The International Small Group and Tree Planting Program, Kenya, VCS-006

(Project ID: VCSPD899)

JACO CDM

Document Prepared By JACO CDM

Project Title	The International Small Group and Tree Planting Program, Kenya, VCS-006
Version	Version 2
Report ID	GR14W0007D

Report Title	VCS Verification Report: The International Small Group and Tree Planting Program, Kenya, VCS-006, Verification 02
Client	Clean Air Action Corporation P.O. Box 4607 Tulsa OK, USA 74159 Telephone 918-747-8749 CharlieWilliams@CleanAirAction.com Tist.org
Pages	35 pages + appendix 56 pages
Date of Issue	24-September-2014
Prepared By	JACO CDM
Contact	Office at: 2-2-19 AKASAKA, MINATO-KU, TOKYO, 107-0052 JAPAN Phone: +81-3-5572-1753, Fax: +81-3-5572-1730
Approved By	Akihide MADENOKOJI (Lead Auditor, General Manager of Assessment Division of JACO CDM)
Work Carried Out By	Teruo FUKUDA (Lead Auditor, Verification team leader), Takahiro YUGUCHI (Lead Auditor, Verification team member)

Summary:

JACO CDM performed the 2nd verification of the VCS project "The International Small Group and Tree Planting Program, Kenya, VCS-006". As stated in the PD, the project is combining reforestation and sustainable development in Kenya carried out by subsistence farmers. The International Small Group and Tree Planting Program (TIST) supports the reforestation and biodiversity efforts of subsistence farmers. Carbon credits sales generate participant income and provide project funding to address agricultural, HIV/AIDS, nutritional and fuel challenges.

KE PD-VCS-006 is a grouped AFOLU project, eligible under the Afforestation, Reforestation and Revegetation (ARR) category. It is a subset of the TIST project in Kenya and initially applied to 3,961 of the Small Groups, 29,222 members, 18,099 project areas and 7,419.2 ha. The PD was validated and first verified on 27 September 2012 by Environmental Services, Inc. (ESI). At that time all of the Project Areas were established and the monitoring systems were in place.

The management of TIST is responsible for the preparation of the GHG removals data. The reported GHG removals of the Project on the basis set out within the Monitoring Plan indicated in the registered PD version 02 dated 24 August 2012, comply with the methodology AR-AMS0001/ version 06. The development and maintenance of records and reporting procedures in accordance with that plan, including the calculation and determination of GHG removals from the project is the responsibility of the Project Management Unit.

The verification criteria followed the guidance documents provided by VCS and included the following: VCS Program Guide (01 May 2012, v3.3), VCS Standard (01 Feb 2012, v3.2), Program Definitions (01 May 2012, v3.3), Agriculture, Forestry and Other Land Use (AFOLU) Requirements (01 Feb 2012, v3.2), AFOLU Non-Permanence Risk Tool (01 Feb 2012, v3.1), VCS Validation and Verification Manual (8 October 2013, v3.1), CDM methodology AR-AMS0001 Version 06 and the registered Grouped Project PD.

The verifier assesses that the project is implemented and operated as planned and described in the validated and registered PD. Established forest being essential for GHG removals is operated reliably and is managed appropriately. The monitoring system is in place and the project is resulting in GHG removals.

The verifier assesses that the monitoring was done in accordance the monitoring plan except a deviation. The deviation does not result in a negative performance of the monitoring of the project and it is acceptable as per VCS VVM § 3.2.7. The GHG removals in the Monitoring Report version 07 dated 15 September 2014 are calculated without material misstatements.

We pointed out 1 CAR, 11 CLs and 3 FARs to the monitoring report and 8 CLs and 1 FAR to the Non-Permanence Risk Report. Responses to these findings were satisfactorily provided by the project participants and the original PD and report were revised.

Our opinion relates to the project's GHG removals and resulting GHG removals reported and related to the valid and registered project baseline and monitoring, and its associated documents. Based on the information we have seen and evaluated, we confirm the following statement. :

<u>Reporting period</u>: From 30 June 2012 to 31 December 2013

<u>Verified removals in the above reporting period</u>:

Gross Reductions:	**154,225 tCO_2 equivalents**
Buffer:	**15,423 tCO_2 equivalents**
Issuance:	**138,802 tCO_2 equivalents**

Abbreviation

AFOLU	Agriculture, Forestry and Other Land Use
AR	Afforestation and Reforestation
ARR	Afforestation, Reforestation and Revegetation
CAAC	Clean Air Action Corporation
CAR	Corrective Action Request
CCBA	Climate, Community and Biodiversity Standard
CDM	Clean Development Mechanism
CL	Clarification Request
DBH	Diameter of tree at breast height
ESI	Environmental Services Inc. (VCS VVB)
FAR	Forward Action Request
GHG	Green House Gas
GPS	Global Positioning System
PA	Project area
PD	Project Description
PP	Project Proponent
TIST	The International Small Group and Tree Planting Program
VCS	Verified Carbon Standard
VCSA	Verified Carbon Standard Association
VCU	Voluntary Carbon Unit
VVB	Validation and verification Body
VVM	Validation and Verification Manual

Table of Contents

1	INTRODUCTION	5
1.1	Objective	5
1.2	Scope and Criteria	5
1.3	Level of Assurance	5
1.4	Summary Description of the project	5
2	VERIFICATION PROCESS	6
2.1	Method and Criteria	6
2.2	Document Review	7
2.3	Interviews	8
2.4	Site Inspections	8
2.5	Resolution of Corrective and Forward Action Requests	9
2.6	Internal Quality Control	9
3	VALIDATION FINDINGS	9
3.1	Participation under other GHG Programs	9
3.2	Methodology Deviations	9
3.3	Project Description Deviations	9
3.4	Grouped Project	11
4	VERIFICATION FINDINGS	12
4.1	Project Implementation Status	12
4.2	Completeness of Monitoring	16
4.3	Accuracy of GHG Emission Reduction and Removal Calculations	20
4.4	Quality of Evidence to Determine GHG Emission Reduction and Removals	22
4.5	Non-Permanence Risk Analysis	24
5	VERIFICATION CONCLUSION	29
6	REFERENCES	31

APPENDIX 1	VCS Verification Checklist	A 1 -38
APPENDIX 2	VCS Non-Permanence Risk Assessment Checklist	A 39 – 56

1. INTRODUCTION

1.1 Objective

JACO CDM was contracted by Clean Air Action Corporation (CAAC) on the second verification of the VCS Project ID 899 "The International Small Group and Tree Planting Program, Kenya, VCS-006" (PD Version 02 dated 24 August 2012).
The objective of the verification work is to comply with the requirements of VCS standard.
This assessment shall:
(a) Ensure that the project activity has been implemented and operated as per the registered PD and that all physical features (technology, project equipment, and monitoring and metering equipment) of the project are in place;
(b) Ensure that the monitoring report and other supporting documents provided are complete in accordance with the VCS standard, VCS AFOLU requirements and relevant methodologies for requests for issuance of VCUs.
The VCSA provided a standardized format for monitoring report to improve consistency in reporting of the implementation and monitoring of the project activity by project participants;
(c) Ensure that actual monitoring systems and procedures comply with the monitoring systems and procedures described in the monitoring plan and the approved methodology;
(d) Evaluate the data recorded and stored as per the monitoring methodology.

1.2 Scope and Criteria

Verification scope is defined as an independent and objective review and ex post determination by the Validation and Verification body of the monitored reduction in GHG emissions. The verification team has been provided with a Monitoring Report Version 01 dated 21 January, 2014, covering the monitoring period 30 June 2012 to 31 December 2013 which has been made publicly available on the TIST web site. (/1-1/)
The verification is based on validated project description including baseline and the Monitoring Plan. These documents are reviewed against VCS standard, VCS AFOLU requirements, relevant methodologies and associated interpretations. JACO CDM, based on the recommendations in the VCS Validation and Verification Manual, employs a risk-based approach in the verification, focusing on the identification of significant risks and reliability of project monitoring and generation of VCUs.

1.3 Level of Assurance

The verification report expresses a conclusion with a reasonable level of assurance about whether the reported net anthropogenic GHG removals data is free from material misstatement. JACO CDM applied a materiality threshold of 5% with respect to omission or misstatement concerning reported quantities as per VCS standard 5.3.1.4).

1.4 Summary Description of the project

The International Small Group and Tree Planting Program (TIST) empowers Small Groups of subsistence farmers in Kenya, Uganda, India and Tanzania to combat the devastating effects of deforestation, poverty and drought. Combining sustainable development with carbon sequestration, TIST supports the reforestation and biodiversity efforts of over 65,000 subsistence farmers. The farmers plant trees on their land and retain ownership of the trees and their products. They receive training from TIST and a share of the carbon revenues from CAAC.
Carbon credit sales generate participant income and provide project funding to address agricultural, HIV/AIDS, nutritional and fuel challenges. As TIST expands to more groups and more areas, it ensures more trees, more biodiversity, more climate change benefit and more income for more people.

Since its inception in 1999, TIST participants organized into over 9,000 TIST Small Groups have planted over 11 million trees on their own and community lands. GHG sequestration is creating a long-term income stream and developing sustainable environments and livelihoods. TIST in Kenya began in 2004 and has grown to nearly 55,000 TIST participants in over 7,000 Small Groups.

KE PD-VCS-006 is a grouped AFOLU project, eligible under the Afforestation, Reforestation and Revegetation (ARR) category. It is a subset of the TIST project in Kenya and initially applied to 3,961 of the Small Groups, 29,222 members, 18,099 project areas and 7,419.2 ha. The PD was validated and first verified on 27 September 2012 by Environmental Services, Inc. (ESI). At that time all of the Project Areas were established and the monitoring systems were in place. The following is the Verification history, including what has been determined for the second monitoring report.

Table 1: GHG removals

Verification Number	Date	Monitoring Period	Gross Reductions	Buffer	Issuance
This Report	25-Jul-14	01-Jan-04 to 31-Dec-13	342,874	34,287	308,586
Less Verif 01	27-Sep-12	01-Jan-04 to 29-Jun-12	188,649	18,865	169,784
Net Verif 02	25-Jul-14	30-Jun-12 to 31-Dec-13	154,225	15,423	138,802

2 VERIFICATION PROCESS

2.1 Method and Criteria

The proposed assessment aims at being a risk based approach and is based on the methodology developed in the VCS Validation and Verification Manual (http://www.v-c-s.org/sites/v-c-s.org/files/VCS%20Validation%20Verification%20Manual%2C%20v3.1_1.pdf) an initiative for all validators/ verifiers, who aims to harmonize the approach, and quality of all such assessments.

In order to ensure transparency, a verification checklist was customized for the project. The checklist shows, in a transparent manner, criteria (requirements), means of verification and the results. The verification checklist serves the following purposes:

- It organizes, details and clarifies the requirements that a VCS project is expected to meet;
- It ensures a transparent verification process where the verifier will document how a particular requirement has been proved and the result of verification.

The verification checklist consists of 2 tables. The different columns in these tables are described in Figure 1 below. The completed checklist is enclosed in Appendix 1 to this report.

Figure 1. Verification Checklist Tables

Table 1: Periodic Verification Checklist			
OBJECTIVE	Ref.	COMMENTS	Concl. (incl. FARs/CARs)
The requirements the project must meet	Gives reference to the sources of evidences for the comments and conclusions.	Description of circumstances and further commendation to the conclusion.	This is either acceptable based on evidence provided **(OK)**, or a **Corrective Action Request (CAR)** of risk or non-compliance with stated requirements. The corrective action requests are numbered and presented to the client in the Verification report. **Clarification Request (CL)** is used when the verifier has identified a need for further

			clarification. The Periodic Verification has additional **Forward Action Requests (FAR)**. FAR indicates essential risks for further periodic verifications.

Periodic Verification Checklist Table 2: Resolution of Corrective Action and Forward Action Requests			
Draft report clarifications and corrective action requests by verifier	Ref. to checklist question at table 1 of periodic verification	Summary of project owner response	Verifier conclusion
Detailed FAR, CL and/or CAR pointed at previous tables.	Item at the tables where FAR/CL/CAR were found.	Answer of the project owner	Analysis and conclusion of the verifier

The verifier visited 138 PAs sampled from 18,099 PAs. Visited PAs are listed in section 6 of this report.

The sampling of visiting PAs was decided as follows.

(1) The number of visiting sites was calculated applying JACO CDM's practice which is based on the "IAF Mandatory Document for the Certification of Multiple Sites Based on Sampling"[1]. Applying section 5.2 of this IAF document, minimum sample size of the project with 18,099 PAs are calculated as √18,099=134.5.

(2) The PAs are distributed in wide areas surrounding the Mount Kenya and they are divided into approx. 10 groups.

- JACO CDM checked the visiting PA numbers roughly taking into account the size of these groups (ha).
- Among each group, JACO CDM selected the visiting project areas using the monitored data spreadsheet and taking into account the rank of PAs such as, Rank in tree numbers, Rank in PA size, Rank in GHG removals in the PA, Rank in tree density and Rank in GHG removal per ha of the PA.
- In selecting the PAs, irregular points are also checked such as extreme tree density and GHG removal/ha.
- Draft visiting PAs are proposed to PP.

(3) Discussion with PP about the visiting PAs. The visiting plots are decided taking into account the accessibility and present situation. In some cases, the PAs are found inactive before visiting the PAs and alternative visiting PAs are proposed by PP and finalized.

As a result, the visiting PAs are selected. The total number is 138 including the 3 inactive PAs which were actually visited.

2.2 Document Review

The monitoring report submitted by the client and additional background documents related to the project performance was reviewed. A complete list of all documents reviewed is shown in References (chapter 6 of this report).

[1] :http://www.iaf.nu/upFiles/IAFMD12007_Certification_of_Multiple_Sites_Issue1v3Pub5.pdf

2.3 Interviews

Verification team, Teruo FUKUDA and Takahiro YUGUCHI visited the project site of "TIST Program in Kenya VCS-006" from 17 to 25 February, 2014. Interviewed organizations and topics are summarized in Table 1 below. The list of interviewed persons is detailed in section 6.

Table 2 Interviewed Organization and Topics at Verification

Interviewed organizations/ visited sites	**Interview topics/ Inspected items**
CAAC, TIST Quantifiers	Monitoring plan Monitoring work - GPS measurement, - Sample plot measurement - DBH and Height measurement Monitoring Report and relevant documents Project area calculation using GIS and Heron formula Allometry/volume equation and sample tree measurement GHG removals calculation and reporting procedures QA/QC activity including cross-checking of data Environment and socio-economic impacts Stakeholders comments Compliance with National laws and regulations Monitoring equipment Record archiving condition
TIST members	Involvement to the project Plantation activity Impact to life Benefits of the project Negative impact, if any

2.4 Site Inspections

Site inspections were performed to verify existence of sites, confirm boundaries, corroborate baseline, and confirm tree age, species and density of plantings. Site inspections were also conducted to assess the consistency of the quantifiers sampling technique with the PD. When possible, on-site interviews were conducted with landowners to confirm ownership, substantiate their support for the project and assess their comprehension of project requirements. GPS was utilized to confirm project location and boundaries. Inventory data (both digital and hard copy) were utilized to confirm the age, species, and density of plantings. Approximately 0.8% of PAs[2] and 1.6% of the project trees (trees in the visited PAs) were sampled in the field verification.

Table 3: Site inspection item

No.	Item	Application
1	Boundary check - Location check by GPS (1 representing point) - Border conditions	All visited PAs
2	Tree species & age	All visited PAs

[2] Including 3 PAs which were found inactive after selection as the visiting candidates. (ref. Section 6 "Reference")

3	Site and tree growth condition	All visited PAs
4	Planting density	All visited PAs (part of PAs)
5	Number of trees	Selected PA block
6	Check of tree circumference	Selected PA block

2.5 Resolution of Corrective and Forward Action Requests

The objective of this phase of the verification was to resolve the requests for corrective actions and any other outstanding issues which needed to be clarified for JACO CDM's positive conclusion on the GHG emission reduction calculation.

Findings established during the past verifications can either be seen as a non-fulfillment of criteria ensuring the proper implementation of a project or where a risk to deliver high quality emission reductions is identified.

Corrective Action Requests (CAR) is raised, where:

(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.

Clarification Request (CL) is raised, where:

(a) If information is insufficient or not clear enough to determine whether the applicable requirements have been met.

Forward Action Requests (FAR) are raised, where:

(a) The monitoring and reporting require attention and/or adjustment for the next verification period.

To guarantee the transparency of the verification process, the concerns raised and responses that have been given are summarized in chapter 3 below and documented in more detail in the verification checklist in Appendix 1.

JACO CDM pointed out;
- 1 CAR, 11 CLs and 3 FARs to the monitoring report.
- 8 CLs and 1 FAR to the Non-Permanence Risk Report for TIST Program in Kenya VCS-006, verification 02.
- The requests regarding the Non-Permanence Risk Report are numbered with R and differentiated from the ones for the Monitoring Report.

2.6 Internal Quality Control

As final step of verification, the final documentation including the verification report and the checklist underwent an internal quality control by JACO CDM's Internal Technical Review.

3. VALIDATION FINDINGS

3.1 Participation under Other GHG Programs

It was confirmed that the project does not participate in any other GHG programs which issue GHG credits.

Clarification Request 2

Participation under other forms of environmental credit and GHG programs is to be confirmed.

Response

The Project is certified under Climate, Community and Biodiversity Standard (CCBA) as "TIST Program in Kenya CCB-003." CCBA does not issue GhG credits. The Project does not participate in any other forms of environmental credits or GHG programs.

Conclusion

It was confirmed that the project does not participate in any other GHG programs which issue GHG credits.

3.2 Methodology Deviations

The PD and Monitoring Plan meet all of the requirements of the methodology and do not deviate from the baseline scenario, additionality determination or inclusion of project GHG sources, sinks and reservoirs.

3.3 Project Description Deviations

It is stated in the monitoring plan of the registered PD that the operational processes for monitoring the actual GHG removal by the sinks are for TIST Quantifiers to visit each grove once per year and, at minimum, once every five years to count trees and collect circumference, GPS and other data.
However, TIST Quantifiers are not visiting each PA once per year. Instead, the TIST program in Kenya was modified and centered on a “Cluster” administrative structure. The TIST Quantifiers now visit each cluster once per year to correct inaccurate data and errors.
Considering that there are approx. 18,000 PAs, the modification is considered practical and appropriate. (**CAR 1, FAR 3**)
The verifier confirmed from the interviews with CAAC & TIST members and on-site visit that the monitoring are conducted in accordance with the registered monitoring plan except above deviation.

