



South Asia

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Verification and Certification Report

(with Post Registration changes validation opinion)

of the Registered CDM Project

“Uganda Nile Basin Reforestation Project No.3”

UNFCCC reference number: 1578

Monitoring Period 1: 01/04/2007 to 05/04/2012

Report No. 600501047

03 July 2013

TÜV SÜD South Asia Pvt. Ltd.
Environmental Technology
Carbon Management Service
Solitaire, I.T.I. Road, Aundh
Pune- 411007
INDIA

Date of first issue of this report	06 May 2013
Revision No. of this report	03
Registered PDD (version/date)	Version 06 -1, dated 16 Jan 2009
Registration date	21 Aug 2009
Revised Monitoring Plan	N/A
Methodology (title; number; version)	Simplified baseline and monitoring methodologies for small-scale afforestation and reforestation project activities under the clean development mechanism implemented on grasslands or croplands; AR-AMS0001, Version 5
Crediting period	01 Apr 2007 to 31 Mar 2027 (renewable)
Published Monitoring Report (version/date)	Version 01 / 06 May 2012
Final Monitoring Report (version/date)	Version 03 / 03 Apr 2013
Scope	14
Technical Area	14.1
Location of the Project	<p>The project is located in south-western Uganda in the Districts of Mbarara, Isingiro and Ntungamo.</p> <p>Easting: 230,484.6 Northing: 9,900,132.0</p> <p>233,065.2 9,901,244.0</p>
Project Participant (contractor)	<ul style="list-style-type: none"> • Uganda National Forestry Authority • Spain Kingdom of Spain-Ministry of the Agriculture, Food and Environment & Ministry of Economy and Competitiveness • Japan: <ul style="list-style-type: none"> - Japan Iron and Steel Federation (JISF) - Idemitsu Kosan Co. Ltd. - The Okinawa Electric Power Co., Inc. - Suntory Holdings Ltd. - Tokyo Electric Power Co., Inc. - Sumitomo Joint Electric Power Co.,Ltd. - Japan Petroleum Exploration Co.,Ltd (JAPEX) - Sumitomo Chemical • Italy Government of Italy Ministry for the Environment, Land and Sea • France Eco-Carbon S.A.S. • Luxembourg Ministry of Sustainable Development and Infrastructure • The International Bank for Reconstruction and Development as the Trustee of the BioCarbon Fund (contractor)
Project Documentation Link	http://cdm.unfccc.int/Projects/DB/JACO1200649370.95/view

VERIFICATION AND CERTIFICATION CONCLUSION (with Post Registration changes validation opinion)

TÜV SÜD South Asia Pvt. Ltd. has performed the periodic verification of the aforementioned CDM project activity. The verification is based on the currently valid documentation of the United Nations Framework Convention on Climate Change (UNFCCC).

The management of National Forestry Authority (NFA) and the International Bank for Reconstruction and Development as the Trustee of the BioCarbon Fund are responsible for the preparation of the GHG emissions data and the reported GHG emission reductions on the basis set out within the project's Monitoring Plan indicated in the registered PDD and the applied methodology.

The verifier can confirm that:

- the development and maintenance of records and reporting procedures are in accordance with the registered monitoring plan;
- the project is implemented and managed as planned and described in the project design document approved by the EB; post-registration changes occurred are in line with 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" (Para (n) EB 66 Annex 24) and fall under Appendix 1 to the Project Standard.
- the monitoring practices being essential for measuring GHG removals by sinks and emission reduction is reliable and appropriate
- the monitoring system is in place and provides data on GHG removals by sinks and emission;
- the GHG removals by sinks and emission are calculated without material misstatements;
- the monitoring plan in Monitoring Report is as per the PDD and monitoring plan approved by the EB;
- the monitoring plan in the approved PDD is as per the applied methodology;
- There is an audit trail that contains the evidence and records that validate the stated figures.

Based on the information we have seen and evaluated, we confirm that the project activity achieved the verified amount of reductions in anthropogenic emissions by sources of greenhouse gases that would not have occurred in the absence of the project activity.

Verified Net anthropogenic GHG removals by sinks in this monitoring period: 4,732 t CO₂e

Baseline net GHG removals by sinks:	0 tCO ₂ e
Project emissions:	0 tCO ₂ e
Leakage:	0 tCO ₂ e
Net anthropogenic GHG removals by sinks:	4,732 tCO ₂ e

Pune, 03 July 2013



Certification Body "Environment and Energy"
TÜV SÜD South Asia

Abbreviations

ACM	Approved Consolidated Methodology
ARWG	Afforestation/Reforestation Working Group
CAR	Corrective Action Request
CDM	Clean Development Mechanism
CDM-EB	CDM Executive Board
CER	Certified Emission Reduction
CO_{2e}	Carbon dioxide equivalent
CR / CL	Clarification Request
DBH	Diameter at Breast Height (1.30 meter height)
DNA	Designated National Authority
DOE	Designated Operational Entity
EIA / EA	Environmental Impact Assessment / Environmental Assessment
ER	Emission Reduction
FAR	Forward Action Request
GHG	Greenhouse Gas(es)
GIS	Geographic Information System
GPS	Global Positioning System
GWP	Global Warming Potential
IPCC	Intergovernmental Panel on Climate Change
IRL	Information Reference List
KP	Kyoto Protocol
MP	Monitoring Plan
MR	Monitoring Report
NEMA	(Ugandan) National Environmental Management Authority
NFA	(Ugandan) National Forest Authority
PCP	Project Cycle Procedure
PDD	Project Design Document
PP	Project Participant
PS	Project Standard
QA/QC	Quality Assurance / Quality Control
TÜV SÜD	TÜV SÜD South Asia Pvt. Ltd
UNFCCC	United Nations Framework Convention on Climate Change
VVS	Clean Development Mechanism Validation And Verification Standard

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Annex 1: List of Findings

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1 METHODOLOGY

1.1 Objective

TÜV SÜD has been commissioned by the aforementioned client to perform an independent verification assessment.

The objective of the verification work is to comply with the requirements of paragraph 62 of the CDM Modalities and Procedures. According to this assessment TÜV SÜD shall:

- ensure that the project activity has been implemented and operated as per the registered PDD and that all physical features (technology, project equipment, monitoring and metering equipment) of the project are in place,
- ensure that the published MR and other supporting documents provided are complete, verifiable and in accordance with applicable CDM requirements,
- ensure that the actual monitoring systems and procedures comply with the monitoring systems and procedures described in the monitoring plan and the approved methodology,
- evaluate the data recorded and stored as per the applicable requirements.

1.2 Scope

The verification scope encompasses an independent and objective review and ex-post determination of the monitored reductions in GHG emissions by the Designated Operational Entity. The verification is based on the submitted monitoring report, the validated project design documents including its monitoring plan and validation report, previous verification reports (if any), the applied monitoring methodology, relevant decisions, clarifications and guidance from the CMP and the EB and any other information and references relevant to the project activity's resulting emission reductions. These documents are reviewed against the requirements of the Kyoto Protocol, the CDM Modalities and Procedures and related rules and guidance.

Based on the requirements in the VVS, TÜV SÜD has applied a rule-based approach for the verification of the project. The principles of accuracy, completeness, relevance, reliability and credibility were combined with a conservative approach to establish a traceable and transparent verification opinion.

The verification considers both quantitative and qualitative information on emission reductions.

The verification is not meant to provide any consultancy towards the client. However, stated requests for clarifications, corrective and/or forward actions may provide input for improvement of the monitoring activities.

