of an increase an appropriate explanation is included in the MR.</i></p> <p><i>Assess in case of a significant increase whether this is due to technical or organisational changes within or outside the control of the PP which might require a notification / approval of changes (as per EB 48 Annex 66/67).</i></p>	<p>/XLS1/ /MR1/ /PDD/</p>	<p><i>Description:</i> A comparison is provided in the published MR which is acceptable.</p> <p><i>Verifier's action:</i> MR was cross checked with PDD.</p> <p><i>Conclusion:</i> Comparison with ex-ante determined emission reductions is found done in the published MR. The comparison is acceptable, and lower than the <i>ex-ante</i> calculated net removals. So no further discussion required on the same.</p>	<p>OK</p>	<p>OK</p>



Checklist Item (incl. guidance for the verification team)	Reference	Verification Team Comments (Means and results of assessment)	Draft Concl.	Final Concl.
<p>E.6. ER during the 1st commitment period and the period from 1 January 2013 onwards (EB 70, Annex 11, E.7)</p> <p><i>Check if the MR includes in chapter E.7 a breakdown of the actual ER into</i></p> <p><i>a) ER up to 2012-12-31 and</i> <i>b) ER from 2013-01-01 onwards</i></p> <p><i>The ERs for each period should be determined as per the actual generation. In cases where this is not possible or a cap has been applied a proportional (time related) approach should be chosen.</i></p>		<p><input checked="" type="checkbox"/> The MR in section E.7 includes a summary table of the ER breakdown</p> <p><i>a) ER up to 2012-12-31 and</i> <i>b) ER from 2013-01-01 onwards</i></p> <p><input checked="" type="checkbox"/> The breakdown of the ERs during the first commitment period and from 2013-01-01 onwards is as follows:</p> <p><input checked="" type="checkbox"/> The ER have completely been generated during the first commitment period</p> <p><input type="checkbox"/> The ERs have completely been generated from 2013-01-01 onwards,</p> <p><input type="checkbox"/> The ERs have partly been generated during the first commitment period and partly from 2013-01-01 onwards.</p> <p><input checked="" type="checkbox"/> The breakdown of the ERs is correct, considering the applicable guidance.</p>	OK	OK



ANNEX 2: STATEMENTS OF COMPETENCE OF INVOLVED PERSONNEL



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

Mr. Lokesh Chandra Dube


SCHEME	STATUS	VALID UNTIL
CDM	Lead Assessor (Validation, Verification)	2015-06-03
	Technical Reviewer	
VCS / ISO 14064-2	Lead Assessor	2015-06-03
	Technical Reviewer	

Authorization status for technical areas within sectoral scopes:

CODE	TECHNICAL AREA
1.2	Renewable Energies
3.1	Energy Demand
13.1	Waste Handling and Disposal
13.2	Animal Waste Management
14.1	Forestry
15.1	Agriculture
15.2	Animal Waste Management

155 - Rev. 3, Date: 2012-06-15

155_501-F003_2012-06-15_rev3.doc 501-F003 rev2 / 2012-04-05



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

Mr. Ashwin A.S.


SCHEME	STATUS	VALID UNTIL
CDM	Lead Assessor (Validation, Verification)	2015-07-24
	Technical Reviewer	
VCS / ISO 14064-2	Lead Assessor	2015-07-24
	Technical Reviewer	

Authorization status for technical areas within sectoral scopes:

CODE	TECHNICAL AREA
1.2	Renewable Energies
14.1	Forestry

069 - Rev. 2, Date: 2013-03-20

069_501-VA069-F20_2013-03-20.doc 501-VA069-F20 rev3 / 2013-10-29



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

Ms. Alexandra Nebel

SCHEME	STATUS	VALID UNTIL
CDM	Senior Assessor (Validation, Verification)	2016-03-03
	Technical Reviewer	
JI	Senior Assessor	2016-03-03
	Technical Reviewer	
VCS / ISO 14064-2	Senior Assessor	2016-03-03
	Technical Reviewer	

Authorization status for technical areas within sectoral scopes:

CODE	TECHNICAL AREA
14.1	Forestry

065 - Rev. 4, Date: 2013-03-04

065_501-VA065-F20_2013-03-04_rev4.doc 501-VA065-F20 rev3 / 2013-10-29