Corrective Action Request 1

It was found that TIST quantifiers are not always visiting each grove annually. This is a deviation from the registered monitoring plan.
It is to be described and to be justified in the monitoring report in accordance with the VCS Standard 3.6.1 (p13) and VCS Guidance VVM (Validation and Verification manual) § 3.2.7 (p23)

Response

The deviation does not impact the applicability of the methodology, additionality or the appropriateness of the baseline scenario, and the project remains in compliance with the applied methodology. This is not an additionality issue or a baseline issue. The only date requirement in the methodology is to monitor within five years. There is no requirement to visit a PA any more than every five years. As shown in the statistics table of the verification data spreadsheet, the targeted precision level is within the 10% of the 95% confidence level.
The following has been added to Section 2.2.2 of the Monitoring Report:
There is a deviation from the PD. In the PD we stated "the operational processes for monitoring the actual GhG removal by the sinks are for TIST Quantifiers to visit each grove once per year and, at minimum, once every five years to count trees and collect circumference, GPS and other data" (Section 4.1.3). TIST Quantifiers are not visiting each PA (grove) once per year.
While counting trees and collecting circumference every five years is a requirement of the methodology (and followed by the Project), visiting every PA every year was simply an operational goal. Not making annual visits does not impact the applicability of the methodology,

additionality or the appropriateness of the baseline scenario. That it was an operational goal was clearly stated in Section 4.3.5, "TIST's internal goal is to quantify each project area once per year."
There are 18,000 PAs in this PD and over 50,000 in TIST Kenya. Unfortunately, visiting every PA every year proved to be too costly to maintain. Instead the entire TIST program in Kenya was modified and centered on a "Cluster" administrative structure. A Cluster is a group of Small Groups within walking distance that has their own local leadership. It is where Small Groups receive training, voucher payment, share "best practices," share news and newsletters and discuss quantification issues. A Quantifier is assigned to each Cluster and their scope has been broadened to include training and assisting Cluster leaders as they rotate into new positions. The Cluster provides an alternate method of gathering intelligence about what is happening at the Small Group level and to individual groves. This allows us to get the same information that a Quantifier might get on a non-quantification visit (i.e. the annual visit) by asking members and their neighbours about changes, at a more sustainable cost. The ideal schedule for Cluster meetings is one per month, increasing the frequency of opportunity to learn about changes at the grove level.

Conclusion

It was confirmed that the monitoring frequency is defined as 5 years in the applied methodology AR-AMS0001 ver. 06 and in the registered monitoring plan.
The monitoring (number of trees in each PA, DBH measurement and CO2 calculation) in the 2nd monitoring period is conducted within 5 years in accordance with the monitoring plan.
It was confirmed from the interviews with quantifiers during on-site visit that the purpose of quantifiers' visiting each groves per year is to assist small groups in training, share "best practices," share news and newsletters and discuss quantification issues.
Considering the cost and man-power availability, it is considered practical and appropriate to modify quantifier's visiting each grove once per year to a "Cluster" administrative structure.
The modification does not impact the applicability of the methodology, additionality and the baseline.
Also, the modification does not result in a negative performance of the monitoring of the project and it is acceptable as per VCS VVM § 3.2.7 (p23).

Forward Action request 3

Each Cluster meeting is to keep updated information about what is happening at the Small Group level and to individual groves. Such information includes PAs situation of removal or pending.

Response

The activity of the cluster meetings will be improved so that TIST management keep updated information about what is happening at the Small Group level and individual groves including information about PAs status of removal or pending.

Conclusion

The measures are appropriate and it is to be reviewed in subsequent verifications.

3.4 Grouped Project

There have been no new project instances to this groped project since project start.

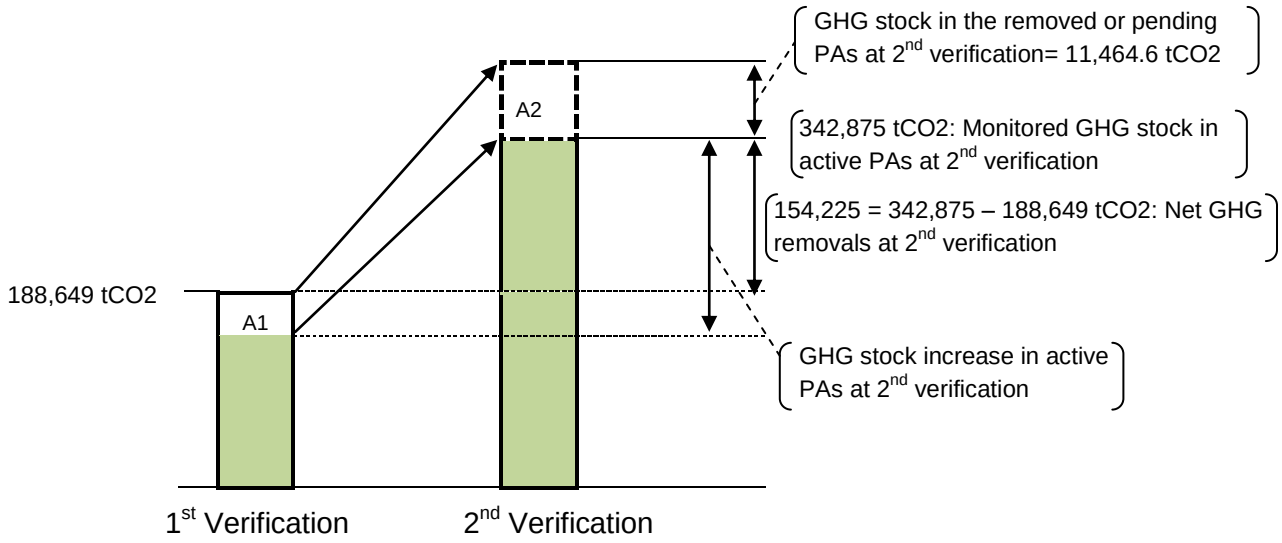
No project activity instance exceeds one percent of the capacity limit and therefore the project complies with the requirement of grouped project.

4. VERIFICATION FINDINGS

4.1 Project Implementation Status

The project is implemented in accordance with the registered PD and the validation report except for some PAs status of removal or pending stated below.
No new incidences have been added. **(CL 1)**
It was confirmed from the interviews with CAAC & TIST and review of spreadsheet /2/ that 173 Project Areas (1.66% of the carbon volumes) have been removed from the PD since validation and the first verification. In addition, 1,005 PAs (1.68% of the carbon volumes) have been put in a "Pending" category. The status of each individual PA is indicated in column AO of the "PA Summary" worksheet, verification data spreadsheet /2-6/. The carbon of all removed or pending PAs have been conservatively set to zero.
The present status of removed PA and pending PAs are discussed and described in CL 3 below. The description was added to the revised monitoring report version 07 section 2.1. /2-6/ **(CL 3)**
Total carbon of the 173 removed PAs and 1005 pending PAs is calculated as 5,706.8 + 5,757.8 = 11,464.6 tCO_2 and 3.34% of the carbon stock 342,874 tCO_2. /2-6/ The value is less than 5% (materiality threshold value applicable to the project).
The GHG removals of each project activity instance are limited by the limit of the applied methodology and capacity limit for group project of VCS standard §3.4.8. /22/ The verifier confirmed by the spreadsheet /2-6/ that each project activity instance does not exceed the limit which is described in the registered PD as 4,800 tCO_2. /2-6/ **(CL 2)**
Carbon stocks at 2nd verification is 342,874 tCO_2 and GHG removals at 2nd verification is 154,225 tCO_2 as indicated in table 1 of section 1. 4.

Fig.2 illustrates the carbon stock at the 1st verification and the 2nd verification.



A1: GHG removals which were calculated as part of the GHG stock at the 1st verification in the PAs which were removed or pending at 2nd verification

A2: GHG removals at the 2nd verification in the PAs which were removed or pending at 2nd verification

Fig.2: Carbon stock at the 1st verification and the 2nd verification

As seen in the Fig.2, GHG stock in the PAs which were removed or pending at the 2nd verification are not included in the net GHG removals at 2nd verification.

Also, A1 (GHG removals which were calculated as part of the GHG stock at the 1st verification in the PAs which were removed or pending at 2nd verification) is cancelled by the GHG stock increase in active PAs at 2nd verification.

Clarification Request 1

Relevant tools and other methodology(ies) applied to the project activity are to be confirmed.

Response

The monitoring methodology used by the Project is CDM AR-AMS0001 Version 06: "Simplified baseline and monitoring methodologies for small-scale afforestation and reforestation project activities under the clean development mechanism implemented on grasslands or croplands" and the associated tools. AFOLU Non-Permanence Risk Tool version 3.2 was also used. No other tools or methodologies were used for this verification report.

Conclusion

The applied monitoring methodology CDM AR-AMS0001 Version 06 and associated CDM tools are appropriate. VCS AFOLU Non-Permanence Risk Tool version 3.2 is also appropriate.

Clarification Request 2:

(1) The result of the maximum GHG removals/year of each project activity instance is to be confirmed.

(2) Participation under other forms of environmental credit and GHG programs is to be confirmed.

Response

(1) It has been confirmed in the verification data spreadsheet that all of the existing instances remain below the 1% threshold for eligibility. It has been confirmed in the verification data spreadsheet that all of the existing instances remain below the 1% threshold for eligibility.

(2) The Project is certified under Climate, Community and Biodiversity Standard (CCBA) as "TIST Program in Kenya CCB-003." CCBA does not issue GhG credits. The Project does not participate in any other forms of environmental credits or GHG programs.

Conclusion

(1) It was confirmed by the spreadsheet that all of the existing project instances remain below 1% threshold for eligibility (4,800 tCO_2/year). /2-6/

(2) It was confirmed that the project does not participate in any other GHG programs which issue GHG credits.

Clarification Request 3

(1) Please inform about the present status of inactive PAs and how to address to these PAs.
(2) What is the reasons of the removals these PAs.
(3) Whether the changes would have been known prior to registration and how the changes would impact the overall operation/ ability of the project activity to deliver emission reductions as stated in the PD,
(4) The impact to the conclusions of validation report of the registered PD (Additionality, Scale, Applicability of methodology, compliance of the monitoring plan, level of accuracy of the monitoring),
(5) The impact to the non-permanence risk due to inactive PAs is to be explained.
(6) It is to be confirmed about the special events which might impact the applicability of the methodology during the monitoring period.

Response

(1) The status of each individual PA, i.e. whether it is active or inactive, is addressed in column AO of the "PA Summary" worksheet, verification data spreadsheet. If the column indicates something other than active, they are inactive. All carbon of each inactive PAs have been set to zero. This means that remaining PAs must first make up the carbon loss before any new credits can be issued.
(2) Much of the following has been added to Section 2.1 of the monitoring report.
There are several reasons for the removal of the PA and each is listed in column AO of the "PA Summary" worksheet, verification data spreadsheet. First, however, you will note that each category description is preceded by a "treatment" code. The codes are as follows:

1. Active: These are PAs that are active in TIST and have valid tree counts and calculated carbon volumes. Only Active PAs contribute to the carbon volume of this verification.
2. Pending: These are PAs that need to be reviewed to determine if they will continue as TIST PAs or need a current quantification. They will still be listed on the PA Summary sheet to acknowledge they are currently part of the PD but for this verification their trees and carbon are zero. Once their circumstances have been reviewed, they will either be removed or listed as active. If they are listed as active, we will re-establish the tree count and carbon in subsequent verifications.
3. Removed: These PA are being permanently removed from the program. They will still be listed on the PA Summary sheet to acknowledge they were part of the PD but their trees and carbon are zero. They will not participate in the future.

There are several reasons for the removal and pending of the PA as listed below.

Table 1: categories of Pending and removed PA

Pending	a. Baseline Error:
	b. Change in ownership
	c. Fire
	d. Group Quit.
	e. Grove inaccessible
	f. Member quit
	g. Merged with another grove
	h. Needs requantification
	i. Never planted
	j. Ownership dispute
	k. Pest
Remove	l. Baseline Error
	m. Change in ownership
	n. Double registration
	o. Group Quit
	p. Harvest
	q. Member quit
	r. Nursery, not a tree grove
	s. Overlap
	t. Registration Error
	u. Trees Removed
	v. Unauthorized registration

Detail explanation is available in the checklist response of CL 3 (Appendix 1)

(3) The nature of TIST relies on the participation of tens of thousands of subsistence farmers. Since they own the land that make up a PAs and own the trees that sequester the carbon, their

membership in TIST is critical. TIST has numerous levels of training before, during and after the acceptance for membership to try and make sure that if members join, they will stay for the 30 year life of the Project. In addition we have them sign a legally binding contract that commits them to 30 year. In spite of these actions, some members leave the program, some do not follow the rules and some fall victim of unexpected circumstances. While the number PAs that might be affected and the impact on future carbon unknown, some amount of attrition was expected from the beginning. TIST was designed to use the beneficial actions of the masses to dilute the negative actions of the few.
The impact of the inactive PAs is a reduction in total carbon emission reductions available at each verification. However, just as with this verification, we expect the total carbon in the PA to show a net increase. Specifically, at the end of the first verification we had sequestered 188,649 tonnes. With this verification, after zeroing our all the inactive groves, our total had increase 154,225 tonnes to 342,874 total tonnes in 18 months. The loss of the PAs reported does not interfere with the overall operation or ability of the project activity to deliver emission reductions as stated in the PD.
(4) We do not believe the inactive PAs affect any of the conclusions of the validation report. There is no affect to additionality, scale methodology or compliance with the monitoring plan. The level of accuracy is not affected because we set the carbon in the inactive PAs to zero and the results of the accuracy calculation show the Project is well within the requirements of the methodology.
(5) Non-permanence is not affected by the loss of the PAs. Despite the loss, we showed a significant net gain in total carbon sequester in the 18 months since the last verification. The growth rate of the trees and increase in stem count in the remaining PAs has vastly out-paced the loss caused by the inactive PAs.

(6) The applicability of the methodology is not affected. The methodology requires us to calculate the existing carbon at the time of verification, i.e. calculate the "carbon stocks within the project boundary achieved by the project activity at time *t"*. By zeroing out the trees from the inactive PA's we only calculate the carbon existing at the end of the verification period. All active PAs have been quantified in accordance with the methodology and PD. The few PAs that were in violation of the PD (wrong area baselined, overlaps, double registration, etc.), have been removed as inactive PAs.

Conclusion
(1) It was confirmed that the status of each PA is addressed in column AO of the PA Summary worksheet and all carbon of each PA which is other than active has been set to zero. According to the spreadsheet of the monitoring report for 2nd verification version 1 dated 21/01/2014, carbon of 604 PAs among original 18,099 PAs have been removed and set to zero. Further, during the 2nd on-site visit and later, TIST and their quantifiers reviewed the status of each PA precisely and finally carbon of 574 PAs have been additionally set to zero, that is, carbon of total 1178 PAs (604 + 574 = 1178) have been conservatively set to zero.
(2) The reasons of Pending and Removed are explained in detail in the revised monitoring report ver. 7. /1-7/ The status and category of each PA is clearly indicated in the spreadsheet. /2-6/
It is confirmed from the assessment and interviews from PP and quantifiers that the explanation is covering all the situations happening and it is appropriate.
(3) It was confirmed by the spreadsheet that total carbon of the removed PAs and pending PAs is calculated as 5,706.8 + 5,757.8 = 11,464.6 tCO_2 and 3.34% of the carbon stock at the 2nd verification 342,874 tCO_2. /2-6/
The value is less than 5% (materiality threshold value specified in the VCS Standard /22/).

(4) The removed and pending PAs are made clear as stated in the revised monitoring report. These do not affect the conclusions of the validation report. The carbon of the removed and pending PAs are conservatively set to zero, hence the accuracy is not affected.
(5) It is confirmed from the result of the 2nd monitoring report and its spreadsheet that the carbon stock in the 2nd monitoring period increased significantly (154,225 tCO_2 increase since 1st verification) and the impact of the loss of the PAs to the non-permanence risk is less than 3.34% of the total carbon stock as indicated in (3) above. /1-7/, /2-6/
(6) It is confirmed by the spreadsheet that only the carbon existing at the end of the verification period is calculated and it is conservative.

4.2. Completeness of Monitoring

The implemented monitoring procedures are in line with the requirements of the monitoring plan of the registered PD and applied methodology AR-AMS0001 version 06 except the deviations stated in section 3.3 and CAR 1.

The operational processes for monitoring the actual GHG removal by the sinks are for Quantifiers to visit each grove, at minimum, once every five years, to count trees and collect circumference, GPS, and other data.

The verifier confirmed that the monitoring system employed by CAAC and TIST (handheld computer, internet data collection system and data analysis) is well utilized and appropriate to handle big data of the project and provide reliable results. (CL 4, CL 5)

The verifier confirmed from the interviews with members of CAAC & TIST quantifiers and demonstration of the monitoring that the monitoring of project areas and trees are in accordance with the registered monitoring plan as indicated below.

[location and area measurement of PA]
The verifier confirmed from the comparison of the GPS measurement and the KML file /4/ for the visited PAs that the project boundaries are in compliance with the ones indicated by the PD. **(CL 4)**

[Tree monitoring]
Sampling method of selecting 20 trees for DBH measurement is conducted in accordance with the Quantifiers monitoring manual./12/ It was explained and demonstrated at site including avoiding double counting.
Counting of trees was demonstrated at site visit. The verifier also counted the number of trees by sampling and compared with the monitored data. It was confirmed that the monitoring is appropriate and reliable.
Circumference measurement was also demonstrated by sampling and it was confirmed that the monitoring is appropriate and reliable.
Age of tree is estimated based on the Quantifies record and farmers memory. **(CL 5)**

There is a deviation from the description of the monitoring plan about the quantifiers visit each grove once per year. The deviation is resolved as described in 3.3 (CAR 1) above.

<u>Clarification Request 4</u>
Please explain;

a) the area calculation using GPS,
b) Preventing the double counting of the same PA,
c) Preventing the counting of different PA,

d) Preventing the counting of trees outside of the PA.
(∵ It was observed that the boundaries are not marked at the site. Double counting such as above might happen if Quantifier changed.)

Response

a) When the GPS track is synchronized to the server, it goes through our "dump sync" script. There is a call in the script that calculates the area. The area calculation is based on a java tool available on the internet: http://www.mathopenref.com/coordpolygonarea2.html

b) For the validation and first verification we relied on looking at the KML files for overlaps. We found some errors and developed a desk audit tool to identify overlapping groves in the grove boundary data set. The first part of it is a bounding box algorithm that creates a rectangle using the max and min latitudes and longitudes. This identifies the potential of an overlap.