1.3 Verification Process

The information provided by the project participants is assessed by applying the means of verification specified in the and in the absence of specific means of verification specified in the VVS the standard auditing techniques are applied.

Once TÜV SÜD receives the Monitoring Report and a confirmation from any PP to upload, the MR is made publicly available through a dedicated interface on the UNFCCC CDM website.

A competent assessment team is selected prior to the start of the verification. The team is selected to cover the technical area(s), sectoral scope(s) and relevant host country experience for evaluating the CDM project activity. Additionally a competent Technical Reviewer or Technical Reviewer Team is appointed to conduct checks on quality and completeness.

The verification team performs first a desk review, followed by an on-site visit, which results in the formation of a draft report and a list of findings. The next step involves the evaluation of the findings through direct communication with the PPs and then finally the preparation of the verification report. This verification report and other supporting documents then undergo an internal quality control by the CB "climate and energy" before submission to the CDM-EB.

1.4 Appointment of the Team

According to the technical scopes and experiences in the sectoral or national business environment, TÜV SÜD has composed an assessment team in accordance with the appointment rules of the TÜV SÜD Certification Body "Environment and Energy".

The composition of an assessment team has to be approved by the Certification Body (CB) to assure that the required skills are covered by the team. The CB TÜV SÜD operates the following qualification levels for team members that are assigned by formal appointment rules:

- Assessment Team Leader (ATL);
- Verifier (V);
- Verifier Trainee (T);
- Technical Experts (TE);
- Country expert (CE);
- Technical review (TR).

It is required that the sectoral scope(s) and the technical area(s) (TA) linked to the methodology/ies and project have to be covered by the assessment team. Appointment certificates of the selected team members are attached to this report as Annex.

Assessment Team:

Name	Qualification	Scope	Technical Area	Host country experience	Onsite visit
Sebastian Hetsch	ATL	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> (14.1)	<input checked="" type="checkbox"/>	
Martin Seitz	V	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> (14.1)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Martin Opitz	V	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> (14.1)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Technical Reviewer (s):

Name	Qualification	Scope	Technical area
Cuiyun (Rachel) Zhang	TR		
Juan Chang	TE	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> (14.1)

1.5 Review of Documents

Publication has been initiated before the verification activities started. Based on the published MR the assessment team performed a desk review to:

- verify the completeness of the data and the information presented in the MR,
- check the compliance of the MR with respect to the monitoring plan depicted in the registered PDD and verify that the applied methodology was carried out. Particular attention to the frequency of measurements, the quality of the metering equipment including calibration requirements, and the quality assurance and quality control procedures was paid,
- evaluate the data management and the quality assurance and quality control system in the context of their influence on the generation and reporting of emission reductions.

A complete list of all documents reviewed is available in the Information Reference List attached as Annex 2 to this report.

1.6 On-site Assessment and follow-up Interviews

During on-site visit (30 May 2012 – 05 Jun 2012) TÜV SÜD performed a physical site inspection and interviewed project stakeholders to:

- confirm the implementation and operation of the project,
- review the data flow for generating, aggregating and reporting the monitoring parameters,
- confirm the correct implementation of procedures for operations and data collection,
- cross-check the information provided in the MR documentation with other sources,
- check the monitoring equipment against the requirements of the PDD and the approved methodology, including calibrations, maintenance, etc.,
- review the calculations and assumptions used to obtain the GHG data and ER,
- identify if the quality control and quality assurance procedures are in place to prevent or correct errors or omissions in the reported parameters.

A list of all persons interviewed is included in the IRL attached as Annex 2 to this report.

1.7 Resolution of Clarification and Corrective and Forward Action Requests

The objective of this phase of the verification is to resolve the requests for corrective actions, clarifications, and any other outstanding issues which need to be clarified for TÜV SÜD's conclusion on the achieved emission reductions. The CARs and CRs raised by TÜV SÜD are resolved during communication between the client and TÜV SÜD. To guarantee the transparency of the verification process, the concerns raised and responses that have been given are documented in detail in the List of Findings that is attached as Annex 1 to this report.

1.8 Internal Quality Control

Internal quality control within the team is assured by means of a technical review process that takes place after the on-site assessment and after closure of findings. The internal quality control in the verification process is given by the final decision (Verification and Certification Conclusion) made by the CB "Environment and Energy".

2 REPORTING REQUIREMENTS

In the following sections, the results of the verification are stated. The verification results relate to the project performance as documented and described in the final PDD and final Monitoring Report. The verification findings for each verification subject are presented below.

2.1 FARs from Validation / Previous Verification

No FARs have been presented in the validation report.

2.2 Project Implementation in accordance with the registered Project Design Document (with post registration changes validation opinion)

The project is implemented according to the description presented in the registered PDD except the below discussed post registration changes.

Post registration changes that occurred are in compliance with respective Guidance of the CDM as described in the following:

- During the implementation of the project some areas were identified that are unsuitable for planting (areas i.e. steep slopes, rocky soils and outcrops). Respectively, the project area was reduced by 17.4 ha to a total of 324.5 ha. The audit team concludes that the reduction does not impact the baseline identification and the additionality demonstrated during validation. Thus, the audit team concludes that this change in project design is in compliance with 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” (Para (n) EB 66 Annex 24).
- The following changes specific to afforestation or reforestation project occurred in the project activity:
 - Planting schedule (years of planting) deviates from the planned schedule (in the project PDD). Reasons for the delay are to be found among others on the availability of respective seedlings.
 - The area planted annually deviates from the planned area (in the project PDD).
 - The tree species *Pinus oocarpa*, which was not originally considered for planting in the project design, has been planted in the project area.
 - The tree species *Maesopsis eminii*, which was originally planted in very small amounts, failed to establish and was wholly replaced by the tree species *Pinus caribaea*.

The audit team found that these changes comply with 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” (Para (a) and (b) EB 66 Annex 24). Thus they do not require prior approval by the Executive Board.

The DOE’s validation opinion regarding the aforementioned post registration changes is that these changes comply with 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” (Para (a) and (b) EB 66 Annex 24) and fall into Appendix 1 to the Project Standard.

The verifier confirms, through the visual inspection that all physical features of the proposed CDM project activity including data collecting systems and storage have been implemented in accordance with the registered PDD.

The project activity is completely operational and the same has been confirmed during the on-site visit.

The GHG removals by sink during the monitoring period presented in the MR are less than the estimated value in the registered PDD. The differences were discussed and verified onsite. Plausible reasons were the fact that less area was planted than foreseen at project validation (see also bullet points above), and some areas burnt or suffered tree mortality which have not been fully compensated by replanting of the respective areas activities yet.

The audit team confirms that the difference in GHG removals by sink does not affect the additionality, scale or applicability of the project, hence no notification has been submitted to the EB.

2.3 Compliance of the Monitoring Plan with the Monitoring Methodology

The monitoring plan is in accordance with the approved methodology applied by this CDM project activity and relevant guidelines and clarification for AR-CDM projects.

In particular a discount to the change in carbon stock in tree biomass within the project boundary was applied on basis of the tool "*Estimation of carbon stocks and change in carbon stocks of trees and shrubs in A/R CDM project activities*" Version 03.0.0 in line with clarification AR_AM_CLA_0019 "*General guidance on cases where the uncertainty in estimation of carbon stocks exceeds allowable maximum uncertainty*". The precision level of the mean carbon stock in the project during the monitoring period is calculated to be 45.29% and thus was larger than the 10% (threshold of the applied methodology). On basis of the clarification provided in the AR-WG report a deduction rate was applied to the project GHG removals. In total, a discount of 12% (645 tCO₂e) was subtracted from the total GHG removals by sink achieved by the project activity. The audit team concludes that the calculation is in line with the respective clarification. Neither a revision nor a deviation to the monitoring plan was required and requested to the CDM Executive Board.