Whenever a new quantification is uploaded, it is the job of the desk auditor to review it and one of the steps is to look at the overlaps. When overlaps are found, the desk auditor talks to the Quantifier to determine how those should be handled. As noted in the verification data spreadsheet, PA Summary worksheet, column AO, some of the PAs have been marked inactive because they we identified as overlaps. With 50,000 groves in Kenya and 60,000 world-wide this is a slow process and will continue as part of our internal quality control procedure.
c) During the verification, an instance was found where the track of the PA did not match with the area where the trees were planted. Investigation showed that a TIST member owned both areas and expected to plant in the area tracked. Subsequently, he changed his mind and planted in a different area. When the Quantifier arrived to count the trees, he/she was directed to another location and did not realize they were not in the tracked area.
We are addressing this type of error with a double tracking system. When a Quantifier goes at a PA, they are to take a secondary track.

Detail explanation for above (b) & (c) is available in Appendix 1 “Checklist”.

d) Preventing the counting of trees outside of the PA.

The secondary track procedure as demonstrated above is also designed to address this issue. For it to work properly it requires constant training of the Quantifiers to make sure that they only count trees within the project boundary. This is part of the training curriculum.

Conclusion
a) It was confirmed that the area calculation is applying standard method of polygon calculation.
b) CAAC and TIST response about checking method to prevent overlapping of the project area is considered appropriate.
The verifier was provided with KML files for all PAs and it was confirmed by sampling check that there is no double counting of the same PA for the visiting PAs.
c) CAAC and TIST response to prevent the counting of different PA and counting of trees outside of the PA is considered appropriate.
d) It was confirmed from the interviews with CAAC and TIST that quantifiers will be trained about tree counting so that they count trees only within the project boundary.

Clarification Request 5
(1) The uncertainty due to the sampling method of tree DBH is to be explained and justified.
(2) Please explain how to avoid the input error by Quantifier. (Circumference, number of trees, etc)
(ex1. It was found that the circumference data of 2006UG321-Busingye J1V as below;
Spreadsheet data J51785 – J51804 is the same as J51765 – J51784,
Spreadsheet [each data of J51765 – J51784] + 2 = [each data of J51745 – J51764])

(ex2. “2005UG143-Opolis John” did not exist from the beginning but the removal in the PA was calculated in the monitoring spreadsheet.)

Response

(1) The uncertainty due to the sampling method of tree DBH:

As noted in the field and in the closing meeting, the Quantifiers have been trained to take random samples based on their judgment. We have provided guidance in our Quantifier Manual (page 51) to help them take random and unbiased samples. Because each grove is different, they have the flexibility to take the samples as they deem reasonable. They also receive training in Quantifier Seminars. We believe that what was observed during verification demonstrated that the Quantifiers took random samples of a range of sizes and were not taking biased samples.

The uncertainty is expressed in the targeted precision level of the methodology; 10% of the 95% confidence level. The Quantifiers have taken more than 600,000 circumference readings that have resulted in a precision level of 0.4% of the 95% confidence level. To adjust for errors made during data entry, the circumference data has been filtered to exclude all measurements that fall into the upper 4th standard deviation. To be conservative, this filter does not affect the lower 4th SD.

(2) How to avoid the input error by Quantifier.

These are human errors. The secondary track tool is available to address example 1. The original PA was tracked and baselined based on instructions from the farmer/member that he was going to plant in that area. When the Quantifier returned to monitor the trees, the farmer explained that he had changed his mind and planted in another area. The Quantifier was aware that it was a different location but monitored it anyway. The Quantifier requested of the Kenya staff that we make the new grove the official PA but that request was not fully communicated internally. Since VCS the rules do not allow us to change the location of a PA, we have marked this PA as Pending and zeroed the trees and carbon. The grove where the trees were quantified is not part of this PD. The original and baselined PA remains eligible and if the farmer ever plants in that location, it will be quantified. In addition, this case will serve as an example in Quantifier training seminars to prevent it from happening again.

The second example is an entry error. We will address this in future Quantifier meetings, too. In addition, we have modified the verification spreadsheet to identify circumference outliers. We revised the Statistics and Circ worksheets to enable us to identify the circumference measurements of every stratum that is in the 4th standard deviation above the mean. The 4th SD is identified in column L of the Statistics worksheet. Column O of the Circ worksheet compares these thresholds with each circumference measurement. If the value is in the 4th SD it is excluded. A new mean is calculated for each stratum in Column O of the Statistics worksheet.

Tree counts are self-correcting. Every time a PA is quantified the new number replaces the old number. If there is an error during one verification, it will be corrected during the next one. In addition, while it is possible that a Quantifier can enter an erroneous tree count, this is minimized by having regular audits that pick up some of the errors, keep the Quantifiers on their toes and help identify trends and poor performers.

Conclusion

(1) It was confirmed from the Quantifier Manual and the demonstration of sampling method of tree DBH that the sampling method is random and unbiased also quantifiers are properly trained for monitoring.

It was confirmed from the spreadsheet /2-6/ that the precision level of GHG removal calculation is 0.41% of the 95% confidence level and satisfies the methodology requirements (10%), hence the monitoring method of DBH is considered appropriate. /28/

(2) It was confirmed that the data is corrected.
Quantifiers training to prevent human error and input errors is appropriate.
Also, it is good practice to remove human error data to apply 4th SD threshold.

Clarification request 6
(1) Please provide information about;
- Fire accident
- Pest or other accidents
(2) How to address above issues.

Response
There were two incidences of fire.
2008KE550-Nkonge birichi: 12,727 trees and 625 tonnes of carbon lost.
2008KE212-Janet W Kihara: 1,039 trees and 112 tonnes of carbon lost.
The total loss to fire is 0.22% of the stocks which is considered insignificant by the permanence tool. The mitigation tools used have proved to be adequate and no further action is necessary.
There were no reported losses due to pests or other accidents.

Conclusion
It was confirmed that the loss by fire is reflected to the calculation sheet and the loss is 0.22% of the total stock.
It was confirmed from the interviews with CAAC and TIST quanifiers that there are no pest accidents.

Clarification Request 7
(1) Please provide the recent audit records.
(2) Please provide Quantifiers training records.
(3) Please provide the recent monthly cluster meeting records.
(4) Please provide the procedures for emergency such as fire, pest, etc.
(5) Please explain about archiving at site office and CAAC.

Response
(1) For example of our audit records, please see attached document: "TIST KE PD-VCS-006 CAR Verif #2 140515b Weekly Audit Reports.pdf"
(2) The attached are samples of the attendance sign-in sheets for Quantifier training: "TIST KE PD-VCS-006 CAR Verif #2 140515c Quantifiers Training Attendance List.zip"
(3) The attached are samples of the cluster meeting records: "TIST KE PD-VCS-006 CAR Verif #2 140515d Cluster meetings.zip"
(4) As noted, each PA is located on land owned by a member. They own and manage the trees. If they lose trees or are affected by fire, pests or something else, the Farmers are to report it at the Cluster meeting and we correct our inventory at the next quantification. For expert support, they are referred to the Kenya Forest Service. There is ample mitigation built into the Project to prevent unexpected problems from having a significant impact on the carbon stocks. They are listed in the risk tool.
(5) Archiving at the TIST office in Meru is limited to Small Group Payment vouchers, M-Pesa statements, statutory payments (PAYE, NHIF, NSSF, Municipal licenses), receipts, salary and wage records.

CAAC does not have many physical/paper records. Virtually all of the project data is achieved electronically on the TIST database. Electronic storage is currently on the Amazon Cloud

Conclusion

(1) Samples of recent audit records (weekly audit reports) were provided.
Also, the audit record for each grove is available in the TIST web site. It was confirmed that the audit is conducted in accordance with the registered PD.
(2) (3) Samples of the attendance list for the quantifiers training during 2010 to beginning of 2013 were provided. Also, the cluster meeting records (monthly) are provided.
During on-site visit, demonstration of the monitoring work by quantifiers such as counting tree numbers, DBH measurement, identification of boundaries was conducted. Also, the data of quantifiers field notes were checked by sampling.
It was confirmed that the training and meeting of quantifiers are conducted as stated in the registered PD. The training is effectively reflected in the monitoring activity.
(4) OK
(5) It was confirmed from the interviews with CAAC that all of the project data is archived electronically at site office and CAAC.

4.3 Accuracy of GHG Emission Reduction and Removal Calculations

4.3.1 Assessment of data and calculation

The verifier confirmed that all data has been available and all the parameters have been monitored in accordance with the registered monitoring plan. Reported data of the monitoring report and the spreadsheet were cross-checked during on-site visit against quantifiers' notebook by sampling and confirmed appropriate.
It was confirmed that the GHG removal calculation is carried out in accordance with the formulae and methods described in the monitoring plan and the applied methodology AR-AMS0001 version 06. /1-7/, /5/, /28/
Allometric equation is applied for volume estimate in accordance with the registered PD.
The carbon stock calculation in the spreadsheet is carried out using the tree age at the end of 2013. This is applied for all the trees of PAs independent of the monitoring date which scatters during past 5 years.
There are some uncertainties in the determination of the tree age which might impact the GHG removals. The impact by such uncertainties in tree age estimate as caused by harvesting, fire, owners change, etc. was discussed and it was confirmed that the carbon of any PA that was affected by harvesting, fire, owners change, etc. has been set to zero and no impact to GHG removals calculation. **(CL 8)**

The precision at 95% confidence level was calculated as 0.41% of the mean. /2-6/
The data meets the precision requirements of the methodology (10% of the mean).
The capacity limit due to grouped project is checked in the spreadsheet "PA Summary Sheet". The project complies with the capacity limit. **(CL 10)**

It was confirmed that the calculated carbon stock at 31/12/2013 is 342,874 tCO_2 and the increase from the 1st verification is 154,225 tCO_2. /1-7/, /2-6/

Clarification Request 8

Please justify the assumptions in tree age estimate* applied to the carbon stock calculation, taking into account the risk of harvesting, fire, owner's change, etc.
(***:** The carbon stock calculation in the spreadsheet is carried out using the tree age at the end of 2013. This is applied for all the trees of PAs independent of the monitoring date which scatters during past 5 years.)

Response

The justification is that any tree that exists will continue to grow. If a tree is 3 years old in 2010, it will be 6 years old in 2013 and, on average, will be the size of a 6 year old tree. This approach is combined with hundreds of thousands of data points that define the average size of a tree in each age and allometric species strata. This approach was found to be acceptable by the original Validator/Verifier.

The issue brought up by the verifier is how we determine if the tree still exists, either physically or as a TIST tree (i.e. as a Project tree). This was done for the verification by the TIST staff and the results are shown in the verification spread sheet ("PA Summary" work sheet, column AO). The carbon of any PA that was affected by harvesting, fire, owners change, etc., has been set to zero. By setting the carbon at zero we have taken a conservative approach to this issue.

Conclusion

The verifier confirmed by the spreadsheet that the carbon of any PA that was affected by harvesting, fire, owners change. etc., has been set to zero. Hence the TIST assumption in tree age estimate does not affect the carbon stock calculation in such PAs.

Clarification Request 9

Where some PAs are removed from the project, it is to be confirmed whether the baseline is adjusted or not.

Response

As noted in the PD and the validation spreadsheet, the baseline of each PA stands on its own. When a grove is declared inactive and removed, the baseline of that PA is no longer relevant. The baseline condition will not have changed (and cannot since it is a historical observation), only the current status as a PA will have changed.

Conclusion

It is confirmed that the baseline is not changed when a groves is declared inactive.

Clarification Request 10

The project is a grouped project, hence, it is stated in the registered PD that the capacity limit is 4,800 tCO_2/PA. (16,000 tCO_2/year x 30 years x 1% = 480,000 tCO_2 x 1%.)

Please demonstrate about the calculated maximum GHG removals during the 2nd monitoring period and justify that the project complies with this capacity limit.

Response

First the ex-post strata data was run to get the most current quantification information (as of December 31, 2013). Columns U through Z of the "Ex-post Strata" worksheet look at the Ex-Ante projects of the carbon of the 30 year carbon of each stratum. A pivot table ("Instance Pivot" worksheet) sums all the strata in a PA and reports the expected capacity limit in columns Z in the "PA Summary" worksheet. Columns AA through AC ("PA Summary") provide another test for the expected 30 year carbon by adjusting for stem density. Column AD ("PA Summary") provides the expected capacity for each PA. Using the filters built into Excel, it can be seen that based on current verification data, none of the PAs are expected to exceeded the 4,800 tCO_2 limit. Column AM ("PA Summary") is the total carbon in each PA as of this verification. Using the filters built into Excel, it can be seen that none of the PAs have exceeded the 4,800 tCO_2 limit.

Conclusion

The verifier confirmed by the spreadsheet /2-6/ that the maximum GHG removals of each project instance meet the conditions of capacity limit for each PA.

Hence, the project complies with the capacity limit of grouped project of VCS (VCS standard 3.4.8) /22/

Forward Action Request 2
(1) The verification team noticed that some of the trees were dead or thinned after the latest quantification (monitoring).
(2) The verification team raised a concern of mistake of counting coppices of Eucalyptus trees.
(3) It was further noted that the data of strata in circumference monitoring were not consistent with the information of existing strata in the ex-post monitoring spreadsheet.
Mitigation measures are to be established in future monitoring periods so that the project proponent can ensure to avoid mistake in terms of such aspects.

Response
(1) With 18,000 PAs in the PD, almost 40,000 PAs in all the current TIST PDs and over 50,000 total groves, it is impossible to have current results for every PA. The Project is designed to update the monitoring data as often as possible and to replace old data with the most recent data.
(2) This was not a concern that was voiced in the field. In fact, I was present on many site visits where the verifiers asked the Quantifiers whether they counted coppiced tree. The Quantifiers told them they did not and demonstrated which ones they count and which ones were excluded because of coppicing. From my observations, the Quantifiers demonstrated knowledge of the Projects policy and the ability to identify which trees were coppiced.
(3) 1. The circumferences that have ages prior to 2004 are errors. We can eliminate those in the future.
2. We will add a new test to the circumference query that checks for matching strata. If the stratum of a circ record does not appear in the Strata Summary, it will not be included in the circ download.
3. We are investigating changing the date collection forms on the hand-held devices. The idea would be for the Quantifiers to download the data from the previous quantification in a format that displays the existing strata and tree count, with a blank next to each stratum for entering the new tree count. There needs to be some flexibility to allow for the addition of new strata and corrections, so we would need to have appropriate warnings and training to make sure it is implemented properly. It will probably be months before we can deploy these changes.

Conclusion
(1) As discussed in CL 10 above, the project is designed so that the loss due to dead trees or thinning is reflected in the next verification and GHG removals are conservatively calculated.
(2) The verifier confirmed by the on-site visit and quantifiers' monitoring work that the quantifiers are correctly following the quantifiers manual.
(3) The verification team has concluded that the proposed measures are appropriate and requests VVBs to verify the implementation in subsequent verifications.
The team identified inconsistency between strata in circumference quantification record in "Circ" datasheet and currently existing strata in "Ex-post Strata" datasheet.
The team found 60,105 strata in the "Circ" sheet and 9,707 of them did not exist in this monitoring period.
The circumference quantification record included old quantifications and most of 9,707 PAs would have been lost after the quantifications. However, some of the record showed errors such as inappropriate tree age (planted prior to 2004) and thus mitigation measures for such input errors were requested for future monitoring.
The 95% confidence interval of this monitoring period was within 10% and therefore the verification team did not request correction in this verification but in future monitoring periods.

4.4 Quality of Evidence to Determine GHG Emission Reduction and Removals

It is confirmed that the monitoring is conducted by trained quantifiers in accordance with the registered monitoring plan and the quantifier manual /12/ which ensures unbiased monitoring.
Double check system is established for the project boundary identification and number of all project trees in the boundary is counted and the DBH measurement is done based on the unbiased sampling procedure in accordance with the quantifier manual.
The data processing is done by handheld computer/internet system and input data is audited by TIST manager and CAAC. Method to avoid human error such as removing irregular input data by statistic treatment (judging irregular data by 4th SD threshold) is also introduced.
The verifier checked the GHG removal calculation for several sampled PAs that the GHG removal is calculated in accordance with the registered PD as indicated in the traceable spreadsheet. /1-7/, /2-6/

As explained in section 2.1 above, the verifier visited 138 PAs sampled from 18,099 PAs. Visited PAs are listed in section 6 of this report.

The verifier confirmed from the interviews with CAAC & TIST members and training records /10/, /11/ that quantifiers are well trained and experienced.
In the on-site visit, the verifier conducted boundary check, tree species check, planting density check, number of trees counting (for selected PAs) and DBH measurement (for selected PAs) as indicated in table 3 of section 2.4 above. By comparing the data provided by the project proponent with these verifiers sampled data, it is confirmed that the evidences to determine GHG removals are reliable.
In addition to above, in case of PAs where there are any pending issues such as ownership, needs of requantification, etc., the GHG removals are set to zero as explained in section 4.1 CL 3 above.

Clarification Request 11
(1) Please explain about the case where the data was corrected during the TIST QA activities such as staff audits, US Team audits, etc.
(2) Please explain how to address to possible internal risks considered such as followings; (As for double counting risk: refer to CL 4 above C.1.1.)
- Selection of 20 trees for circumference measurement (risk of biased selection of sample trees)
- Mistake in counting of trees
- Mistake of boundary of PA
- Mistake in circumference measurement

Response
(1) The TIST staff and US team do not correct quantification data. Inconsistencies found during audit are corrected by having the PA requantified by a Quantifier. This only happens if the audit and the quantification are more than 10% different, in which case the Quantifier is also suspended.
(2) How to address:
- Selection of 20 trees for circumference measurement (risk of biased selection of sample trees)
As noted above, the Quantifier procedure is addressed in the Quantifier Manual, the Quantifiers receive regular training and Quantifiers are audited regularly. We also have adopted an approach to collecting circumference data that builds a huge historical record of the average circumference of each Allometric Strata so that the effect of the a few biased samples would be diluted and have an insignificant effect on the average biomass. In addition, we do not believe that the verifiers witnessed any Quantifier sampling in a biased manner.
- Mistake in counting of trees

As noted, tree counts are self-correcting. Every time a PA is quantified the new number replaces the old number. If there is an error during one verification, it will be corrected during the next one. In addition, while it is possible that a Quantifier can enter an erroneous tree count, this is minimized by having regular audits that pick up some of the errors, keep the Quantifiers on their toes and help identify trends and poor performers.