2.4 Compliance of the Monitoring with the Monitoring Plan

The monitoring has been carried out in accordance with the monitoring plan. Less stringent QA/QC procedures have been applied: The QA/QC for the measurement of DBH and height was changed to < +/- 1.0 cm or 8% for DBH and < +/- 15% or +/- 1 meter for height. It was shown that comparable QA/QC procedures were applied to a similar registered project: "Reforestation of croplands and grasslands in low income communities of Paraguari Department, Paraguay" (CDM Project ID 2694, chapter B.8.2., registered PDD page 51), where an error level of < +/- 10% for DBH and < +/- 20% for height is applied. As per 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" (Para (o), EB 66 Annex 24), these changes of the QA/QC procedures do not require prior approval by the Executive Board. The audit team therefore concludes that the changes are acceptable in-line with the CDM guidelines.

Neither a revision nor a deviation to the monitoring plan was required and requested to the CDM Executive Board.

All parameters were monitored and determined as per the monitoring plan.

The verification of the parameters required by the monitoring plan is provided as follows:

Data / Parameter:	Location of the area where the project activity has been implemented
Data unit:	UTM co-ordinates
Description:	Location of the project area on earth defined in UTM co-ordinates
Source of data used:	Forest inventory of the PP (based on GPS measures, stored in GIS)
Means of verification/ Comments:	The boundaries have been verified by the audit team by using GPS devices. The data obtained in the field have been compared with the data provided by the PP.
Cross-check	N/A

Data / Parameter:	Location of permanent sample plots
Data unit:	UTM co-ordinates
Description:	Location of sample plots on earth defined in projected co-ordinates
Source of data used:	Forest inventory of the PP (based on GPS measures, stored in GIS)
Means of verification/ Comments:	The plot locations have been verified during the onsite visit by the audit team by using GPS devices. The data obtained in the field have been compared with the data provided by the PP.
Cross-check	N/A

Data / Parameter:	A _i - size of the areas where the project activity has been implemented for each type of strata
Data unit:	Ha (hectare)
Description:	Size of the areas where the project activity has been implemented for each type of strata
Source of data used:	Forest inventory of the PP (based on GPS measures, stored in GIS)
Means of verification/ Comments:	The audit team assessed the GIS shape files provided and verified the area of the project area by using GPS devices. The data obtained in the field have been compared with the data provided by the PP.
Cross-check	N/A

Data / Parameter:	Diameter at breast height (1.30 m)
Data unit:	cm (centimetre)
Description:	Diameter of trees within the permanent sample plot measured at 1.30 m along the longitudinal axis of the tree stems
Source of data used:	Sample plot measures from the PP
Means of verification/ Comments:	During onsite visit the DBH of the trees per sample plot were re-measured and compared with the actual measurements of the PP (IRL 21)
Cross-check	Scientific studies indicating growth of diameter of trees (IRL 20)

Data / Parameter:	Height of tree
Data unit:	m (meter)
Description:	Height of all trees within the sample plot measured along the longitudinal axis from tree base to top.
Source of data used:	Sample plot measures from the PP
Means of verification/ Comments:	During onsite visit the Height of trees per sample plot were re-measured and compared with the actual measurements of the PP (IRL 21)
Cross-check	Scientific studies indicating growth of diameter of trees (IRL 20)

Data / Parameter:	Total CO ₂
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Data unit:	Metric tonne (tCO ₂)
Description:	Amount of CO ₂ sequestered by the project activity
Source of data used:	Sample plot data and area measurements from PP / calculation in Excel
Means of verification/Comments:	The audit team assessed the calculations provided and verified the sources of applied values and equations
Cross-check	Scientific studies indicating growth of diameter of trees (IRL 20)

2.5 Assessment of Data and Calculation of Greenhouse Gas Emission Reductions

All data has been available and all the parameters have been monitored in accordance with the registered monitoring plan.

The reported data have been cross-checked against other sources available as explained above in chapter 2.4.

The verifier confirms that the methods and formulae used to obtained the baseline, project and leakage emissions are appropriate. The same has been done in accordance with the methods and formulae described in the registered monitoring plan and applicable methodology.

The verifier confirms that the monitoring report includes all parameters and the monitored data at the intervals required by the methodology and PDD.

The verifier confirms that all default values (ex-ante values from PDD) have been correctly justified. All the emission factors and default values are explicitly mentioned in the monitoring report.

Annex 1

List of Findings

List of Findings - Compilation and Resolutions

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Definitions contained in the Glossary of CDM terms and applied in the Standard	
Shall / Should / May	In addition to the definitions contained in the Glossary of CDM terms, the following terms apply in the VVS (VVS/10): <u>Shall</u> is used to indicate requirements to be followed; <u>Should</u> is used to indicate that among several possibilities, one course of action is recommended as particularly suitable; <u>May</u> is used to indicate what is permitted.
Credible	Information is credible if it is authentic and is able to inspire belief or trust, and the willingness of persons to accept the quality of evidence. (VVS/17)
Reliable	Information is reliable if the quality of evidence is accurate and credible and able to yield the same results on a repeated basis. (VVS/17)
CAR	The DOE shall raise a CAR if one of the following situations occur: (VVS/220) (a) Non-compliance with the monitoring plan or methodology are found in monitoring and reporting and has not been sufficiently documented by the project participants, or if the evidence provided to prove conformity is insufficient; (b) Modifications to the implementation, operation and monitoring of the registered project activity has not been sufficiently documented by the project participants; (c) Mistakes have been made in applying assumptions, data or calculations of emission reductions that will impact the quantity of emission reductions; (d) Issues identified in a FAR during validation to be verified during verification or previous verification(s) have not been resolved by the project participants.
CL	The DOE shall raise a CL if information is insufficient or not clear enough to determine whether the applicable CDM requirements have been met. (VVS/221)
FAR	The DOE shall raise a FAR during verification for actions if the monitoring and reporting require attention and/or adjustment for the next verification period. (VVS/223)

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Compilation and Resolutions of CARs, CRs and FARs

Corrective Action Requests by verification team		
	Comments and Results	Conclusion and IRL
Issue	During onsite the audit team observed that the numbers of trees counted per sample plot was not always correct, since the monitoring procedures were not always followed correctly by the PP. The project specific quality assurance and quality control procedures allow no error in the numbers of trees per sample plot.	IRL 2, 7, 8, 21, 24
Requirement	VVS (Version 02.0) para 233 The DOE shall determine whether the monitoring of parameters related to the GHG emissions reductions in the project activity has been implemented in accordance with the monitoring plan contained in the registered PDD or any accepted revised monitoring plan. VVS (Version 02.0) para 234 e The DOE shall determine whether: Quality assurance and quality control procedures have been applied in accordance with the monitoring plan or the revised monitoring plan.	
Corrective Action Request	<u>Corrective Action Request No 1</u> The number of trees per sample plot was not correct in some plots assessed by the audit team. The PP needs to ensure that Standard Operational Procedure of the project activity are correctly applied and hence GHG removals are calculated correctly	
Response by PP	1. The inventory uses nested plots of 6m and 12m radius. Trees with DBH \leq 20cm are measured only in the smaller circle. Trees with a DBH $>$ 20cm are measured in a circle of 12m radius. The terrain is often very difficult, i.e. steep slopes are the rule, making it difficult to measure distances horizontally. Therefore tables are provided in the Field Carbon Inventory and Monitoring Manual that provide maximum distances for measurement along the slope. Tables provide the thus increased distances in degree and percent (see Field Carbon Inventory and Monitoring manual). The provision of two different sets of tables led to errors when reading the adjusted distance. 2. During the inventory the inventory team passed a general resolution to set the unit for measuring slope to percent only. This was implemented for all sample plots measured from April 2012 onwards. From this time onwards only the distance correction tables for percent were taken to the	

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Corrective Action Requests by verification team		
	<p>field to avoid using the degree correction tables.</p> <p>3. For all sample plots measured before April 2012 the recorded distance for individual trees with distances > 6 or 12 meters depending on DBH, was compared to the distance as provided in the tables. Given the fact that slope may have been measured in percent but recorded as degree we conservatively assumed that all slope values are in %. (Adjusted distance for a percent reading is shorter than adjusted distance for the same value in degree.)</p> <p>4. Any tree with a DBH \leq 20cm outside the slope corrected 6m distance and any tree with a DBH > 20cm outside the slope corrected 12m distance was excluded, i.e. is the record was deleted from the data in the calculation file.</p> <p>All original data sets were corrected where necessary and carbon stock recalculated.</p>	
Assessment by Audit Team Means of verification	<p>The PPs presented a plausible explanation of why trees have been measured although they are outside of the sample plots. The explanation provided is in line with observations made by the audit team onsite. The PPs describe an approach to reassess the collected tree data in order to delete those trees that have been wrongly taken into account. The Audit team verified the approach and ensures that it will lead to a correct result.</p> <p>The audit team assessed the new set of tree data provided by applying the above mentioned approach with the old data (2012-05-09 SMART-Tool c-inventory_V4.xlsm) and come to different results in terms of numbers of trees in the overall data.</p> <p>Further the audit team detected trees in the data provided that have been found to be outside of the sample plot during the field visit.</p>	
Second response by PP	<p>The above described approach to find and exclude trees wrongly included during the inventory was reapplied carefully. As a result additional trees have been removed from the data used for carbon stock calculations. Carbon stocks were re-calculated with the corrected data set.</p>	
Second assessment by Audit Team Means of verification	<p>The audit team assessed the new set of tree data provided applying the above mentioned approach with the old data (2012-05-09 SMART-Tool c-inventory_V4.xlsm) and came to the same result as the PPs. All trees that have been outside the sample plots during the field visit have been erased from the new set of tree data.</p> <p>Request closed.</p>	
Changes in the monitoring report or supporting annexes	<p>The set of tree data has been revised. The above described approach to erase all trees that have been wrongly taken into account although being outside the sample plots has been applied correctly. The set of tree data contains only trees that have been properly measured and that are inside the sample plots.</p>	

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Corrective Action Requests by verification team		
	Comments and Results	Conclusion and IRL
Issue	Two pine species were found in the project area: <i>Pinus caribaea</i> and <i>Pinus oocarpa</i> . The latter is not mentioned in the project design; hence the project species composition is not in line with the PDD.	IRL 2, 3, 19, 21
Requirement	VVS (Version 02.0) para 226 The DOE shall identify any concerns related to the conformity of the actual project activity and its operation with the registered project design document and determine whether the implementation and operation of the project activity has been conducted in accordance with the description contained in the registered PDD	
Corrective Action Request	<u>Corrective Action Request No 2</u> The species composition is not in line with the registered PDD.	
Response by PP	Wood density values used for carbon stock calculations were adjusted to: <i>Pinus caribaea</i> = 0.51 (IPCC LULUCF GPG (2003) Tables 3A.1.9-2) <i>Pinus oocarpa</i> = 0.55 (IPCC LULUCF GPG (2003) Tables 3A.1.9-2)	
Assessment by Audit Team Means of verification	Corrected parameter for wood density corresponding with the tree species planted has been taken from public available sources (IPCC LULUCF GPG (2003) Tables 3A.1.9-2). Further the audit team compared the field sheets with the tree data provided and could confirm that the tree species have been correctly identified. The changes in the species composition are not documented and justified to be in line with the guideline of EB 66 Annex 24 in Section B.2 of the MR as required by the respective template.	
Second response by PP	The planting of <i>Pinus oocarpa</i> , not originally included as one of the plantation species in the project design, has occurred in one of the project strata: T1-17-3-A-PCH-07-II. <i>Maesopsis eminii</i> , which was originally planted in discrete area T1-17-3-A-ME-07-I-0, failed to establish and was wholly replaced by <i>Pinus caribaea</i> (discrete area re-named T1-17-3-A-PCH-12-I-01). These change have been included in the MR (Section B.2.6) as types of changes specific to afforestation or reforestation project activity that do not require prior approval by the Executive Board according to <i>EB 66 Annex 24 Guidelines on accounting of specified types of changes in A/R CDM project activities from the description in registered project design documents, Version 2.</i>	

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Corrective Action Requests by verification team		
Second assessment by Audit Team	The changes in the species composition have been documented and justified to be in line with the guideline of EB 66 Annex 24.	
Means of verification	Request closed.	
Changes in the monitoring report or supporting annexes	Species specific values for Wood density as publically available were used in the CER calculations. Section B.2.6 and D.1 were updated respectively.	

Corrective Action Requests by verification team		
	Comments and Results	Conclusion and IRL
Issue	During the onsite visit the audit team observed areas inside the project boundary that were not subject to reforestation activities (e.g. patches of pre-existing vegetation or unplanted areas).	IRL 1, 2, 3, 7, 8
Requirement	<p>VVS (Version 02.0) para 229 The DOE shall determine whether the monitoring plan of the project activity is in accordance with the applied methodology including applicable tool(s).</p> <p>AR-AMS0001 (Version 05) Section I 4 a and VI E table 1 The methodology requires that the project area is eligible for the A/R CDM project activity and that the project is monitored every 5 years.</p> <p>VVS (Version 02.0) para 289 As a part of the first verification report, the DOE shall confirm 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.</p>	
Corrective Action Request	<u>Corrective Action Request No 3</u> Parts of the project area are not subject to reforestation. The PP need to ensure compliance with requirements regarding monitoring of the project area / stratification.	
Response by PP	All planted areas have been mapped on-site. Where unplanted areas are enclosed by planted areas the former have been mapped out. All unplanted areas form a separate stratum where 0.0 carbon stock is	

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Corrective Action Requests by verification team		
	accounted for. GIS files and carbon stock calculations have been updated accordingly.	
Assessment by Audit Team Means of verification	Updated GIS files have been provided and assessed by the audit team. The project area is now larger than in the registered PDD, which is a significant change in project design and requires the prior approval by the Board. Clarify if the change in project area is permanent.	
Second response by PP	During project implementation several areas were identified as not suitable for planting, i.e. very steep slopes and areas such as wetland and degraded forest. An assessment revealed that the latter will be able to recover due to the protection resulting from management the surrounding areas as plantation forest. Accordingly unplanted areas have been divided into those that will be planted in the near future and those that cannot be planted due to the circumstances described above, and boundaries were established accordingly. All areas considered as not suitable for planting have been excluded from the project area, thereby reducing the project area to 324.5 ha from the 341.9 ha registered. The reduction in the project area does not compromise the applicability of the baseline and additionality demonstration made at validation stage. <i>According to EB 63 Annex 24 Guidelines on accounting of specified types of changes in A/R CDM project activities from the description in registered project design documents, Version 01 changes in the project boundary that reduce the project area are considered to be minor, and therefore shall be addressed through the verification stage by the designated operational entity.</i>	
Second assessment by Audit Team Means of verification	Updated GIS files have been provided and assessed by the audit team. The project area is now about 17.4 ha smaller than in the registered PDD. During onsite visit it could be sustained that the baseline identified and described in the PDD is not affected by the reduction of the project area as described in the MR. Further the audit team concludes that the additionality of the project based on several barriers will not be affected by the reduction of the project area. Thus the changes of the project area are in compliance with EB 66 Annex 24. Request closed.	
Changes in the monitoring report or supporting annexes	The GIS-files have been revised. Areas not suitable for planting are excluded from the overall project area. Section B.2.4 was updated respectively.	