- Mistake of boundary of PA

As noted under Clarification Request #4, we have instituted a secondary track system and have a desk auditor that are addressing this issue. Please see CL4 for more information.

- Mistake in circumference measurement

As noted in Clarification Request #4, these are human entry errors which will be addressed in future Quantifier meetings. In addition, we have modified the verification spreadsheet to identify circumference outliers. We revised the Statistics and Circ worksheets to enable us to identify the circumference measurements of every stratum that is in the 4th standard deviation above the mean. The 4th SD is identified in column L of the Statistics worksheet. Column O of the Circ worksheet compares these thresholds with each circumference measurement. If the value is in the 4th SD it is excluded. A new mean is calculated for each stratum in Column O of the Statistics worksheet.

Conclusion

(1) It was confirmed that inconsistencies found during audit are corrected by having the PA requantified by a Quantifier.

(2)

- The verifier confirmed that the selection of the 20 trees is suitably described in the quantifiers Manual to avoid biased selection.
- The verifier considers that the counting tree procedures are self-correcting by repeating the monitoring and counting trees in all PAs based on the quantifiers manual.
- The verifier considers that the secondary track system is appropriate to prevent mistakes of PA.
- The verifier considers that the method applying 4th SD to avoid human errors in circumference measurement and its entry is effective and appropriate.

4.5 Non-Permanence Risk Analysis

The risk assessment for this monitoring period was conducted according to the "Tool for AFOLU Non –Permanence Risk Tool" of VCS version 3.

Each risk category was calculated based on the tool.

The verifier confirmed that the assessment of the PP is appropriate and the Overall Risk Rating is 2.5 as discussed in Clarification Request R1 to R7 below.

As for detail, refer to the VCS Non-Permanence Risk Assessment Checklist Appendix 2

Clarification Request R1

Please inform about regular contacts such as;

(1) between TIST management and Quantifiers (frequency, topics)

(2) cluster meetings (frequency, topics)

(3) Please provide examples of recent records of above.

Response

(1) Contact between TIST management and Quantifiers is frequent but more events driven than scheduled.

1. TIST management sometimes attends Cluster meeting and audits Cluster.
2. TIST Management audits each quantifier about several times per year.
3. TIST Management holds Quantifier training seminars at least once per year

4. TIST Management conducts a desk audit of each quantifier's work whenever new information is uploaded. If the information is out of the ordinary, it triggers and email, SMS or telephone discussion.
5. TIST Management and Quantifiers talk on the phone as necessary.
(2) Generally, clusters meet monthly. The training topics in a given month are different for each Cluster. The general topic are: What is TIST, TIST eligibility, TIST values, GHG contract, nursery development, Conservation Farming, improved stoves, tree species/indigenous trees, riparian buffers, Erosion control, HIV/AIDS, developing best practices, other.
Other
(3) The recent Cluster information is kept on the TIST mobile website. The following are pdf prints from the sit and are provided as examples:

Conclusion
The verifier was provided with the Quantifiers meeting records /10/,/11/
It is confirmed from the records that meeting is held monthly in average and there are close contact between TIST management and quantifiers. It was confirmed from the cluster meeting records that the meetings contribute to the project management improvement and sharing information and experiences between project participants.

Clarification Request R2
Please provide the evidence to show the statement “the project had all the funds secured to cover the total cash needs to reach breakeven”.

Response
It was explained by internal information (confidential).

Conclusion

It was confirmed by the explanation of CAAC that the project had all the funds secured to cover the total cash needs to reach breakeven and the project is financially sound.

Clarification Request R3
(1) Please inform about PAs which were removed from TIST program in the past.
(2) Please inform the reasons of the removal, if applicable.
(3) Are there any PAs removed from the project due to the reason that the land was converted to more profitable alternative?
(4) What kind of more profitable alternative land use is estimated in the crediting period?

Response
(1) Please see the response to Clarification Request #3 of the Verification Check list, above, and the "PA Summary" worksheet of the verification spreadsheet.
(2) Please see the response to Clarification Request #3 of the Verification Check list, above, and the "PA Summary" worksheet of the verification spreadsheet.
(3) We believe that some of the ones harvested for timber were done so because the owners felt it was a more profitable alternative.
(4) We believe that there could be more trees harvested during the crediting period. That said, harvesting is not necessarily the more profitable land use. While it might generate a spike in income, it is spaced out over many years. As determined in our CCB Gold level survey, as of 2011, TIST members had already received over $25 million in benefits from participating in the program. Some of this comes directly from the presence of live trees such as sustainable wood use, fodder, fruits and nuts. Participation also provides training on many subjects that have additional value to the farmer, such as Conservation Farming, use of more efficient wood stoves

and health. We believe that much of the harvest can be stopped with improved training. (Detail: refer to checklist)

Conclusion
(1), (2) Refer to conclusion of CL 3. (Section 4.1)
(3) OK
(4) It is confirmed that the total value of the benefit of staying in TIST project is the most profitable alternative land use from the long-term and other benefits such as carbon benefits, sustainable wood use, fodder, fruits, nuts, income by thinning, etc.

Clarification Request R4
Please inform how many PAs were removed from the project with knowledge of the legally binding commitment, if available.

Response
There are a total of 173 PAs (0.96% of the PA and 1.66% of the carbon stocks) being removed. Of these we would exclude Double Registration, Registration Error, Overlaps and Unauthorized Registration from this category because they are not eligible to be in the Project. Their inclusion in the PD was an error. That leaves 67 PAs (0.37% of the PAs and 1.24% of the carbon stocks) that are being removed where the members had knowledge of a legally binding commitment. In addition, there are probably another 256 PAs (1.41% of the PAs and 1.34% of the carbon stocks) that are marked as pending that fall in this category. They are PAs where there is a Change in Ownership, Groups Quit and Members Quit.

The total potential in this category is 1.78% of the PAs and 2.58% of the carbon stocks. Looked at another way, the contract is over 97% effective.

Conclusion
It is confirmed from interviews with CAAC & TIST members and on-site visit that some PAs are removed and some PAs are pending as discussed in CL 3.
It is confirmed by the spreadsheet /2-6/ that the values are correct and the position is clearly indicated as below.
173 PAs are removed, among these;
- 106 PAs: not eligible PA to the project and removed the project,
- 67: baseline error, change in ownership, harvest, member quit, tree removed, etc.

256 PAs are pending due to change in ownership, group quit and member quit

It is confirmed that the contract is over 97% effective.

Clarification Request R5
Please explain about the impact to the project risk factor due to the reasons below.
(1) cut for construction
(2) cut for public purpose such as securing the space for transmission lines
(3) land is sold partially and grove was cut partially

Response
TIST is unlike most AR projects in that it is made up of thousands of individual subsistence farmers. As with any project in which there are many actors, some violate the rules. Harvesting for any reason is a violation of the GhG agreement and results in expulsion from TIST. The Verifiers also noted that there were cases where trees were cut for construction and transmission lines. We do not consider this harvesting. It is a reaction to the needs of the farmers and community. Many TIST farmers are among the poorest people in the world and

they are doing their best to better their lives. Cutting down trees for the opportunity to get electricity is one of these. Removing some trees to improve their homes is another.

The effect on risk is de minimis. There are 29 harvest and tree removal related PAs (0.16% of the PAs and 0.29% of the carbon stocks). In spite of the loss there has been an overall gain of 154,225 tonnes of sequestration in the 18 months since the first verification indicating that there is no risk to the carbon stocks.

Conclusion

It is considered appropriate that cutting trees for the purpose of community such as transmission lines, etc. is not taken as harvesting.
It is confirmed from the spreadsheet that the effect on the risk is limited (0.28% of the carbon stock)./2-6/

Clarification Request R6

(1) Any changes in the ownership and resource access/use rights during the 2nd monitoring period are confirmed including the impact to the project risk factor.
(2) Existence of any disputes or potential disputes is to be confirmed.

Response

(1) There are 7 PAs (0.04% of the PAs and 0.81% of the carbon stocks) that have been removed due to change in ownership. In addition there are 52 PAs (0.29% of the PAs and 0.08% of the carbon stocks) in this category that have been listed as pending. The fact that the total is less than 0.9% of the carbon stocks and the fact that there has been an overall gain of 154,225 tonnes of sequestration in the 18 months since the first verification indicate that there is no risk to the project.
(2) There are 6 pending PAs with Ownership Disputes (0.03% of the PAs and 0.01% of the carbon stocks). They are marked pending because the PAs remain eligible once the dispute is resolved and if the final owner wants to stay in TIST, he/she may.
Excluded in this category are Overlaps. Overlaps are monitoring errors, not ownership disputes.

Conclusion

(1) Risk of change of ownership:
It is confirmed that the effect on the risk is small (less than 0.9 % of the carbon stock).
(2) Risk of disputes over access/use rights:
It is confirmed that the effect on this risk is small (0.01% of the carbon stock).

Clarification Request R7

(1) The record of past occurrence of fire and damages to the forest in the project area is to be provided, if any.
(2) Any preventive measures implemented, if applicable.
(3) Loss by the accident is to be explained.

Response

There are 2 PAs that have been lost to fire (0.01% of the PAs and 0.21% of the carbon stocks). The mitigation tools listed in the risk tool have proved to be adequate and no further action is necessary. The PAs are marked as pending because the PAs remain eligible under the PD. If the farmers replant, they can be monitored and included in subsequent verifications.

In the risk tool, we rated the significance of fire loss as "insignificant (less than 5% loss of carbon stocks." The Project is 9 years old and we have not had a 5% loss, indicating that the risk rating in the tool is still valid.

Conclusion
(1) (3) Risk of fire and loss:
It is confirmed that there are 2 PAs that have been lost to fire and the effect on the risk is small (0.21 % of the carbon stock) and insignificant.
(2) The location of the project PAs are scattered in wide area and each PA's area is small in Kenya project. Hence, the risk of spreading fire is considered small.

Clarification Request R8
(1) The record of pest and disease outbreak in the project area (including the adjacent areas) during the monitoring period are to be provided, if any.
(2) Any preventive measures implemented, if applicable.
(3) Loss by the accident is to be explained.

Response
The Kenya team reports there have been no reports or losses due to pest and disease.

Conclusion
It was confirmed from the interviews with CAAC and TIST members that there have been no reports or losses due to pest and disease except loss by termite in a PA.
The location of the project PAs are scattered in wide area and each PA's area is small in Kenya project. Hence, the risk of spreading pest and disease outbreak is considered small.

Forward Action Request R1
Please explain how to maintain the management system during the long time project operation, in particular, when the key management team in CAAC and TIST was changed.

Response
We are aware of the need for a succession plan for CAAC and TIST. We believe the best approach is to continue to build capacity in the host countries. Some of our key staffs have been involved with TIST and the PDs for well over five year. We have been building their capacity and will continue to do so until they are able to take over the responsibilities currently held by CAAC personnel. It should be noted that the actual operations and daily oversight of the monitoring and monitoring system are already done by the host country staff. They have been involved in 7 validations and 8 verifications. In addition, we have staff in the other countries that can support one another. For example, we have just recently hired a Tanzanian in Dar es Salaam that had a long history with TIST before he went to University to become a programmer. He is in training with his US counterpart and is expected to take over management of the TIST Data System by the end of 2014.

Conclusion
It is to be reviewed in the next verification.

5. VERIFICATION CONCLUSION

JACO CDM performed the 2nd verification of the VCS project "The International Small Group and Tree Planting Program, Kenya, VCS-006". As stated in the PD, the project is combining reforestation and sustainable development in Kenya carried out by subsistence farmers. The International Small Group and Tree Planting Program (TIST) supports the reforestation and biodiversity efforts of subsistence farmers. Carbon credits sales generate participant income and provide project funding to address agricultural, HIV/AIDS, nutritional and fuel challenges. KE PD-VCS-006 is a grouped AFOLU project, eligible under the Afforestation, Reforestation and Revegetation (ARR) category. It is a subset of the TIST project in Kenya and initially applied to 3,961 of the Small Groups, 29,222 members, 18,099 project areas and 7,419.2 ha. The PD was validated and first verified on 27 September 2012 by Environmental Services, Inc. (ESI). At that time all of the Project Areas were established and the monitoring systems were in place.

The management of TIST is responsible for the preparation of the GHG removals data. The reported GHG removals of the Project on the basis set out within the Monitoring Plan indicated in the registered PD version 02 dated 24 August 2012, comply with the methodology AR-AMS0001/ version 06. The development and maintenance of records and reporting procedures in accordance with that plan, including the calculation and determination of GHG removals from the project is the responsibility of the Project Management Unit.
The verification criteria followed the guidance documents provided by VCS and included the following: VCS Program Guide (01 May 2012, v3.3), VCS Standard (01 Feb 2012, v3.2), Program Definitions (01 May 2012, v3.3), Agriculture, Forestry and Other Land Use (AFOLU) Requirements (01 Feb 2012, v3.2), AFOLU Non-Permanence Risk Tool (01 Feb 2012, v3.1), VCS Validation and Verification Manual (8 October 2013, v3.1), CDM methodology AR-AMS0001 Version 06 and the registered Grouped Project PD.
The verifier assesses that the project is implemented and operated as planned and described in the validated and registered PD. Established forest being essential for GHG removals is operated reliably and is managed appropriately. The monitoring system is in place and the project is resulting in GHG removals.

The verifier assesses that the monitoring was done in accordance the monitoring plan except a deviation. The deviation does not result in a negative performance of the monitoring of the project and it is acceptable as per VCS VVM § 3.2.7. The GHG removals in the Monitoring Report version 07 dated 15 September 2014 are calculated without material misstatements.

The calculated GHG removals calculation meets the precision requirements of the applied methodology.

Overall non-permanence risk rating is ranked as 2.5 and the buffer is 10% in accordance with the VCS AFOLU "Non-Permanence Risk Tool.

We pointed out 1 CAR, 11 CLs and 3 FARs to the monitoring report and 8 CLs and 1 FAR to the Non-Permanence Risk Report. Responses to these findings were satisfactorily provided by the project participants and the original PD and report were revised.

Our opinion relates to the project's GHG removals and resulting GHG removals reported and related to the valid and registered project baseline and monitoring, and its associated documents. Based on the information we have seen and evaluated, we confirm the following statement. :

Reporting period: From 30 June 2012 to 31 December 2013

Verified removals in the above reporting period:

Gross Reductions:	154,225 tCO_2 equivalents
Buffer:	15,423 tCO_2 equivalents
Issuance:	138,802 tCO_2 equivalents

Date: 24 September 2014

Michio HIRUTA

Representative Director

JACO CDM

6. REFERENCES

Category 1 Documents:

List documents provided by the Client that relate directly to the GHG components of the project. These should have been used as direct sources of evidence for the verification conclusions, and are usually further checked through interviews with key personnel.

/1-1/ Monitoring Report for TIST Program in Kenya VCS-006, Verification 02, Version 01 dated 21/01/2014 (for 29/06/2012 – 31/12/2013)

/1-2/ Monitoring Report for TIST Program in Kenya VCS-006, Verification 02, Version 02 dated 15/05/2014 (for 30/06/2012 – 31/12/2013)

/1-3/ Monitoring Report for TIST Program in Kenya VCS-006, Verification 02, Version 03 dated 04/06/2014 (for 30/06/2012 – 31/12/2013)

/1-4/ Monitoring Report for TIST Program in Kenya VCS-006, Verification 02, Version 04 dated 25/06/2014 (for 30/06/2012 – 31/12/2013)

/1-5/ Monitoring Report for TIST Program in Kenya VCS-006, Verification 02, Version 05 dated 23/07/2014 (for 30/06/2012 – 31/12/2013)

/1-6/ Monitoring Report for TIST Program in Kenya VCS-006, Verification 02, Version 06 dated 25/07/2014 (for 30/06/2012 – 31/12/2013)

/1-7/ Monitoring Report for TIST Program in Kenya VCS-006, Verification 02, Version 07 dated 15/09/2014 (for 30/06/2012 – 31/12/2013)

/2-1/ Data spreadsheet of monitoring report, version 01
- Instance Test
- Statistics
- Circumference
- Misc Calculation (Tree-age distribution, Summary of Grove Status)
- Instance Pivot
- Ex-post Strata
- PA summary

/2-2/ Data spreadsheet of monitoring report, version 02

/2-3/ Data spreadsheet of monitoring report, version 03

/2-4/ Data spreadsheet of monitoring report, version 04

/2-5/ Data spreadsheet of monitoring report, version 05

/2-6/ Data spreadsheet of monitoring report, version 06

/3-1/ Non-Permanence Risk Report for TIST Program in Kenya VCS-006, Verification 02, Version 01 dated 21/01/2014

/3-2/ Non-Permanence Risk Report for TIST Program in Kenya VCS-006, Verification 02, Version 02 dated 15/05/2014

/3-3/ Non-Permanence Risk Report for TIST Program in Kenya VCS-006, Verification 02, Version 03 dated 04/06/2014

/3-4/ Non-Permanence Risk Report for TIST Program in Kenya VCS-006, Verification 02, Version 04 dated 04/06/2014

/3-5/ Non-Permanence Risk Report for TIST Program in Kenya VCS-006, Verification 02, Version 05 dated 23/07/2014

/3-6/ Non-Permanence Risk Report for TIST Program in Kenya VCS-006, Verification 02, Version 06 dated 25/07/2014

/4/ Geographic area of Groups, KML file

/5/ Project Description for TIST Program in Kenya VCS-006

/6/ Validation Report for TIST Kenya VCS-006 by ESI dated 27 September 2012

/7/	Verification Report for TIST Kenya VCS-006 by ESI dated 27 September 2012
/8/	TIST Weekly Audit Report (recent examples)
/9/	TIST Cluster Group Grove Logout (Examples: recent news items, current training articles, etc.)
/10/	TIST Quantifier Cluster meeting records (examples)
/11/	TIST Quantifier Cluster meeting attendance records (examples)
/12/	TIST quantifier manual
/13/	Small Group GHG contract
/14/	Third Party Environmental Assessment
/15/	Report from Winrock International "Assessment of Methods and Background for Carbon Sequestration in the TIST Project in Tanzania, December 2004

Category 2 Documents:

List background documents related to the design and/or methodologies employed in the design or other reference documents. Where applicable, Category 2 documents should have been used to cross-check project assumptions and confirm the validity of information given in the Category 1 documents and in verification interviews.