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Corrective Action Requests by verification team		
	Comments and Results	Conclusion and IRL
Issue	The information on QA/QC of the PP do not include information regarding the error percentage for each measurement team as required by the project specific QA/QC-procedures. According to the project specific quality assurance and quality control procedures 10% of the sample plots have to be re-measured. If the overall measurement error for a given parameter of on team exceeds 5% all sample plots measured by this team have to be re-measured.	IRL 2, 9, 21, 25, 26, 27, 28
Requirement	VVS (Version 02.0) para 233 The DOE shall determine whether the monitoring of parameters related to the GHG emissions reductions in the project activity has been implemented in accordance with the monitoring plan contained in the registered PDD or any accepted revised monitoring plan. VVS (Version 02.0) para 234 e The DOE shall determine whether: Quality assurance and quality control procedures have been applied in accordance with the monitoring plan or the revised monitoring plan.	
Corrective Action Request	<u>Corrective Action Request No 4</u> The QA/QC provided by the PP is not in compliance with the project specific QA/QC-procedures regarding the error percentage for each measurement team. The PP is requested to ensure compliance with requirements.	
Response by PP	According to the "Field Carbon Inventory and Monitoring Manual" any errors discovered will be expressed as a percentage of all plots that have been re-checked, thereby providing an estimate of the measurement error. The error is calculated per parameter. If the overall measurement error for a given parameter of one team exceeds 5 %, all sample plots measured by this team have to be re-measured. Teams were included in the QC analysis. The overall error for DBH and height measurements for single teams is always below the 5 % threshold. Calculations are provided in: QC_analysis.xlsx	
Assessment by Audit Team	New QA/QC analysis has been provided. The error percentage per measurement team has been calculated as required by the project specific QA/QC procedures. None of the measurements team has been above the threshold of 5%. Request closed.	
Means of verification		
Changes in the monitoring report or supporting annexes	The QA/QC analysis has been revised. For each measurement team the error percentage has been calculated and presented. Section B.2.3 was updated respectively.	

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Corrective Action Requests by verification team		
	Comments and Results	Conclusion and IRL
Issue	Precision-level calculations have been provided based on an Excel calculation file. The formulas used are not correct, the calculations are not fully interlinked and traceable and the calculations contain data of all CDM Projects in the Rwoho Forest Reserve.	IRL 2, 22, 29
Requirement	VVS (Version 02.0) para 244 The DOE shall assess the data and calculations of GHG emission reductions achieved by/resulting from the project activity by the application of the selected approved methodology. EB 63 Annex 26 Section II Table 1 A maximum allowable relative margin of error of the mean, for estimation of aboveground tree biomass, of +/- 10% at 90% confidence level shall be allowed.	
Corrective Action Request	<u>Corrective Action Request No 5</u> The formulae used to calculate precision level are not correct. Only project relevant data shall be included in the calculation file. The PP shall provide correct calculation of precision level in line with good practice.	
Response by PP	Precision-level calculations are now provided individually for projects. Calculations have been corrected and are linked to the individual carbon stock calculation files.	
Assessment by Audit Team Means of verification	There has been one calculations file per project been provided containing the CER calculations and the calculation of the margin of error. The audit team assessed the CER calculations: <ul style="list-style-type: none"> Formulas applied are correct. The value for PI calculated with is incorrect, as well as the value of the area of the sample plot. A table of the area per strata is missing The audit team assessed the calculation of the margin of error: <ul style="list-style-type: none"> Formulas applied are correct and in line with the CDM AR Tool "Estimation of carbon stocks and change in carbon stocks of trees and shrubs in A/R CDM project activities (EB 60 Annex 13) Equations 5 to 9 The area weighted mean variance of stratum "T1-17-3-A-PCH-08-II" is missing The margin of error is around 44% thus not in line with the methodological requirement. 	

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Corrective Action Requests by verification team		
	<p>Discounted C-stock:</p> <ul style="list-style-type: none"> Calculations provided are not in line with the formula presented the report of the 28th meeting of the ARWG 	
Second response by PP	<ul style="list-style-type: none"> PI value: equations using the rounded PI value 3.14675 (Treedata -Column H, Standard values, column C) have been replaced with the xls equation PI() Sample plot area: the rounded figures for sample plot area (452, 113) used in sheet Treebiomass (column Q) have been replaced with the correct equation PI()*potenz(r;2) Area values for strata are provided in the sheet StrataArea. Calculations in sheet Tree Biomass column AM have been linked accordingly. The area weighted mean variance for stratum "T1-17-3-A-PCH-08-II" has been included. Discounted carbon stock was calculated following clarification AR_AM_CLA_0019 "General guidance on cases where the uncertainty in estimation of carbon stocks exceeds allowable maximum uncertainty" and the tool "Estimation of carbon stocks and change in carbon stocks of trees and shrubs in A/R CDM project activities" Version 03.0.0 was used. 	
Second assessment by Audit Team Means of verification	<p>A new calculation has been provided containing the CER calculations and the calculation of the margin of error.</p> <p>The audit team assessed the CER calculations and could confirm that all corrections as listed above have been implemented correctly. Thus the CER calculations comply with the requirements of the methodology applied and the CDM.</p> <p>Request closed.</p>	
Changes in the monitoring report or supporting annexes	<p>Corrected CER calculations files have been provided, the calculations comply with the methodology and the CDM. The MR has been revised respectively.</p>	

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Corrective Action Requests by verification team		
	Comments and Results	Conclusion and IRL
Issue	The quality assurance and quality control procedures of the project activity have been changed during the 1. Monitoring period.	IRL 2, 9
Requirement	<p>VVS (Version 02.0) para 233 The DOE shall determine whether the monitoring of parameters related to the GHG emissions reductions in the project activity has been implemented in accordance with the monitoring plan contained in the registered PDD or any accepted revised monitoring plan.</p> <p>VVS (Version 02.0) para 234 e The DOE shall determine whether: Quality assurance and quality control procedures have been applied in accordance with the monitoring plan or the revised monitoring plan.</p>	
Corrective Action Request	<p><u>Corrective Action Request No 6</u> The quality assurance and quality control procedures applied are not in line with the registered PDD and MR. The PP is requested to ensure compliance with registered PDD or request for changes in line with the CDM procedures.</p>	
Response by PP	<p>The monitoring plan of the PDD (Annex 8, page 43) stipulates that as part of QC procedures re-measurement data will be compared with the original measurement data. [...] If the difference between the re-measurement and original measurement is higher than 5%, the sample plot will be eliminated. The error margin was changed to: DBH < ± 1.0 cm or 8 %; whichever is greater Height < ± 15 % or ± 1 meter; whichever is greater</p> <p>Less stringent QA/QC procedures are used by the project: "Reforestation of croplands and grasslands in low income communities of <i>Paraguarí</i> Department, <i>Paraguay</i>" (chapter B.8.2., page 51 (registered 06.09.2009)): The following quality targets should be achieved for the measurements: DBH: < ±10% Height: < ± 20%</p> <p>Accordingly, as cited above, the change in the QA/QC procedure does not require the approval of the</p>	

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Corrective Action Requests by verification team		
	CDM Executive Board.	
Assessment by Audit Team Means of verification	The PPs demonstrated that the changes in the QA/QC procedures are in line with Guidelines on accounting of specified types of changes in A/R CDM project activities from the description in registered project design documents (EB 66 Annex 24) as it could be shown that QA/QC procedures were applied in another registered A/R CDM project activity that are even wider than that of the project at hand. The changes are not documented and justified to be in line with the above mentioned guideline in Section B.2 of the MR as required by the respective template.	
Second response by PP	The change in the error margin outlined above constitutes the type of change that does not require prior approval by the Executive Board according to <i>EB 66 Annex 24 Guidelines on accounting of specified types of changes in A/R CDM project activities from the description in registered project design documents, Version 2</i> ; The change has been reported in Section B.2.3 of the monitoring report.	
Second assessment by Audit Team Means of verification	The changes regarding QA/QC procedures are now documented and justified to be in line with the above mentioned guideline in Section B.2.3 of the MR as required by the respective template. Request closed.	
Changes in the monitoring report or supporting annexes	Section B.2.3 of the MR has been revised respectively.	

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Corrective Action Requests by verification team		
	Comments and Results	Conclusion and IRL
Issue	In the opening table of the MR as well as the table in section A.3 not all project participants as listed on the UNFCCC webpage (http://cdm.unfccc.int/Projects/DB/JACO1200649370.95/view) are listed as required.	IRL 2
Requirement	VVS (Version 02.0) para 226 The DOE shall identify any concerns related to the conformity of the actual project activity and its operation with the registered project design document and determine whether: (a) The implementation and operation of the project activity has been conducted in accordance with the description contained in the registered PDD;	
Corrective Action Request	<u>Corrective Action Request No 7</u> The MR does not provide full information of the authorized project participants as registered on the UNFCCC webpage.	
Response by PP	The full information pertaining authorised project participants, as presented on the UNFCCC webpage (http://cdm.unfccc.int/Projects/DB/JACO1200649370.95/view) has been included in the monitoring report.	
Assessment by Audit Team	A revised MR has been provided. Full information about the authorised project participants as presented on the UNFCCC webpage (http://cdm.unfccc.int/Projects/DB/JACO1297129985.73/view) has been included in the MR	
Means of verification		
Changes in the monitoring report or supporting annexes	The Section A.3 of the MR has been revised accordingly.	

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Corrective Action Requests by verification team		
	Comments and Results	Conclusion and IRL
Issue	The naming of the parameters to be monitored in the MR differs from the naming of the respective parameters to be monitored in the Methodology and the registered PDD.	IRL 2
Requirement	VVS (Version 02.0) para 229 The DOE shall determine whether the monitoring plan of the project activity is in accordance with the applied methodology including applicable tool(s).	
Corrective Action Request	<u>Corrective Action Request No 8</u> Ensure consistency between the monitoring plan of the Methodology, the registered PDD and the MR.	
Response by PP	The exact names used for parameters to be monitored listed in the project methodology and the registered project PDD are now used for the respective parameters monitored and listed in the monitoring report.	
Assessment by Audit Team Means of verification	A revised MR has been provided. The naming of the parameters to be monitored and listed in the MR complies with those of the methodology applied. Request closed.	
Changes in the monitoring report or supporting annexes	The sections D.1 and D.2 of the MR have been revised accordingly.	

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Clarification Requests by verification team		
	Comments and Results	Conclusion and IRL
Issue	<p>The methodology requires a monitoring of leakage one time after the project is established. As the validation was conducted after project start the parameter was already assessed during validation.</p> <p>At validation it was confirmed that leakage (after project implementation) is not significant in compliance with the applied methodology. However as part of the verification, the audit team requires the respective information for re-assessment of the parameter.</p> <p>At time of the onsite visit for verification the leakage survey was not available.</p>	IRL 2, 4, 23, 27
Requirement	<p>VVS (Version 02.0) para 233</p> <p>The DOE shall determine whether the monitoring of parameters related to the GHG emissions reductions in the project activity has been implemented in accordance with the monitoring plan contained in the registered PDD or any accepted revised monitoring plan.</p> <p>VVS (Version 02.0) para 234 b iii</p> <p>The DOE shall determine whether: All parameters stated in the monitoring plan and relevant Board decisions have been monitored and updated as applicable, including leakage parameters</p>	
Clarification Request	<p><u>Clarification Request 1.</u></p> <p>The PP shall clarify and submit monitoring information on leakage to the DOE.</p>	
Response by PP	<p>A leakage survey was conducted. Households from villages bordering the project area and owning grazing animals (cattle, goat) were identified by field staff with the help of Local Council. Owners of livestock were asked to provide:</p> <ul style="list-style-type: none"> the type of animal grazing in the project area, the number of animals grazing in the project area and the time (days/year, hours/day) animals spend grazing in the project area. <p>Data was standardized into tropical livestock units (TLU), and the time average for TLUs calculated. TLUs currently grazing in the project area were compared to TLUs grazing in the project area before project start. The thus determined number of displaced grazing animals could then be expressed as percentage of the grazing capacity.</p> <p>Displacement = 7 % of the grazing capacity.</p> <p>Thus, in line with the methodology used, leakage $L_{tv} = 0$ (if displacement $\leq 10\%$)</p> <p>Survey data and calculations are provided in: leakage_survey_calculations.xlsx</p>	

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Clarification Requests by verification team		
Assessment by Audit Team Means of verification	<p>Already at validation it was shown that leakage is not significant. Therefore, it was not included as a monitoring parameter neither in the Monitoring Plan nor in the Monitoring Report.</p> <p>At the time of validation it was shown that displacement of pre-project activities will not cause deforestation attributable to the project activity and the lands surrounding the project area does not contain significant biomass (see also Validation Report). It was shown that the project area and the surrounding areas contained no significant biomass before project start and thus could be classified highly degraded.</p> <p>The survey conducted by the PPs provided evidence showing that the highly degraded surrounding areas received the shifted activities thus in line with in line with § 28 of the applied methodology leakage can be considered zero.</p> <p>The calculation for leakage presented is not in line with the methodology and the monitoring plan, which does not foresee to monitor leakage.</p>	
Second response by PP	<p>According to the baseline leakage survey, detailed in the project PDD, people living in the project area are settled agro-pastoralist, i.e. movement of livestock is restricted to the vicinity of their homes. The project adjoins 3 parishes, which, including the project area had 10,000ha of degraded land available for grazing prior to project start, with an average grazing capacity of 0.5 TLU/ha. The stocking density prior to project start was 0.039 TLU/ha. The baseline survey and National Biomass Study (NFA) showed that both project area lands outside the reserve contained no significant biomass.</p> <p>According to the leakage monitoring survey 12 TLUs were displaced from the project to the 3 adjoining parishes, raising the stocking density marginally by 0.002 to 0.041 TLU/ha or 8.3% of the maximum grazing capacity. Thus, in line with paragraph 28 of the methodology leakage due to displacement of domesticated grazing animals is considered to be zero. ($L_{iv} = 0$)</p>	
Second assessment by Audit Team Means of verification	<p>The PPs presented a calculation on basis of a leakage survey conducted sustaining that the lands surrounding the project area can receive the shifted activities as just 2.4% of the maximum grazing capacity is used. The shifting increased this amount about 0,4%. Thus considering the evidence provided during validation that the lands surrounding the project area do not contain significant biomass leakage can be considered zero in line with the methodology.</p> <p>Request closed.</p>	
Changes in the monitoring report or supporting annexes	A calculation of the grazing capacity of the land surrounding the project area has been provided as well as the section E.3 revised accordingly.	