/21/	VCS Program Guide version 3
/22/	VCS Standard version 3
/23/	Program Definitions version 3
/24/	Agriculture, Forestry and other Land Use (AFOLU) Requirements
/25/	AFOLU Non-Permanence Risk Tool
/26/	VCS AFOLU Guidance: Additional guidance for VCS ARR projects using CDM A/R Methodologies
/27/	VCS Validation and Verification Manual (8 October 2013, v3.1)
/28/	CDM Methodology AR-AMS0001 Version 06
/29/	Standard for Sampling and Surveys for CDM Project Activities and Program of Activities (EB69 Annex 4)
/30/	CDM Methodological tool "Estimation of carbon stocks and change in carbon stocks of trees and shrubs in A/R CDM project activities (CDM-EB70-A35)

Persons interviewed:

List persons interviewed during the verification, or persons contributed with other information that are not included in the documents listed above.

Charlie Williams	CAAC vice president and project developer
Charles Ibeere	TIST Field manager
Martin Weru	TIST Field manager
Elizabeth Wangui	TIST Quantifier
Festus Mutegi	TIST Quantifier
Aaron Kaindio	TIST Quantifier
Mary Kawira	TIST Quantifier
William Mwito	TIST Quantifier
Joice Makena	TIST Quantifier
Edward Mwenda	TIST Quantifier
Judith Kamba Kairemia	TIST Quantifier
Alice Nkirote	TIST Quantifier
Joshua Mwenda	TIST Quantifier

Peter Mithiru	TIST Quantifier
Patricia Wachuka	TIST Quantifier
Geoffrey Lmwrgiri	TIST Quantifier
David Mawira	TIST Quantifier
Annete Kaari	TIST Quantifier
Faith Ntinyari	TIST Quantifier
Moses Mwandiki	TIST Quantifier
Harrison Muthomi	TIST Quantifier
Zaverio Kiriiya	TIST Quantifier
Doris Kendi	TIST Quantifier
John Kiunga	TIST Quantifier
Patrick Kimathi	TIST Quantifier
Joseph Kiogara Rukuwaru	TIST Quantifier
Evelyn Kinati	TIST Quantifier
Naman Karani Mungaria	TIST Quantifier
Virginia Wairima	TIST Quantifier
Simon Kinyua Kibaara	TIST Quantifier
Josephine Mwangi	TIST Quantifier
Jackson Mutua	TIST Member
Francis M. Kibocha	TIST Member
Johnson Kimau	TIST Member
Joses Mithika	TIST Member
Peter Kagai	TIST Member
Samuel Ndungu	TIST Member
Ausilio Thagaru	TIST Member
Ernest Muriu	TIST Member
Macharia waigwa	TIST Member
Lilian mumbi	TIST Member

Visited PAs

2009KE99-John muriuki (Inactive)
2009KE560-EstherandConsen
2009KE560-Margaret wanjiku
2009KE560-Mary nyambura
2006KE1156-Stella b
2006KE1156-Erastus marangu
2007KE1172-Kianjagi Pry Sch.
2006KE1156-Kevin kithuci
2006KE1156-Keneth kaunda A
2007KE1172-Winfred Muthoni
2006KE956-Rahab Basilio
2007KE437-Samson mithika 1
2007KE468-Nkoyai
2005KE1231-Simon tharamba c
2005KE1233-Ayub kobia
2007KE78-Andrew kiraithe
2005KE1231-Simon tharamba
2005KE1233-Nicholas kanake
2008KE2461-Grace Cobaithili
2008KE1754-Lucy Nkatha
2008KE2461-Florence Karuki
2008KE52-Isayah c
2008KE52-Zablon kinoti
2008KE52-James marira
2007KE627-Samuel m'murithi
2007KE627-M'inoti b
2006KE1254-Evageline isayah
2008KE1452-David nteere
2008KE1452-Paris murathi
2005KE378-Tomars gitonga
2005KE378-Elias gatimba
2008KE1452-Beredina kithinji
2006KE45-John Ncebere

2006KE45-James
2006KE45-James Kithwa B
2006KE45-Ibrahimb Muriuki 5
2008KE560-Julius Kibutha3
2008KE560-Joses mithika
2006KE45-James Kithwa 6
2009KE180-Juliano Gitari
2009KE280-Kenneth kirimi
2009KE280-Eustace mbaya
2009KE280-Faniel muriungi
2009KE280-Mary kirigo
2009KE280-Patrick kinoti
2009KE514-Jecinta mugethi
2009KE514-Mary wanjiru
2009KE514-Mary w. wachira
2009KE514-Rachael w. Githaiga
2009KE514-Johnson mwithiga
2008KE1289-Bsl J Maina W Farm
2008KE1285-Bsl S wanjiku K farm
2008KE1286-Bsl J Weru farm
2008KE1285-Bsl F M Kibocha frm1
2005KE741-MARY-FARM
2005KE741-KIRIMI-FARM
2005KE741-MARGRET-ACACIA
2005KE741-KINANU-HOME
2005KE741-JANET-HOME
2007KE217-JENIFFER-VALLEY
2007KE217-JENIFFER-HILL
2007KE217-ZABLON MIRITI-HILL B
2007KE217-JENIFFER-HOME.
2008KE1665-MUTUA-FARM
2007KE716-Munyua B
2008KE338-Elifas mputhia B
2008KE550-Damaris mugira
2007KE723-Lilian mumbi
2007KE723-Jelica muthoni
2007KE723-Stella kaari baseli
2007KE723-Vetronina muraga
2007KE723-Evangeline kiambi
2006KE790-Lawrence riungu
2007KE933-George muiru
2007KE933-Geralnd m muchiri
2007KE933-Julia kananua
2007KE444-Silas B
2007KE444-Silas Kinoti A
2006KE395-Simion C
2006KE395-Simion B
2006KE1201-Zaberio kiambi A
2006KE1201-John muriuki
2006KE388-Simon gatobu A
2006KE1265-Zaida K Abdii
2006KE1265-Sasinta Kirinya
2007KE147-Josphat kinoti b
2007KE147-Charles mutugi
2007KE370-Andrew kiguna M
2007KE370-Jeniffer Gaceri Muga
2007KE514-Rael
2006KE134-PatrickMbaabu(A)
2006KE173-T kinya trees
2006KE521-Francis Kirongo
2006KE1289-John Marete
2006KE917-Simon meru
2008KE1334-Fredrick Riungu
2008KE1334-Andrew Kirimi
2008KE1334-Andrew Kirimi B
2006KE917-Philip Mutethia
2005KE741-RHODA-06.
2005KE1072-MWITI-HOME
2005KE1072-MERCY KIMATHI-HOME
2005KE1072-FLORENCE JONAH-ROAD
2005KE1072-DANIEL-HOME
2005KE1072-ESTHER MWONGERA-FARM
2005KE317-Susan-Family
2006KE799-Joseph m'magiri
2006KE96-Joseph muonja
2006KE96-Joseph kirugi A
2005KE555-KINOTI-FENCE.
2005KE607-HENERYFARM
2005KE607-DANIELGATE A
2005KE607-DANIEL05
2005KE877-YOUTH-FARM (inactive)
2005KE346-ALICE-HOME. (inactive)
2005KE346-JOSEPH-FARM
2005KE608-ROSE 05

2008KE2462-Charles wachira
2008KE2462-Simon waigwa
2008KE2462-Macharia waigwa
2008KE273-Francis Nderitu
2008KE273-Jane W Maina
2008KE273-Consolata Wanjau
2008KE241-Mbauni
2006KE652-Felicita M Farm
2006KE652-Fericita eucalyptus
2006KE652-Fericita
2006KE652-Nguyo Githae
2006KE652-felicita Mumbi lower
2005KE1261-Ernest Muriu
2005KE1261-Timothy Mwangi
2005KE1261-Ausilio Thagaru
2005KE1261-Peter Warutere
2005KE1260-Samuel Ndungu
2005KE1260-Peter Kagai
2008KE1341-Wachira Wanyoro
2008KE1341-Wachira Road

Total 138 PAs (135 active PAs + 3 inactive PAs)

Appendix 1: VCS Verification Checklist

for

Title: The International Small Group and Tree Planting Program, Kenya, VCS-006

Verification 02

Monitoring Period: 30/06/2012 to 31/12/2013

Based on VCS VVM Version 3.1

JACO CDM

Table 1: Periodic Verification Checklist

OBJECTIVE	Ref.	COMMENTS	Concl. (incl. FARs/ CARs)
Project Title			
0.1. Project title, monitoring period and version number of the report, ID of the project: Are they consistent with the Monitoring report spread sheet and the registered PD?	/1/ /5/	Project title: The International Small Group and Tree Planting Program, Uganda, VCS-001 Monitoring period: 30/06/2012 – 31/12/2013 Monitoring report version: ~~01~~ updated to 07 Project ID: 899 https://vcsprojectdatabase2.apx.com/myModule/Interactive.asp?Tab=Projects&a=2&i=899&lat=2%2E503983&lon=34%2E958549&bp=1	OK
A. Description of project activity			
A.1 Purpose and general description of project activity Does the Monitoring report describe a brief summary of the project as below? e) The purpose of the project activity and the measures taken to reduce greenhouse gas emissions; f) Brief description of the installed technology and equipments; g) Relevant dates for the project activity (e.g. construction, commissioning, continued operation periods, etc.); and h) Total emission reductions achieved in this monitoring period.	/1/ /5/	The International Small Group and Tree Planting Program (TIST) empower Small Groups of subsistence farmers in Kenya, Uganda, India and Tanzania to combat the devastating effects of deforestation, poverty and drought. Combining sustainable development with carbon sequestration, TIST supports the reforestation and biodiversity efforts of over 65,000 subsistence farmers. Carbon credit sales generate participant income and provide project funding to address agricultural, HIV/AIDS, nutritional and fuel challenges. As TIST expands to more groups and more areas, it ensures more trees, more biodiversity, more climate change benefit and more income for more people. KE PD-VCS-006 is a grouped AFOLU project, eligible under the Afforestation, Reforestation and Revegetation (ARR) category. It is a subset of the TIST project in Kenya and initially applied to 3,961 of the Small Groups, 29,222 members, 18,099 project areas and 7,419.2 ha. The PD was validated and first verified on 27 September 2012 by Environmental Services, Inc. (ESI). At that time all of the	OK

OBJECTIVE	Ref.	COMMENTS	Concl. (incl. FARs/ CARs)
		Project Areas were established and the monitoring systems were in place. The net reduction of the monitoring period is as below. Gross reductions: ~~156,791 tCO_2e~~ updated to 154,225 tCO_2 Buffer: ~~15,679 tCO_2e~~ updated to 15,423 tCO_2 Net reductions: ~~141,112 tCO_2e~~ updated to 138,802 tCO_2	
A.2. Sectoral scope and project type - Does the sectoral scope(s) indicated? - Do the AFOLU project category and activity type indicated? - (Groped project): It is to be indicated as a grouped project.	/1/ /5/ /22/	Sectoral scope: The sectoral scope and its category are described as that the project is AFOLU ARR project. It is a grouped project.	OK
A.3. Location of project activity Is complete information of the location of the project activity: town, city, country and GPS coordinates described?	/1/ /5/ /4/	The TIST Kenya Project is located in central Kenya in the Central, Rift Valley and Eastern Provinces. Most of the project activity is centered around Meru and Nanyuki. The individual project areas, their location and their boundaries are presented in a KML file with around latitude -0.4º ~ 0.5º S, longitude 35ºE ~ 38ºE.	OK
A.4. Project participant(s) Are the project participants consistent with the project activity?	/1/ /5/	Project proponent is CAAC and consistent with the PD. Other project participants are approx. 18,000 farmers who joined the project.	OK
A.5. Project start date and crediting period The day, month and year are to be indictaed.	/1/ /5/	Project start date: 01/01/2004, Crediting period: 30 years starting 01/01/2004 and ending 31/12/2033	OK
A.6. Reference of applied methodology Are the exact reference (number, title, version)	/1/ /5/	The monitoring methodology is clearly indicated as CDM AR-AMS0001 version 06: “Simplified baseline and monitoring methodologies for small scale afforestation and reforestation project activities under the clean development mechanism	

OBJECTIVE	Ref.	COMMENTS	Concl. (incl. FARs/ CARs)
indicated? (a) The applied methodology (b) Tools and other methodologies to which the applied methodology(ies) refers.	/28/	implemented on grasslands and croplands". **<u>Clarification Request 1:</u>** **Relevant tools and other methodology(ies) applied to the project activity are to be confirmed.**	~~CL 1~~ OK
A.7. Other Programs If applicable, following information is to be included i) Emission trading programs and other binding limits, j) Other forms of environmental credit, k) Participation under other GHG programs	/1/ /22/ /28/	(1) Limit: The GHG removals of each project activity instance are limited by the limit of the applied methodology and capacity limit for group project of VCS standard. The limit is clearly described in the PD as 4,800 tCO_2 per a project area. **<u>Clarification Request 2:</u>** **(1) The result of the maximum GHG removals of each project activity instance is to be confirmed.** **(2) Participation under other forms of environmental credit and GHG programs is to be confirmed.**	~~CL 2~~ OK
A.8. Open issue by the validation or previous verifications	/1//5/ /6//7/	It was confirmed by the validation report and 1st verification report that there is no open issue by the validation or previous verifications.	OK
B. Implementation of the project This part covers the essential checks during the on-site inspection at the project's site, which is indispensably for 1st verification			
B.1 Description of implemented registered project activity Determine whether the project activity has been implemented and operated as per the registered			

OBJECTIVE	Ref.	COMMENTS	Concl. (incl. FARs/ CARs)
PD or any approved registered PD, and that all physical features (technology, project equipment, and monitoring and metering equipment) of the project are in place			
B.1.1. Implementation status of the project - The starting date of the project: consistent with the registered PD? - Is the information described regarding the actual operation of the project activity during the monitoring period, including information on special events? (ex.: overhaul times, downtimes of equipment, exchange of equipment, etc.) - Is a brief explanation described: (i) Events or situations that occurred during the monitoring period, which may impact the applicability of the methodology? (ii) How the issues resulting from these events or situations are being addressed?	/1/ /2/ /5/	a) It is confirmed that the project starting date is 01/01/2004 and consistent with the registered PD. b) It was described in the monitoring report version 01 that 10 PAs have been removed from the list after the 1st verification. c) During the on-site visit, it was explained that several PAs were found inactive due to several reasons such as harvesting, landowner changed, pest and fire, etc. It is described in the monitoring report that 604 PAs have been removed from the list in the validated PD because few farmers have left the program. During the on-site visit for the 2nd verification, JACO CDM was informed that there are other PAs which have been removed from the TIST project. **<u>Clarification Request 3</u>** **(1) Please inform about the present status of inactive PAs and how to address to these PAs.** **(2) What is the reasons of the removals these PAs.** **(3) Whether the changes would have been known prior to registration and how the changes would impact the overall operation/ ability of the project activity to deliver emission reductions as stated in the PD,** **(4) The impact to the conclusions of validation report of the registered PD (Additionality, Scale, Applicability of methodology, compliance of the monitoring plan, level of accuracy of the monitoring),** **(5) The impact to the non-permanence risk is to be explained.** **(6) It is to be confirmed about the special events which might impact the applicability of the methodology during the monitoring period.**	~~CL 3~~ OK

OBJECTIVE	Ref.	COMMENTS	Concl. (incl. FARs/ CARs)
B.1.2. Physical components Check the installation of all required facilities and equipment as described by the PD.	/1/	NA	**NA**
B.1.3. Project boundaries Check whether the project boundaries are still in compliance with the ones indicated by the PD.	/1/ /4/ /5/	JACO CDM confirmed during the on-site visit of 138 PAs among approx. 18,000 PAs, checked typical coordinates by GPS and compared with kml files that the project boundaries are described correctly in the kml file.	~~**CL 5**~~ OK
B.1.4. On-site visit Was on-site visit conducted? If not, justify the rational of decision.	-	The on-site visit was conducted during 17/02/2014 – 26/02/2014. The visited PAs are listed in the attached sheet.	OK
B.2. Deviations The VVB shall determine whether the deviation is appropriately described and justified. Further the VVB shall determine whether the project remains in compliance with VCS rules.			
B.2.1. Temporary deviations from registered monitoring plan or applied methodology Check whether there are deviations from the registered monitoring plan and/or methodology.	/1/	NA	NA
B.2.2. Corrections Check whether any corrections to project information or parameters fixed at validation, as	/1/ /2/	Some errors have been discovered in the PA data sheets and the KML files but these only affect the data and not the methodology, the overall PD or the Project Standard. Some of the PAs have been marked inactive and their trees and carbon have been set to zero. Most of these PAs will remain inactive through the	OK

OBJECTIVE	Ref.	COMMENTS	Concl. (incl. FARs/ CARs)
described in the registered PD, made by project participants in a revised PD comply with the requirements of the Project Standard.	/4/	life of the Project. Where errors in the KML files were found, either the PA was removed (such as a case where the PA was identified in the PD but the trees were planted in a different location), or the trees were recounted (cases where trees were counted on a farm but were outside the boundary of the PA). Ref **CL 3**.	
B.2.3. Permanent changes from registered monitoring plan or applied methodology Check whether there are permanent changes from the registered monitoring plan and/or methodology.	/1//5/ /22/ /27/	As for the operational process of the monitoring plan, it is described in the registered PD § 4.3.1 as below. For monitoring the actual GHG removal by sinks are for TIST quantifiers to visit each grove once per year and, at minimum, once every five years to count trees and collect circumference, GPS and other data. **<u>Corrective Action Request 1</u>** **It was found that TIST quantifiers are not always visiting each grove annually. This is a deviation from the registered monitoring plan.** **It is to be described and to be justified in the monitoring report in accordance with the VCS Standard 3.6 (p13) and VCS Guidance VVM (Validation and Verification manual) § 3.2.7 (p23).**	~~**CAR 1**~~ OK
B.2.4. Changes to project design of registered project activity Check whether there are proposed or actual changes to the project design of a registered VCS project activity. (VVS 269 -282) <u>It is to be assessed;</u> (1) proposed or actual changes as compared to the registered PD, (2) when the changes occurred, reasons for changes,	/1/ /5/	As for the changes due to removals of some PAs are described in B.1.1 above. Refer to **CL 3.** It was confirmed that there are no other changes to project design of registered project activity.	~~**(CL 3)**~~ OK

OBJECTIVE	Ref.	COMMENTS	Concl. (incl. FARs/ CARs)
whether the changes would have been known prior to registration and how the changes would impact the overall operation/ ability of the project activity to deliver emission reductions as stated in the PD, (3) an assessment whether the changes would adversely affect the conclusions of validation report of the registered PD (Additionality, Scale, Applicability of methodology, compliance of the monitoring plan, level of accuracy of the monitoring), (a) the revisions ensures that the level of accuracy and completeness in the monitoring and verification process is not reduced, (b) the revisions are in accordance with the monitoring methodology.			
B.2.5. Changes to start date of crediting period If the project participants wish to change the start date of the crediting period in accordance with section H of the Project Standard, the VVB shall determine whether the proposed changes result in a less conservative baseline.	/1//5/	No change. The starting date of crediting period is 2004/01/01.	OK
B.2.6. Description of the monitoring report (a) Is the deviation appropriately described and justified in the monitoring report? (b) Is the project remain in compliance with the VCS rules?	/1/ /24/ /28/	Yes, the deviation is appropriately described in the monitoring report version 07. The project remains in compliance with the VCS rules.	OK

OBJECTIVE	Ref.	COMMENTS	Concl. (incl. FARs/ CARs)
B.3. Grouped Projects Key elements for grouped projects are to be assessed.			
B.3.1. Following key elements are to be assessed. (a) Geographic area: Are geographic areas clearly identified? (b) Baseline scenario and additionality: - A single baseline scenario exists for each geographic area. - Additionality is demonstrated across the entity of each geographic area. (c) Eligibility: - Eligibility criteria are developed sufficiently. - Eligibility criteria must conform to any restrictions set out in the methodologies applied. (d) Monitoring plan and GHG information system: - The project has an appropriate monitoring plan that includes a sampling plan to collect data from all project activity instances and information systems, allowing for centralized data collection. (e) Methodology: Any capacity limits applicable to the methodology are to be adhered.	/1//4/ /5/ /22/ /24/ /28/	(a) Yes. The Geographic area of each PA is clearly indicated in the kml file. (b) Yes. (c) The eligibility is demonstrated based using the CDM EB 35 Annex 18 in the registered PD and VCS standard version 3.4 section 3.4.8 about capacity limits. (d) The monitoring is conducted for all PAs and there is no sampling applied to the project. (e) Ref. **CL 2** (Capacity limits applicable to the methodology: Ref. to the CDM methodology AR-AMS0001 version 6.)	~~**(CL 2)**~~ OK
C. Description of the Monitoring System Verification of the monitoring plan of the project complies with the applied monitoring methodology.			

OBJECTIVE	Ref.	COMMENTS	Concl. (incl. FARs/ CARs)
C.1. Monitoring plan & monitoring methodology			
C.1.1. Monitoring Plan and methodology Check whether the monitoring plan of the project in accordance with the approved methodology applied by the proposed VCS project activity.	/1/ /5/ /28/	JACO CDM confirmed that the monitoring plan of the project is in accordance with the approved methodology. Sampling method of selecting 20 trees for DBH measurement is conducted in accordance with the Quantifiers monitoring manual. It was explained and demonstrated at site including avoiding double counting. Counting of trees was demonstrated at site visit. Circumference measurement was also demonstrated by sampling. Age of tree is estimated based on the Quantifies record and farmers memory. **<u>Clarification Request 4</u>** **Please explain;** **a) the area calculation using GPS,** **b) Preventing the double counting of the same PA,** **c) Preventing the counting of different PA,** **d) Preventing the counting of trees outside of the PA.** **(∵ It was observed that the boundaries are not clearly marked at the site. Double counting such as above may happen if Quantifier changed.)**	~~**CL 4**~~ OK
C.1.2. Revision of Monitoring Plan In case if the monitoring plans of the project is not in accordance with the monitoring methodology, is the revision of the monitoring plan justified in accordance with VCS rules?	/1/ /28/	NA ∵ The monitoring plan of the project is in compliance with the applied monitoring methodology AR AMS0001 version 06.	NA
C.1.3. Monitoring activities and monitoring plan (a) Check whether the monitoring activities of the project in accordance with the approved monitoring plan. (b) Check whether diagrams of the monitoring	/1/ /5/ /28/	**<u>Clarification Request 5</u>** **(1) The uncertainty due to the sampling method of tree DBH is to be explained and justified.** **(2) Please explain how to avoid the input error by Quantifier. (Circumference, number of trees, etc)**	~~**CL 5**~~ OK

OBJECTIVE	Ref.	COMMENTS	Concl. (incl. FARs/ CARs)
system and the information flow are described appropriately.			
C.1.4 Monitoring Aspect Are there any monitoring aspects of the project activity that are not specified in the methodology (e.g. additional monitoring parameters, monitoring frequency and calibration frequency)?	/1/ /5/ /28/	**Clarification request 6** **(1) Please provide information about;** **- Fire accident** **- Pest or other accidents** **(2) How to address above issues, if applicable.**	~~CL 6~~ OK
C.2.2. Management and Operational System In order to ensure a successful operation of a Client project and the credibility and verifiability of the ERs achieved, the project must have a well defined management and operational system.			
C.2.1. Reporting procedures Check how reports with relevance for the later determination of emission reductions will be generated.	/1/ /5/ /8/	**Clarification Request 7** **(1) Please provide the recent audit records.**	~~CL 7~~ OK
C.2.2. Documented instructions Check whether the personnel performing tasks with sensitivity for the monitoring of emission reductions have access and knowledge of documented instructions, forming a part of the project's management system.	/1/ /5/ /10/- /12/	**Clarification Request 7** **(2) Please provide Quantifiers training records.**	~~CL 7~~ OK
C.2.3. Documentation The system should be documented by manuals and	/1//5/ /12/	**Forward Action Request 1** **Please indicate the name of quantifiers in the Ex-post Strata spreadsheet in subsequent monitoring period so that the verifier can notice who was**	~~(CL 7)~~ ~~FAR 1~~

OBJECTIVE	Ref.	COMMENTS	Concl. (incl. FARs/ CARs)
instructions for all procedures and routines with relevance to the quality of emission reductions. The accessibility of such documentations to persons working on the project has to be secured.		**responsible for each PA and consider it while making a site visit plan.**	OK
C.2.4. Qualification and training The system should describe the requirements on qualification and the need of training programs for all persons working on the emission reduction project. Performed training programs and certificates should be archived by the system.	/1/ /10/- /12/	ditto	~~(CL 7)~~ OK
C.2.5. Allocation of responsibilities The allocation of responsibilities should be documented in written manner.	/1//5/ /12/	The organization and responsibility are described in the monitoring report section 3.3.1. **<u>Clarification Request 7</u>** **(3) Please provide the recent monthly cluster meeting records.**	~~CL 7~~ OK
C.2.6. Emergency procedures The system should contain procedures which provide emergency concepts in case of unexpected problems with data access and/or data quality.	/1/ /12/	**<u>Clarification Request 7</u>** **(4) Please provide the procedures in case of unexpected problems such as fire, pest, etc.**	~~CL 7~~ OK
C.2.7. Data archiving The system should provide routines for the archiving of all data which is required for verifying the project's performance in the context of	/1/ /12/	**<u>Clarification Request 7</u>** **(5) Please explain about archiving at site office and CAAC.**	~~CL 7~~

OBJECTIVE	Ref.	COMMENTS	Concl. (incl. FARs/ CARs)
consecutive verifications.			
C.2.8. Monitoring report The system includes procedures for the calculation of emission reductions and the preparation of the monitoring report.	/1/ /5/	CAAC is preparing the monitoring report.	OK
C.2.9. Internal QA/QC The system includes internal control procedures, which allow the identification and solution of problems at an early stage.	/1//5/ /8/	Ref CL 7 (1) of C.2.1.	~~(CL 7)~~ OK
D. Calculation of emission reductions GHG emission reductions achieved by/resulting from the proposed VCS project activity shall be calculated applying the selected methodology.			
D.1. Assessment of data and calculation			
D.1.1. Complete set of data Check whether the complete set of data for the specified monitoring period available. If not, was the most conservative assumption taken, or a request of deviation raised?	/1/ /2/	OK It is confirmed that the complete set of data for the 2nd monitoring period is available in the spreadsheet and TIST web site.	OK
D.1.2. Cross-check Information provided in the monitoring report is to be cross-checked with other sources such as plant log books, inventories, purchase records,	/1//2/ /12/	Cross check of the spreadsheet data was conducted during on-site visit with quantifiers' records in their notebook.	OK

OBJECTIVE	Ref.	COMMENTS	Concl. (incl. FARs/ CARs)
laboratory analysis.			
D.1.3. Emission reduction Calculation Check whether the calculations of baseline emissions, proposed VCS project activity emissions and leakage, as appropriate, have been carried out in accordance with the formulae and methods described in the monitoring plan and the applied methodology document.	/1//5/ /12/ /28/	It was confirmed that the GHG removal calculation is carried out in accordance with the formulae and methods described in the monitoring plan and the applied methodology AR-AMS0001 version 06.	OK
D.1.4. Assumptions in emission calculation Justify any assumptions used in emission calculations.	/1/ /2//5/ /28/	Allometry equation is applied for volume estimate in accordance with the registered PD. The carbon stock calculation in the spreadsheet is carried out using the tree age at the end of 2013. This is applied for all the trees of PAs independent of the monitoring date which scatters during past 5 years. **Clarification Request 8** **Please justify the assumptions above applied to the carbon stock calculation, taking into account the risk of harvesting, fire, owner's change, etc.**	~~CL 8~~ OK
D.1.5. Appropriate emission factor Check whether appropriate emission factors, IPCC default values and other reference values have been correctly applied.	/1//2/ /5/	ditto	OK
D.2. Emission Reduction Calculation			
D.2.1 Calculation of baseline emissions	/1//5/ /28/	**Clarification Request 9**	~~CL 9~~

OBJECTIVE	Ref.	COMMENTS	Concl. (incl. FARs/ CARs)
Check whether the calculations of baseline emissions have been carried out in accordance with the formulae and methods described in the monitoring plan and the applied methodology document		**Where some PAs are removed from the project, it is to be confirmed whether the baseline is adjusted or not.**	OK
D.2.2 Calculation of project emissions Check whether the calculations of project emissions have been carried out in accordance with the formulae and methods described in the monitoring plan and the applied methodology document	/1//5/ /28/	NA	NA
D.2.3. Calculation of leakage emissions Check whether the calculations of leakage emissions have been carried out in accordance with the formulae and methods described in the monitoring plan and the applied methodology document	/1//5/ /28/	NA	NA
D.2.4. Summary of calculation of emission reductions Check whether the calculated summary is described in accordance with the monitoring plan and the applied methodology document	/1//2/ /5/ /28/	(based on the results of above discussion)	
D.2.5. Capacity limit The capacity limits are to be assessed. (a) Capacity limits by the applied methodology. (b) Capacity limits due to grouped project. (VCS standard version 3.4 § 3.4.8.	/1//2/ /22/ /28/	**<u>Clarification Request 10</u>** **The project is a grouped project, hence, it is stated in the registered PD that the capacity limit is 4,800 tCO_2/PA. (16,000 tCO_2/year x 30 years x 1% = 480,000 tCO_2 x 1%.)** **Please demonstrate about the calculated maximum GHG removals during the 2nd monitoring period and justify that the project complies with this**	~~**CL 10**~~ OK

OBJECTIVE	Ref.	COMMENTS	Concl. (incl. FARs/ CARs)
		capacity limit.	
E. Data and parameters Verification of the monitoring of the project in accordance with the registered PD.			
E.1. Data and parameters fixed ex ante or at renewal of crediting period			
E.1.1. Data and parameters Are all used data and parameters fixed ex ante or at renewal of crediting period listed and described properly?	/1//2/ /5/	Some PAs are removed from the TIST project. Ref **CL 3**	~~**(CL 3)**~~ OK
E.2 Data and parameters monitored			
E.2.1. Type and sources of internal data Acquire information on type and source of internal GHG data, which is used in calculations of emission reductions. e.g..” continuous direct measurements”, “site-specific correlations”, “periodic direct measurements”, “use of models” and/or “use of default emissions factors”.	/1/ /2//5/	Number of trees and DBH are internal data monitored.	OK
E.2.2. Quality assurance Does internal data collection underlie sufficient quality assurance routines?	/1//2/ /5//8/	**<u>Clarification Request 11</u>** **(1) Please explain about the case where the data was corrected during the TIST QA activities such as staff audits, US Team audits, etc.**	~~**CL 11**~~ OK
E.2.3. Significance and reporting risks Assess the significance and reporting risks related	/1//2/ /5//8/	**<u>Clarification Request 11</u>** **(2) Please explain how to address to possible internal risks considered such as followings; (As for double counting risk: refer to CL 4 above C.1.1.)**	~~**CL 11**~~ OK

OBJECTIVE	Ref.	COMMENTS	Concl. (incl. FARs/ CARs)
to the different internal data sources. Potential reporting risks may be related to the calculation methods, accuracy of data sources and data collection and/or the information systems from which data is obtained. The significance of and risks associated with the data source indicate the level of verification effort required at a later stage.		**Selection of 20 trees for circumference measurement (risk of biased selection of sample trees)** **Mistake in counting of trees** **Mistake of boundary of PA** **Mistake in circumference measurement** **<u>Forward Action Request 2</u>** **(1) The verification team noticed that some of the trees were dead or thinned after the latest quantification (monitoring).** **(2) The verification team raised a concern of mistake of counting coppices of Eucalyptus trees.** **(3) It was further noted that the data of strata in circumference monitoring were not consistent with the information of existing strata in the ex-post monitoring spreadsheet.** **Mitigation measures are to be established in future monitoring periods so that the project proponent can ensure to avoid mistake in terms of such aspects.**	**FAR 2**
E.2.4. Type and sources of external data Acquire information on type and source of external data, which is used in calculations of emission reductions	/1//2/ /5/	External data are allometric equations, biomass expansion factor. It was confirmed that they are the same as the registered PD.	OK
E.2.5. Access to external data How is data transferred? How can reproducibility of data set be ensured?	/1//2/ /5/	The external data including allometry equations and biomass expansion factor are indicated in the registered PD and they are published data as indicated in the PD.	OK
E.2.6. Emergency procedures Are there any procedures which will be applicable if there is no access to relevant external data?		NA	NA

OBJECTIVE	Ref.	COMMENTS	Concl. (incl. FARs/ CARs)
Baseline, project emission & leakage emission factor			
E.2.7. Baseline emission parameter (VVS 234 (b)) (1) Are all the parameters listed in accordance with the monitoring plan? (2) Is the information flow of each parameter appropriate?	/1//2/ /5/	**Ref. CL 9 above.**	~~**(CL 9)**~~ OK
E.2.8. Project emission parameter (VVS 234 (b)) (1) Are all the parameters listed in accordance with the monitoring plan? (2) Is the information flow of each parameter appropriate?	/1//2/ /5/	NA	NA
E.2.9. Leakage emission parameter (1) Are all the parameters listed in accordance with the monitoring plan? (2) Is the information flow of each parameter appropriate?	/1//2/ /5/	NA	NA
Accuracy of equipment The accuracy of equipment used for monitoring is in accordance with the relevant guidance provided by VCS and calibrated in accordance with the monitoring plan.			
E.2.10. Monitoring and metering equipment Check whether the required metering systems have been installed. The meters have to comply with	/1//5/	GPS is used for checking the boudaries and area measurement. Measurement tape is used for circumference measurement and commonly used for tree circumference measurement.	OK

OBJECTIVE	Ref.	COMMENTS	Concl. (incl. FARs/ CARs)
appropriate quality standards applicable for the used technology.			
E.2.11. Data uncertainty How will data uncertainty be determined for later calculations of emission reductions? Is this in compliance with monitoring and metering equipment?	/1//2/ /5/ /28/	The uncertainty is calculated in accordance with the commonly used equation which is in line with the CDM methodology. /30/ The calculated result is 0.41% and it is below 10% which is within the targeted precision level of ±10% of the mean at a 95% confidence level specified in the applied methodology AR-AMS0001 ver.06./28/	OK
E.2.12. Data acquisition and data processing Check the eligibility of used systems.	/1//2/ /5/ /12/	The verifier confirmed that the TIST's data acquisition and data processing system is effective and reliable. This system is appropriate to avoid human errors in such project that consists of approx. 18,000PA and many tree data, etc. The system consists of the handheld devices which are programmed in a manner that requires the data to be collected in a step-by-step manner, increasing the likelihood that all the data will be collected. Data field characteristics are defined to force the use of numbers, text or special formats. Drop down menus are used to restrict answers to certain subsets (e.g. a TIST Small Group name comes from a drop down menu).	OK
E.2.13. Calibration and quality assurance Check how monitoring and metering systems are subject to calibration and quality assurance routines a) with installation b) during future operation	/1//2/ /5/	NA	NA
E.2.14. Delayed Calibration In case of delayed calibration or the calibration has		NA	NA

OBJECTIVE	Ref.	COMMENTS	Concl. (incl. FARs/ CARs)
not been conducted at the time of verification, does the calculation adopt conservative approach?			
E.3. Implementation of sampling plan			
E.3.1. Sampling procedures Are the sampling procedures in accordance with VCS standard?	/1//2/ /5/ /12/	Number of trees for all PAs are physically counted. The circumference of trees is measured for 20 trees as described in the monitoring plan of the PD. The verifier confirmed by the monitoring activity during the on-site visit that the sampling of 20 trees are in accordance with the Quantifiers manual, not biased and appropriate. /12/	OK

Table 2: Resolution of Corrective Action and Forward Action Requests

Corrective action, clarification and forward action requests	Ref. to checklist Table 1	Summary of project owner's response	Conclusion
<u>Corrective Action Request 1</u> **It was found that TIST quantifiers are not always visiting each grove annually. This is a deviation from the registered monitoring plan.** **It is to be described and to be justified in the monitoring report in accordance with the VCS Standard 3.6.1 (p13) and VCS Guidance VVM (Validation and Verification manual) § 3.2.7 (p23).**	B.2.3	The deviation does not impact the applicability of the methodology, additionality or the appropriateness of the baseline scenario, and the project remains in compliance with the applied methodology. This is not an additionality issue or a baseline issue. The only date requirement in the methodology is to monitor within five years. There is no requirement to visit a PA any more than every five years. As shown in the statistics table of the verification data spreadsheet, the targeted precision level is within the 10% of the 95% confidence level. The following has been added to Section 2.2.2 of the Monitoring Report: There is a deviation from the PD. In the PD we stated "the operational processes for monitoring the actual GhG removal by the sinks are for TIST Quantifiers to visit each grove once per year and, at minimum, once every five years to count trees and collect circumference, GPS and other data" (Section 4.1.3). TIST Quantifiers are not visiting each PA (grove) once per year. While counting trees and collecting circumference every five years is a requirement of the methodology (and followed by the Project), visiting every PA every year was simply an operational goal. Not making annual visits does not impact the applicability of the methodology, additionality or the appropriateness of the baseline scenario. That it was an operational goal was clearly stated in Section 4.3.5, "TIST's internal goal is to quantify each project area once per year." There are 18,000 PAs in this PD and over 50,000 in TIST Kenya. Unfortunately, visiting every PA every year proved to be too costly to maintain. Instead the entire TIST program in Kenya was modified and centered on a "Cluster" administrative structure. A Cluster is a group of Small Groups within walking distance that has their own local	OK It was confirmed that the monitoring frequency is defined as 5 years in the applied methodology AR-AMS0001 ver. 06 and in the registered monitoring plan. The monitoring (number of trees in each PA, DBH measurement and CO2 calculation) in the 2nd monitoring period is conducted within 5 years in accordance with the monitoring plan. It was confirmed from the interviews with quantifiers during on-site visit that the purpose of quantifiers' visiting each groves per year is to assist small groups in training, share "best practices," share news and newsletters and discuss quantification issues. Considering the cost and man-power availability, it is considered practical and appropriate to modify quantifier's visiting each grove once per year to a "Cluster" administrative structure. The modification does not impact the applicability of the methodology, additionality and the baseline. Also, the modification does not result in a negative performance of the monitoring of the project and it is acceptable as per VCS VVM § 3.2.7 (p23).