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Clarification Requests by verification team		
	Comments and Results	Conclusion and IRL
Issue	<p>The PDD is referring to an Environmental Impact Assessment that was carried out by “Environmental Assessment Consult Limited” in line with requirements by the National Environmental Management Authority (NEMA). Annual monitoring is required for the project.</p> <p>Respective documentation and approval was not available at the time of the onsite.</p> <p>According to the “environmental impact statement for the proposed Rwoho and Bugamba forest management plan (2006-2016)” annual audit reports have to be submitted and approved by NEMA</p>	IRL 14, 24
Requirement	<p>VVS (Version 02.0) para 226</p> <p>The DOE shall identify any concerns related to the conformity of the actual project activity and its operation with the registered project design document and determine whether the implementation and operation of the project activity has been conducted in accordance with the description contained in the registered PDD.</p> <p>VVS (Version 02.0) para 212 f</p> <p>In addition to the monitoring documentation the DOE shall review any other information and references relevant to the project activities emission reductions (e.g. IPCC reports, data on electricity generation in the national grid or laboratory analysis and national regulations).</p>	
Clarification Request	<p><u>Clarification Request 2.</u></p> <p>The registered PDD refers to the environmental impact assessment, which requires periodic approval by NEMA. The PP need to clarify if such approval was provided.</p>	
Response by PP	The National Environment Management Authority (NEMA) has confirmed compliance with National Environmental Policies, Laws, Regulations and Standards as well as World Bank safeguard policies.	
Assessment by Audit Team	A Letter of the National Environment Management Authority has been provided confirming the compliance of the project with National Environmental Policies, Laws, Regulations and Standards as well as World Bank safeguard policies. The audit team assessed the letter and found it sufficient to comply with requirements stated in the environmental impact assessment.	
Means of verification		
Changes in the monitoring report or supporting annexes	No adjustments on the project design nor changes in the monitoring report or supporting annexes needed.	

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Clarification Requests by verification team		
	Comments and Results	Conclusion and IRL
Issue	The reference for the form factor to calculate the “stem volume” of Maesopsis is not provided. As Form Factor a value of 0.42 for Pine and 0.498 for Maesopsis were provided in MR. The value was taken from a national studies “Alder model”; however the reference for the value of 0.498 for Maesopsis is not found in the report.	IRL 28
Requirement	VVS (Version 02.0) para 244 The DOE shall assess the data and calculations of GHG emission reductions achieved by/resulting from the project activity by the application of the selected approved methodology. VVS (Version 02.0) para 245 e The DOE shall determine whether: Appropriate emission factors, IPCC default values and other reference values have been correctly applied.	
Clarification Request	<u>Clarification Request 3.</u> The PP need to clarify the reference / source for the form factor for Maesopsis	
Response by PP	The plantation of Maesopsis eminii failed, and was completely replanted in 2012 with Pinus caribaea. (discrete area T1-17-3-A-ME -07-I -01 = 24.9 ha was replaced by T1-17-3-A-PCH-12-I-01 = 24.9 ha) Thus, no form factor for Maesopsis eminii is provided.	
Assessment by Audit Team Means of verification	Originally, two sample plots were located in strata of the species Maesopsis eminii. The mortality in the strata was high and only few trees survived. The PP replanted the area with Pine (Pinus caribaea). The percentage of Maesopsis eminii is extremely low in this stratum. Further, it was evident during the onsite visit that none of the trees were located inside a sample plots. The changes in the species composition are not documented and justified to be in line with the guideline of EB 66 Annex 24 in Section B.2 of the MR as required by the respective template.	
Second response by PP	The change in species composition outlined above constitutes the type of change specific to afforestation or reforestation project activity that does not require prior approval by the Executive Board according to <i>EB 66 Annex 24 Guidelines on accounting of specified types of changes in A/R CDM project activities from the description in registered project design documents, Version 2</i> ; The change has been reported in Section B.2.6 of the monitoring report.	

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Clarification Requests by verification team		
Second assessment by Audit Team Means of verification	The changes in the species composition have been documented and justified to be in line with the guideline of EB 66 Annex 24. Request closed.	
Changes in the monitoring report or supporting annexes	Section B.2.6 of the MR has been revised respectively.	

Annex 2


Information Reference List

Information Reference List	Verification of CDM Project: Uganda Nile Basin Reforestation Project No.3	Page 1 of 3	 South Asia
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Project title: Uganda Nile Basin Reforestation Project No.5

Interviewed Persons during onsite assessment:

Name	Function	Company
Robert Otuko	Forest Supervisor Inventory and Surveys	NFA
Kissa Sam	GIS Technician	NFA
Gilbert Wathum	Consultant	UNIQUE
Grit Trechel	Consultant	UNIQUE
Marco van der Linde	Carbon Finance Specialist	World Bank
Rukundo Tom	Environment Impact Assessment and Research Specialist	NFA
Abdul Mubiru	Senior Management Account	NFA
Paul Buyerah Musamali	Director Corporate Affairs	NFA
Michael Mugisa	Executive Director	NFA
Edward Ssenyonjo	Remote Sensing Specialist	NFA
Xavier Mugumya	Coordinator, Climate Change Specialist	NFA
Mutyaba Joseph	Cartography Specialist	NFA
Obed Tugumisirize	Plantation Development Specialist	NFA
Tom Khabusi	Boundary Surveys Specialist	NFA
Ogwayi Peter	Plantation Manager Mbarara	NFA
Kabeireho Moses	Sector Manager, Rwoho-Bugamba Plantation	NFA
Kitiyo Benard	Forest Supervisor Rwoho CFR	NFA
Fridah Basemera	GIS/Database Assistant	NFA

Information Reference List	Verification of CDM Project: Uganda Nile Basin Reforestation Project No.3	Page 2 of 3	
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Ref. No.	Author/Editor / Issuer	Title/Type of Document. Publication place	Issuance and/or submission date	Additional Information (Relevance in CDM Context)
1.		Interviewed Persons (see table above)		
2.	PP	Monitoring Report ver. 03	03 Apr 2013	
3.	PP	Registered PDD vers. 06-1	16 Jan 2009	
4.	JACO	Validation Report. Rev # 6	11 Aug 2009	
5.	UNFCCC	UNFCCC webpage: http://cdm.unfccc.int/Projects/DB/JACO1297129985.73/view		
6.	PP	CER calculation files: "SMART - Uganda projects -extended v4.xls"	Apr 2013	
7.	NFA/Unique	GIS files (project boundary)	Oct 2012	
8.	NFA/Unique	GIS files (sample plots)	Oct 2012	
9.	NFA/Unique	CDM Operations Plan: CDM Operations Plan final.pdf	May 2012	
10.	NFA/Unique	Data Analysis and reporting manual: 2011-10-31-NFA-Data-analysis-and-reporting-manual V2.doc	Nov 2011	
11.	NFA/Unique	Monitoring Process: 2011-10-30-NFA-CDM-monitoring process final.docx	Nov 2011	
12.	NFA/Unique	Carbon Revenue Distribution Procedure: 2011-10-31 SOP - Carbon Revenue Distribution Procedure final.docx	May 2012	
13.	NFA/Unique	Field Carbon Inventory and Monitoring Manual	May 2012	
14.	NEMA	Environmental impact statement for the proposed Rwoho and Bugamba Forest management Plan (2006-2016)	Jul 2006	
15.	NFA	Forest Management Plan for UGAMBA AND RWOHO CENTRAL FOREST RESERVES for the period 2006-2026	2006	
16.	Republic of Uganda	Art 237 (2) (b) of the Constitution of Uganda	Dec 2000	
17.	Republic of Uganda	National Forestry and Tree planting Act No 8/2003	2003	
18.	Republic of Uganda	Forests reserves (Declaration) Order 1998, Land Act Cap 227 laws of Uganda (revised 2000)	Dec 2003	