Corrective action, clarification and forward action requests	Ref. to checklist Table 1	Summary of project owner's response	Conclusion
		leadership. It is where Small Groups receive training, voucher payment, share "best practices," share news and newsletters and discuss quantification issues. A Quantifier is assigned to each Cluster and their scope has been broadened to include training and assisting Cluster leaders as they rotate into new positions. The Cluster provides an alternate method of gathering intelligence about what is happening at the Small Group level and to individual groves. This allows us to get the same information that a Quantifier might get on a non-quantification visit (i.e. the annual visit) by asking members and their neighbours about changes, at a more sustainable cost. The ideal schedule for Cluster meetings is one per month, increasing the frequency of opportunity to learn about changes at the grove level.	**Forward Action request 3** **Each Cluster meeting is to keep updated information about what is happening at the Small Group level and to individual groves. Such information includes PAs situation of removal or pending.**
Clarification Request 1: **Relevant tools and other methodology(ies) applied to the project activity are to be confirmed.**	A.5	The monitoring methodology used by the Project is CDM AR-AMS0001 Version 06: "Simplified baseline and monitoring methodologies for small-scale afforestation and reforestation project activities under the clean development mechanism implemented on grasslands or croplands" and the associated tools. AFOLU Non-Permanence Risk Tool version 3.2 was also used. No other tools or methodologies were used for this verification report.	OK The applied monitoring methodology CDM AR-AMS0001 Version 06 and associated CDM tools are appropriate. VCS AFOLU Non-Permanence Risk Tool version 3.2 is also appropriate.
Clarification Request 2: **(1) The result of the maximum GHG removals/year of each project activity instance is to be confirmed.** **(2) Participation under other forms of environmental credit and GHG programs is to be confirmed.**	A.6	(1) It has been confirmed in the verification data spreadsheet that all of the existing instances remain below the 1% threshold for eligibility. It has been confirmed in the verification data spreadsheet that all of the existing instances remain below the 1% threshold for eligibility. (2) The Project is certified under Climate, Community and Biodiversity Standard (CCBA) as "TIST Program in Kenya CCB-003." CCBA does not issue GhG credits. The Project does not participate in any other forms of environmental credits or GHG programs.	OK (1) It was confirmed that all of the existing project instances remain below 1% threshold for eligibility (4,800 tCO_2/year). (2) It was confirmed that the project does not participate in any other GHG programs which issue GHG credits.
Clarification Request 3 **(1) Please inform about the present status of inactive PAs and how**	B1.1	(1) The status of each individual PA, i.e. whether it is active or inactive, is addressed in column AO of the "PA Summary" worksheet, verification data spreadsheet. If the column	OK (1) It is confirmed that the status of each PA is addressed in column AO

Corrective action, clarification and forward action requests	Ref. to checklist Table 1	Summary of project owner's response	Conclusion
to address to these PAs. **(2) What is the reasons of the removals these PAs.** **(3) Whether the changes would have been known prior to registration and how the changes would impact the overall operation/ ability of the project activity to deliver emission reductions as stated in the PD,** **(4) The impact to the conclusions of validation report of the registered PD (Additionality, Scale, Applicability of methodology, compliance of the monitoring plan, level of accuracy of the monitoring),** **(5) The impact to the non-permanence risk is to be explained.** **(6) It is to be confirmed about the special events which might impact the applicability of the methodology during the monitoring period.**		indicates something other than active, they are inactive. All carbon of each inactive PAs have been set to zero. This means that remaining PAs must first make up the carbon loss before any new credits can be issued. (2) Much of the following has been added to Section 2.1 of the monitoring report. There are several reasons for the removal of the PA and each is listed in column AO of the "PA Summary" worksheet, verification data spreadsheet. First, however, you will note that each category description is preceded by a "treatment" code. The codes are as follows: 1. Active: These are PAs that are active in TIST and have valid tree counts and calculated carbon volumes. Only Active PAs contribute to the carbon volume of this verification. 2. Pending: These are PAs that need to be reviewed to determine if they will continue as TIST PAs or need a current quantification. They will still be listed on the PA Summary sheet to acknowledge they are currently part of the PD but for this verification their trees and carbon are zero. Once their circumstances have been reviewed, they will either be removed or listed as active. If they are listed as active, we will re-establish the tree count and carbon in subsequent verifications. 3. Removed: These PA are being permanently removed from the program. They will still be listed on the PA Summary sheet to acknowledge they were part of the PD but their trees and carbon are zero. They will not participate in the future. The following describes the different categories and the way they are treated: a. Pending: Baseline Error: These are cases where the baseline and boundaries of a grove were taken at one location but the farmer decided to plant somewhere else. Due to the rules of VCS, the groves with the trees are not part of this PD. The baselined area can still be a	of the PA Summary worksheet. It is confirmed by the spreadsheet that all carbon of each PA which is other than active has been set to zero. According to the spreadsheet of the monitoring report for 2nd verification version 1 dated 21/01/2014, carbon of 604 PAs among original 18,099 PAs have been removed and set to zero. Further, during the 2nd on-site visit and later, TIST and their quantifiers reviewed the status of each PA precisely and finally carbon of 574 PAs have been additionally set to zero, that is, carbon of total 1178 PAs (604 + 574 = 1178) have been set to zero. It is conservative and appropriate. (2) The reasons of Pending and Removed are explained in detail in the revised monitoring report ver. 7. /1-7/ The status and category of each PA are clearly indicated in the spreadsheet. /2-6/ It is confirmed from the assessment and interviews from PP and quantifiers that the explanation is covering all the situations happening and appropriate. (3) It was confirmed by the spreadsheet that total carbon of the removed PAs and pending PAs is calculated as 5,706.8 + 5,757.8 = 11,464.6 tCO_2 and 3.34% of the carbon stock at the 2nd verification

Corrective action, clarification and forward action requests	Ref. to checklist Table 1	Summary of project owner's response	Conclusion
		project area if it is ever planted. Until that time the tree and carbon will be set to zero. b. Pending-Change in ownership: This includes sale to others; transfer to family members that don't want to be in TIST; and subdividing to family members whom want their groves to be treated separately. If the new owners want to keep their groves in the PD, they are eligible. c. Pending-Fire. These groves were lost to fire. If the member replants the trees will be eligible under this PD. d. Pending-Group Quit. Some groups have quit the program. Reasons include they registered in more than one group, they were too small to qualify for carbon payments, they had a misunderstanding with another member. A group can rejoin if they change their mind and rejoin before the next verification. e. Pending-Grove inaccessible. These PAs are too remote to be able to be serviced. If quantified in the future, they will be added in subsequent verifications. f. Pending-Member quit. Some members have quit. Reasons include, they refuse to be quantified so they are dropped from the program; they say they have not received any carbon payments, they had a misunderstanding with another member; they felt that participation was not in their best interest; because they did not want to participate; because they felt the carbon payment was not adequate and some for undisclosed reasons. Sometimes members change their minds about quitting so they are put in a pending category. If they don't change their minds buy the next verification they will be removed. g. Pending-Merged with another grove. These are cases where there were 2 or more original tracks on a farm and in a subsequent quantification the Quantifier merged the groves into one. Since this is not allowed under VCS rules, the carbon and trees in these groves were set to zero. If the PAs are un-	342,874 tCO_2. /2-6/ The value is less than 5% (materiality threshold value specified in the VCS Standard /22/). (4) The removed and pending PAs are made clear as stated in the revised monitoring report. These do not affect the conclusions of the validation report. The carbon of the removed and pending PAs are conservatively set to zero, hence the accuracy is not affected. (5) It is confirmed from the result of the 2nd monitoring report and its spreadsheet that the carbon stock in the 2nd monitoring period increased significantly (154,225 tCO_2 increase since 1st verification) and the impact of the loss of the PAs to the non-permanence risk is less than 3.34% of the total carbon stock as indicated in (3) above. /1-7/, /2-6/ (6) It is confirmed by the spreadsheet that only the carbon existing at the end of the verification period is calculated and it is conservative.

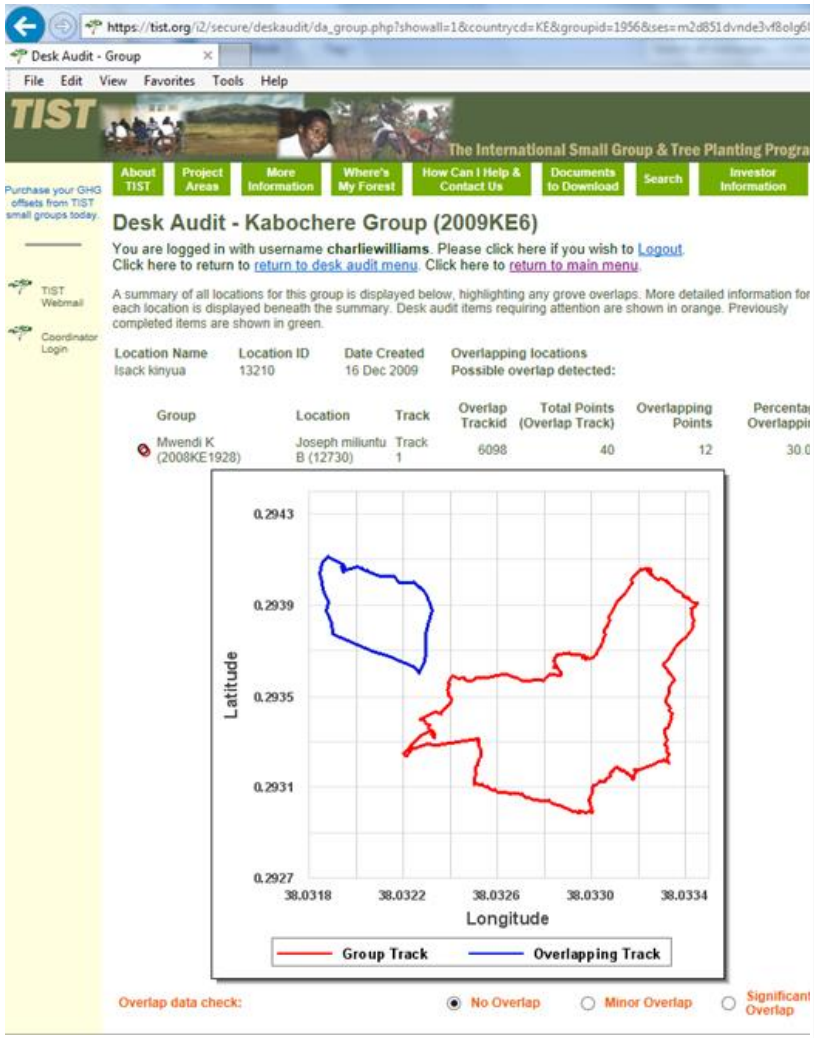
Corrective action, clarification and forward action requests	Ref. to checklist Table 1	Summary of project owner's response	Conclusion
		merged and are requantified properly, they can become eligible in a subsequent verification. h. Pending-Needs requantification. These are groves that are still active but we do not believe the quantification to be accurate. Most are groves that had no trees at the time of the first verification and have not been requantified. Their carbon was zero at the time of the first quantification and remains zero. Two other reasons for questioning the quantification are the data was lost during synchronization and poor quality of quantification. i. Pending-Never planted. The members have not planted any trees in these PA. If they do they will be included in subsequent verifications. j. Pending-Ownership dispute. This generally results when the farmer dies and the family does not agree on the inheritance. These are pending because sometime the new owners decide they want to be in TIST. Since these PAs have been validated and the baseline and additionality are not affected, this change in ownership is permitted if the new owners decide they want to keep the PAs in TIST. k. Remove-Baseline Error. These are groves where baseline trees were erroneously marked as TIST trees. These trees have been removed and the PAs are not eligible under the PD. l. Remove-Change in ownership: This includes sale to others; transfer to family members that don't want to be in TIST; and subdividing to family members whom want their groves to be treated separately. These are cases where new owners will not be eligible for membership. m. Remove-Double registration. These are cases where subsequent to validation we learned that the grove had been registered twice. This includes cases where the same farmer registered the same	

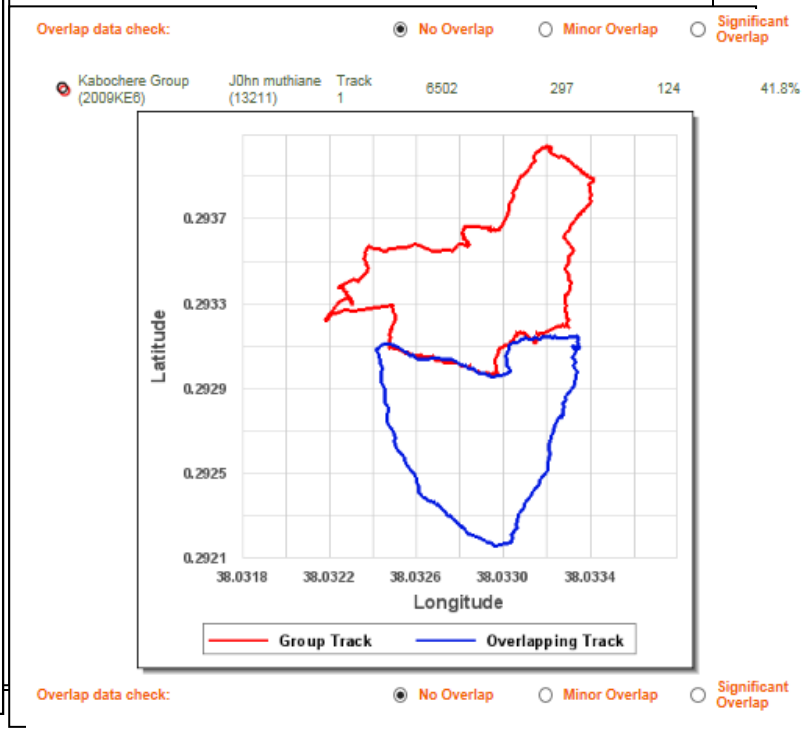
Corrective action, clarification and forward action requests	Ref. to checklist Table 1	Summary of project owner's response	Conclusion
		grove in two different Small Groups and where the same grove was quantified under 2 different names. n. Remove-Harvest. While TIST allows beneficial thinning, we do not allow harvest. Those in this category have violated the contract and have been marked inactive. We expect most of them will be removed from TIST permanently. We have identified a few, however, that removed eucalyptus trees in order to plant indigenous trees. If that can be demonstrated, those PAs may be allowed to stay in the PD. In such a case, the carbon from the harvested trees will have been debited from the total carbon of the PA and only the carbon from the new trees will be counted. o. Remove-Nursery, not a tree grove. This was a nursery mislabelled a grove. p. Remove-Overlap. These are cases where subsequent to validation we learned that the grove boundary overlapped with another grove boundary. These groves have been removed to avoid double counting. q. Remove-Registration Error. These are groves that the farmers say were not part of TIST. The likely cause is the Quantifier misunderstood the farmer during baseline and tracked the wrong area. r. Remove-Trees Removed. These are PAs where trees were removed because the land was needed for cultivation, home construction, powerlines, road expansion or school expansion. The land is not expected be available in the future as a TIST grove. s. Remove-Unauthorized registration: These are cases where an unauthorized person registered the grove for TIST. Sometimes it is the wife joining and the husband later refusing. (3) The nature of TIST relies on the participation of tens of thousands of subsistence farmers. Since they own the land	

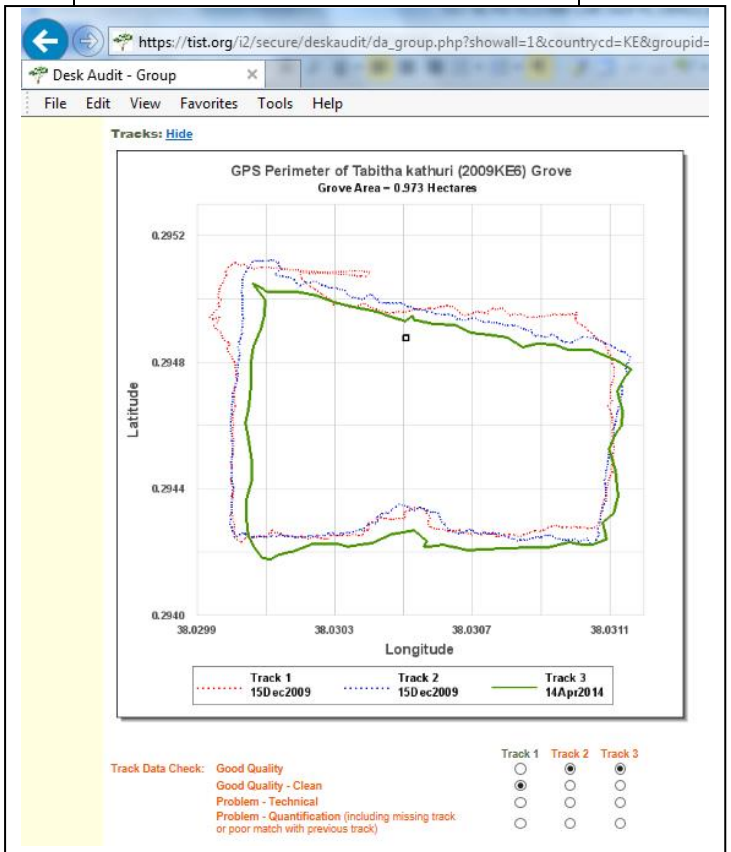
Corrective action, clarification and forward action requests	Ref. to checklist Table 1	Summary of project owner's response	Conclusion
		that make up a PAs and own the trees that sequester the carbon, their membership in TIST is critical. TIST has numerous levels of training before, during and after the acceptance for membership to try and make sure that if members join, they will stay for the 30 year life of the Project. In addition we have them sign a legally binding contract that commits them to 30 year. In spite of these actions, some members leave the program, some do not follow the rules and some fall victim of unexpected circumstances. While the number PAs that might be affected and the impact on future carbon unknown, some amount of attrition was expected from the beginning. TIST was designed to use the beneficial actions of the masses to dilute the negative actions of the few. The impact of the inactive PAs is a reduction in total carbon emission reductions available at each verification. However, just as with this verification, we expect the total carbon in the PA to show a net increase. Specifically, at the end of the first verification we had sequestered 188,649 tonnes. With this verification, after zeroing our all the inactive groves, our total had increase 154,225 tonnes to 342,874 total tonnes in 18 months. The loss of the PAs reported does not interfere with the overall operation or ability of the project activity to deliver emission reductions as stated in the PD. (4) We do not believe the inactive PAs affect any of the conclusions of the validation report. There is no affect to additionality, scale methodology or compliance with the monitoring plan. The level of accuracy is not affected because we set the carbon in the inactive PAs to zero and the results of the accuracy calculation show the Project is well within the requirements of the methodology. (5) Non-permanence is not affected by the loss of the PAs. Despite the loss, we showed a significant net gain in total carbon sequester in the 18 months since the last verification. The growth rate of the trees and increase in stem count in the remaining PAs has vastly out-paced the loss caused by	