Information Reference List	Verification of CDM Project: Uganda Nile Basin Reforestation Project No.3	Page 3 of 3	 South Asia
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Ref. No.	Author/Editor / Issuer	Title/Type of Document. Publication place	Issuance and/or submission date	Additional Information (Relevance in CDM Context)
19.	IPCC	IPCC GPG	2003	
20.	Alder et al	Yield of Eucalyptus and Caribbean Pine in Uganda	May 2003	
21.	Tüv Süd	Field Sheets	May-June 2012	
22.	PP	CER calculation files: "NBR5-ARAMS0001V5Report_V4"	May 2012	
23.	PP	Leakage Survey Analysis: "2012-09-14_leakage_survey_calculations_project_5"	May 2012	
24.	NEMA	Compliance statement	Nov 2012	
25.	NFA/Unique	QC Report; QC report c-stock inventory.pdf	May 2012	
26.	NFA/Unique	QC Analysis; report c-stock inventory.xlsx	May 2012	
27.	NFA/Unique	QC Analysis; 2012-07-20 QC_analysis.xlsx	Aug 2012	
28.	NFA/Unique	QC Report; 2012-08-08_QC_report.docx	Aug 2012	
29.	NFA/Unique	2012-05-09 precision calculation.xlsx	Apr 2013	
27.	Forest Department, Ministry of Water Lands and Environment	National Biomass Study	Sep 2002	

Annex 3

Appointment Certificates



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CERTIFICATE OF APPOINTMENT

Mr. Hetsch, Sebastian fulfills the requirements of the Certification Body "Environment and Energy" of TÜV SÜD South Asia Pvt Ltd to participate in audits.

Qualification applicable to					
Standard	CDM	GS	VCS	VER	Other
Date	21.11.12				

Qualification as						
Status	Trainee	Validator	Verifier	Team Leader	Technical Reviewer	Technical Expert
Date		21.11.12	21.11.12	21.11.12		14.1

Other qualification						
Country Expertise						
Region	1	2	3	4	5	Other
Date	21.11.12					
Further countries						
Financial Expertise						
Date	21.11.12					

Qualification in technical areas	
Technical Area	Date
14.1_Forestry	21.11.12

This appointment is valid until 28.02.2014 and is bound by internal requirements of the Certification Body "Environment and Energy" of TÜV SÜD South Asia Pvt Ltd.

In case of loss of validity of this certificate as per result of an assessment according to internal procedures or due to any other reason, it will be properly communicated to you.

Your Certificate has the internal reference no. CB-IND-CCP-0019/002.

Date	Signature
01.03.2013	

CERTIFICATE OF APPOINTMENT

Mr. Opitz, Martin fulfills the requirements of the Certification Body "Environment and Energy" of TÜV SÜD South Asia Pvt Ltd to participate in audits.

Qualification applicable to					
Standard	CDM	GS	VCS	VER	Other
Date	21.11.12				

Qualification as						
Status	Trainee	Validator	Verifier	Team Leader	Technical Reviewer	Technical Expert
Date		21.11.12	21.11.12			14.1

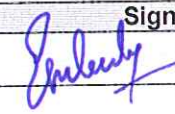
Other qualification						
Country Expertise						
Region	1	2	3	4	5	Other
Date	21.11.12					
Further countries						
Financial Expertise						
Date						

Qualification in technical areas	
Technical Area	Date
14.1_Forestry	21.11.12

This appointment is valid until 28.02.2014 and is bound by internal requirements of the Certification Body "Environment and Energy" of TÜV SÜD South Asia Pvt Ltd.

In case of loss of validity of this certificate as per result of an assessment according to internal procedures or due to any other reason, it will be properly communicated to you.

Your Certificate has the internal reference no. CB-IND-CCP-0033/002.

Date	Signature
01.03.2013	



South Asia

CERTIFICATE OF APPOINTMENT

Mr. Seitz, Martin fulfills the requirements of the Certification Body "Environment and Energy" of TÜV SÜD South Asia Pvt Ltd to participate in audits.

Qualification applicable to					
Standard	CDM	GS	VCS	VER	Other
Date	21.11.12				

Qualification as						
Status	Trainee	Validator	Verifier	Team Leader	Technical Reviewer	Technical Expert
Date		21.11.12	21.11.12			14.1

Other qualification						
Country Expertise						
Region	1	2	3	4	5	Other
Date	21.11.12					
Further countries						
Financial Expertise						
Date						

Qualification in technical areas	
Technical Area	Date
14.1_Forestry	21.11.12

This appointment is valid until 28.02.2014 and is bound by internal requirements of the Certification Body "Environment and Energy" of TÜV SÜD South Asia Pvt Ltd.

In case of loss of validity of this certificate as per result of an assessment according to internal procedures or due to any other reason, it will be properly communicated to you.

Your Certificate has the internal reference no. CB-IND-CCP-0041/002.

Date	Signature
01.03.2013	



South Asia

CERTIFICATE OF APPOINTMENT

Ms. Zhang, Cuiyun (Rachel) fulfills the requirements of the Certification Body "Environment and Energy" of TÜV SÜD South Asia Pvt Ltd to participate in audits.

Qualification applicable to					
Standard	CDM	GS	VCS	VER	Other
Date	21.11.12				

Qualification as						
Status	Trainee	Validator	Verifier	Team Leader	Technical Reviewer	Technical Expert
Date		21.11.12	21.11.12	21.11.12	21.11.12	1.2, 13.1

Other qualification						
Country Expertise						
Region	1	2	3	4	5	Other
Date	21.11.12				21.11.12	
Further countries						
Financial Expertise						
Date						

Qualification in technical areas	
Technical Area	Date
1.2_Energy generation from renewable energy source	21.11.12
13.1_Waste handling and disposal	21.11.12

This appointment is valid until 28.02.2014 and is bound by internal requirements of the Certification Body "Environment and Energy" of TÜV SÜD South Asia Pvt Ltd.

In case of loss of validity of this certificate as per result of an assessment according to internal procedures or due to any other reason, it will be properly communicated to you.

Your Certificate has the internal reference no. CB-IND-CCP-0056/002

Date	Signature
01.03.2013	



South Asia

CERTIFICATE OF APPOINTMENT

Mr. Chang Olivas, Juan fulfills the requirements of the Certification Body "Environment and Energy" of TÜV SÜD South Asia Pvt Ltd to participate in audits.

Qualification applicable to					
Standard	CDM	GS	VCS	VER	Other
Date	21.11.12				

Qualification as						
Status	Trainee	Validator	Verifier	Team Leader	Technical Reviewer	Technical Expert
Date		21.11.12	21.11.12			14.1

Other qualification						
Country Expertise						
Region	1	2	3	4	5	Other
Date	21.11.12	21.11.12				
Further countries						
Financial Expertise						
Date						

Qualification in technical areas	
Technical Area	Date
14.1_Forestry	21.11.12

This appointment is valid until 28.02.2014 and is bound by internal requirements of the Certification Body "Environment and Energy" of TÜV SÜD South Asia Pvt Ltd.

In case of loss of validity of this certificate as per result of an assessment according to internal procedures or due to any other reason, it will be properly communicated to you.

Your Certificate has the internal reference no. CB-IND-CCP-0010/002.

Date	Signature
01.03.2013	