Corrective action, clarification and forward action requests	Ref. to checklist Table 1	Summary of project owner's response	Conclusion
		the inactive PAs. (6) The applicability of the methodology is not affected. The methodology requires us to calculate the existing carbon at the time of verification, i.e. calculate the "carbon stocks within the project boundary achieved by the project activity at time *t''*. By zeroing out the trees from the inactive PA's we only calculate the carbon existing at the end of the verification period. All active PAs have been quantified in accordance with the methodology and PD. The few PAs that were in violation of the PD (wrong area baselined, overlaps, double registration, etc.), have been removed as inactive PAs.	
<u>Clarification Request 4</u> **Please explain;** **a) the area calculation using GPS,** **b) Preventing the double counting of the same PA,** **c) Preventing the counting of different PA,** **d) Preventing the counting of trees outside of the PA.** **(∵ It was observed that the boundaries are not marked at the site. Double counting such as above might happen if Quantifier changed.)**	C.1.1, C.1.3	**Location of PA and area measurement :** **a) the area calculation using GPS,** When the GPS track is synchronized to the server, it goes through our "dump sync" script. There is a call in the script that calculates the area. The area calculation is based on a java tool available on the internet: http://www.mathopenref.com/coordpolygonarea2.html **b) Preventing the double counting of the same PA,** For the validation and first verification we relied on looking at the KML files for overlaps. We found some errors and developed a desk audit tool to identify overlapping groves in the grove boundary data set. The first part of it is a bounding box algorithm that creates a rectangle using the max and min latitudes and longitudes. This identifies the potential of an overlap. The following image shows an example from the desk audit page. Above, the data base recognized that location Isack Linyua (the red group track) had an overlapping bounding box with location Joseph miliuntu (the blue overlapping track). When the desk auditor reviewed it, he saw that there was not an overlap so he highlighted the "No Overlap" radio button. In the following image, the bounding box of location Isack Linyua is compared with J0hn muthiane. Again,	OK a) It was confirmed that the area calculation is applying standard method of polygon calculation. b) CAAC and TIST response about checking method to prevent overlapping of the project area is considered appropriate. The verifier was provided with KML files for all PAs and it was confirmed by sampling check that there is no double counting of the same PA for the visiting PAs. c) CAAC and TIST response to prevent the counting of different PA and counting of trees outside of the PA is considered appropriate. d) It was confirmed from the interviews with CAAC and TIST that quantifiers will be trained about tree counting so that they count trees only within the project boundary.

Corrective action, clarification and forward action requests	Ref. to checklist Table 1	Summary of project owner's response	Conclusion
		the desk auditor looked at them and determined there was no overlap. Whenever a new quantification is uploaded, it is the job of the desk auditor to review it and one of the steps is to look at the overlaps. When overlaps are found, the desk auditor talks to the Quantifier to determine how those should be handled. As noted in the verification data spreadsheet, PA Summary worksheet, column AO, some of the PAs have been marked inactive because they we identified as overlaps. With 50,000 groves in Kenya and 60,000 world-wide this is a slow process and will continue as part of our internal quality control procedure.	





Corrective action, clarification and forward action requests	Ref. to checklist Table 1	Summary of project owner's response	Conclusion
		**c) Preventing the counting of different PA,** During the verification, an instance was found where the track of the PA did not match with the area where the trees were planted. Investigation showed that a TIST member owned both areas and expected to plant in the area tracked. Subsequently, he changed his mind and planted in a different area. When the Quantifier arrived to count the trees, he/she was directed to another location and did not realize they were not in the tracked area. We are addressing this type of error with a double tracking system. When a Quantifier goes at a PA, they are to take a secondary track. The secondary track shows up on the handheld device so they can confirm the boundaries. When they sync to the server, the Desk Auditor will see a screen like the next image. The red dotted track is the original and official track. The blue dotted track was taken at the same time as part of the double track procedure to ensure that the Quantifier walked the same boundary. The green track is a secondary that was taken on a subsequent quantification. This is the track that demonstrated to the Desk Auditor that the Quantifier was at the correct location and tracked the correct boundary **d) Preventing the counting of trees outside of the PA.** The secondary track procedure as demonstrated above is also designed to address this issue. For it to work properly it requires constant training of the Quantifiers to make sure that they only count trees within the project boundary. This is part of the training curriculum.	

Corrective action, clarification and forward action requests	Ref. to checklist Table 1	Summary of project owner's response	Conclusion
<u>**Clarification Request 5**</u> **(1) The uncertainty due to the sampling method of tree DBH is to be explained and justified.** **(2) Please explain how to avoid the input error by Quantifier. (Circumference, number of trees, etc) (ex1. There was a case where trees of different PA (neighbour PA) were counted. (2007KE217-JENIFFER-VALLEY)** **ex2. Circumference of 4 years Eucalyptus is recorded as 416cm. (2008KE2462-Machira waigwa)**		**(1) The uncertainty due to the sampling method of tree DBH:** As noted in the field and in the closing meeting, the Quantifiers have been trained to take random samples based on their judgment. We have provided guidance in our Quantifier Manual (page 51) to help them take random and unbiased samples. Because each grove is different, they have the flexibility to take the samples as they deem reasonable. They also receive training in Quantifier Seminars. We believe that what was observed during verification demonstrated that the Quantifiers took random samples of a range of sizes and were not taking biased samples. The uncertainty is expressed in the targeted precision level of the methodology; 10% of the 95% confidence level. The Quantifiers have taken more than 600,000 circumference readings that have resulted in a precision level of 0.4% of the 95% confidence level. To adjust for errors made during data entry, the circumference data has been filtered to exclude all measurements that fall into the upper 4th standard deviation. To be conservative, this filter does not affect the lower 4th SD. **(2) How to avoid the input error by Quantifier.** These are human errors. The secondary track tool is available to address example 1. The original PA was tracked and baselined based on instructions from the farmer/member that he was going to plant in that area. When the Quantifier returned to monitor the trees, the farmer explained that he had changed his mind and planted in another area. The Quantifier was aware that it was a different location but monitored it anyway. The Quantifier requested of the Kenya staff that we make the new grove the official PA but that request was not fully communicated internally. Since VCS the rules do not allow us to change the location of a PA, we have marked this PA as Pending and zeroed the trees and	OK (1) It was confirmed from the Quantifier Manual and the demonstration of sampling method of tree DBH that the sampling method is random and unbiased also quantifiers are properly trained for monitoring. It was confirmed from the spreadsheet /2-6/ that the precision level of GHG removal calculation is 0.41% of the 95% confidence level and satisfies the methodology requirements (10%), hence the monitoring method of DBH is considered appropriate. /28/ (2) It was confirmed that the data is corrected. Quantifiers training to prevent human error and input errors is appropriate. Also, it is good practice to remove human error data to apply 4th SD threshold.

Corrective action, clarification and forward action requests	Ref. to checklist Table 1	Summary of project owner's response	Conclusion
		carbon. The grove where the trees were quantified is not part of this PD. The original and baselined PA remains eligible and if the farmer ever plants in that location, it will be quantified. In addition, this case will serve as an example in Quantifier training seminars to prevent it from happening again. The second example is an entry error. We will address this in future Quantifier meetings, too. In addition, we have modified the verification spreadsheet to identify circumference outliers. We revised the Statistics and Circ worksheets to enable us to identify the circumference measurements of every stratum that is in the 4th standard deviation above the mean. The 4th SD is identified in column L of the Statistics worksheet. Column O of the Circ worksheet compares these thresholds with each circumference measurement. If the value is in the 4th SD it is excluded. A new mean is calculated for each stratum in Column O of the Statistics worksheet. Tree counts are self-correcting. Every time a PA is quantified the new number replaces the old number. If there is an error during one verification, it will be corrected during the next one. In addition, while it is possible that a Quantifier can enter an erroneous tree count, this is minimized by having regular audits that pick up some of the errors, keep the Quantifiers on their toes and help identify trends and poor performers.	
<u>Clarification request 6</u> **(1) Please provide information about;** **- Fire accident** **- Pest or other accidents** **(2) How to address above issues.**	C.1.4	There were two incidences of fire. 2008KE550-Nkonge birichi: 12,727 trees and 625 tonnes of carbon lost. 2008KE212-Janet W Kihara: 1,039 trees and 112 tonnes of carbon lost. The total loss to fire is 0.2% of the stocks which is considered insignificant by the permanence tool. The mitigation tools used have proved to be adequate and no further action is necessary. There were no reported losses due to pests or other	OK It was confirmed that the loss by fire is reflected to the calculation sheet. It was confirmed from the interviews with CAAC and TIST quanifiers that there is no pest accidents.

Corrective action, clarification and forward action requests	Ref. to checklist Table 1	Summary of project owner's response	Conclusion
		accidents.	
<u>Clarification Request 7</u> **(1) Please provide the recent audit records.** **(2) Please provide Quantifiers training records.** **(3) Please provide the recent monthly cluster meeting records.** **(4) Please provide the procedures for emergency such as fire, pest, etc.** **(5) Please explain about archiving at site office and CAAC.**	C.2.1, C.2.2, C.2.5, C.2.6, C.2.7	(1) For example of our audit records, please see attached document: "TIST KE PD-VCS-006 CAR Verif #2 140515b Weekly Audit Reports.pdf" (2) The attached are samples of the attendance sign-in sheets for Quantifier training: "TIST KE PD-VCS-006 CAR Verif #2 140515c Quantifiers Training Attendance List.zip" (3) The attached are samples of the cluster meeting records: "TIST KE PD-VCS-006 CAR Verif #2 140515d Cluster meetings.zip" (4) As noted, each PA is located on land owned by a member. They own and manage the trees. If they lose trees or are affected by fire, pests or something else, the Farmers are to report it at the Cluster meeting and we correct our inventory at the next quantification. For expert support, they are referred to the Kenya Forest Service. There is ample mitigation built into the Project to prevent unexpected problems from having a significant impact on the carbon stocks. They are listed in the risk tool. (5) Archiving at the TIST office in Meru is limited to Small Group Payment vouchers, M-Pesa statements, statutory payments (PAYE,NHIF, NSSF, Municipal licenses), receipts, salary and wage records. CAAC does not have many physical/paper records. Virtually all of the project data is achieved electronically on the TIST database. Electronic storage is currently on the Amazon Cloud	OK (1) Samples of recent audit records (weekly audit reports) were provided. Also, the audit record for each grove is available in the TIST web site. It was confirmed that the audit is conducted in accordance with the registered PD. (2) (3) Samples of the attendance list for the quantifiers training during 2010 to beginning of 2013 were provided. Also, the cluster meeting records (monthly) are provided. During on-site visit, demonstration of the monitoring work by quantifiers such as counting tree numbers, DBH measurement, identification of boundaries was conducted. Also, the data of quantifiers field notes were checked by sampling. It was confirmed that the training and meeting of quantifiers are conducted as stated in the registered PD. The training is effectively reflected in the monitoring activity. (4) OK (5) It was confirmed from the interviews with CAAC that all of the project data is archived electronically at site office and CAAC.
<u>Clarification Request 8</u> **Please justify the assumptions in tree age estimate* applied to the carbon stock calculation, taking into account the risk of harvesting, fire,**	D.1.4	The justification is that any tree that exists will continue to grow. If a tree is 3 years old in 2010, it will be 6 years old in 2013 and, on average, will be the size of a 6 year old tree. This approach is combined with hundreds of thousands of data points that define the average size of a tree in each age	OK The verifier confirmed by the spreadsheet that the carbon of any PA that was affected by harvesting, fire, owners change, etc., has been

Corrective action, clarification and forward action requests	Ref. to checklist Table 1	Summary of project owner's response	Conclusion
owner's change, etc. (*: The carbon stock calculation in the spreadsheet is carried out using the tree age at the end of 2013. This is applied for all the trees of PAs independent of the monitoring date which scatters during past 5 years.)		and allometric species strata. This approach was found to be acceptable by the original Validator/Verifier. The issue brought up by the verifier is how we determine if the tree still exists, either physically or as a TIST tree (i.e. as a Project tree). This was done for the verification by the TIST staff and the results are shown in the verification spread sheet ("PA Summary" work sheet, column AO). The carbon of any PA that was affected by harvesting, fire, owners change, etc., has been set to zero. By setting the carbon at zero we have taken a conservative approach to this issue.	set to zero. Hence the assumption in tree age estimate does not affect the carbon stock calculation in such PAs.
<u>Clarification Request 9</u> **Where some PAs are removed from the project, it is to be confirmed whether the baseline is adjusted or not.**	D.2.1	As noted in the PD and the validation spreadsheet, the baseline of each PA stands on its own. When a grove is declared inactive and removed, the baseline of that PA is no longer relevant. The baseline condition will not have changed (and cannot since it is a historical observation), only the current status as a PA will have changed.	OK It is confirmed that the baseline is not changed when a groves is declared inactive. It is appropriate.
<u>Clarification Request 10</u> **The project is a grouped project, hence, it is stated in the registered PD that the capacity limit is 4,800 tCO_2/PA. (16,000 tCO_2/year x 30 years x 1% = 480,000tCO_2 x 1%.)** **Please demonstrate about the calculated maximum GHG removals during the 2nd monitoring period and justify that the project complies with this capacity limit.**	D.2.5	First the ex-post strata data was run to get the most current quantification information (as of December 31, 2013). Columns U through Z of the "Ex-post Strata" worksheet look at the Ex-Ante projects of the carbon of the 30 year carbon of each stratum. A pivot table ("Instance Pivot" worksheet) sums all the strata in a PA and reports the expected capacity limit in columns Z in the "PA Summary" worksheet. Columns AA through AC ("PA Summary") provide another test for the expected 30 year carbon by adjusting for stem density. Column AD ("PA Summary") provides the expected capacity for each PA. Using the filters built into Excel, it can be seen that based on current verification data, none of the PAs are expected to exceeded the 4,800 tCO_2 limit. Column AM ("PA Summary") is the total carbon in each PA as of this verification. Using the filters built into Excel, it can be seen that none of the PAs have exceeded the 4,800 tCO_2 limit.	OK The verifier confirmed by the spreadsheet /2-6/ that the maximum GHG removals of each project instance meet the conditions of capacity limit for each PA. Hence, the project complies with the capacity limit of grouped project of VCS (VCS standard 3.4.8) /22/
<u>Clarification Request 11</u> **(1) Please explain about the case where the data was corrected during**	E.2.2, E.2.3,	(1) The TIST staff and US team does not correct quantification data. Inconsistencies found during audit are	OK (1) It was confirmed that inconsistencies found during audit

Corrective action, clarification and forward action requests	Ref. to checklist Table 1	Summary of project owner's response	Conclusion
the TIST QA activities such as staff audits, US Team audits, etc. **(2) Please explain how to address to possible internal risks considered such as followings; (As for double counting risk: refer to CL 4 above C.1.1.)** **- Selection of 20 trees for circumference measurement (risk of biased selection of sample trees)** **- Mistake in counting of trees** **- Mistake of boundary of PA** **- Mistake in circumference measurement**		corrected by having the PA requantified by a Quantifier. This only happens if the audit and the quantification are more than 10% different, in which case the Quantifier is also suspended. (2) How to address: <u>- Selection of 20 trees for circumference measurement (risk of biased selection of sample trees)</u> As noted above, the Quantifier procedure is addressed in the Quantifier Manual, the Quantifiers receive regular training and Quantifiers are audited regularly. We also have adopted an approach to collecting circumference data that builds a huge historical record of the average circumference of each Allometric Strata so that the effect of the a few biased samples would be diluted and have an insignificant effect on the average biomass. In addition, we do not believe that the verifiers witnessed any Quantifier sampling in a biased manner. <u>- Mistake in counting of trees</u> As noted, tree counts are self-correcting. Every time a PA is quantified the new number replaces the old number. If there is an error during one verification, it will be corrected during the next one. In addition, while it is possible that a Quantifier can enter an erroneous tree count, this is minimized by having regular audits that pick up some of the errors, keep the Quantifiers on their toes and help identify trends and poor performers. <u>- Mistake of boundary of PA</u> As noted under Clarification Request #4, we have instituted a secondary track system and have a desk auditor that are addressing this issue. Please see CL4 for more information. <u>- Mistake in circumference measurement</u> As noted in Clarification Request #4, these are human entry errors which will be addressed in future Quantifier meetings. In addition, we have modified the verification spreadsheet to identify circumference outliers. We revised the Statistics and Circ worksheets to enable us to identify the circumference	are corrected by having the PA requantified by a Quantifier. (2) - The verifier confirmed that the selection of the 20 trees is suitably described in the quantifiers Manual to avoid biased selection. /12/ - The verifier considers that the counting tree procedures are self-correcting by repeating the monitoring and counting trees in all PAs based on the quantifiers manual. - The verifier considers that the secondary track system is appropriate to prevent mistakes of PA boundary. - the verifier considers that the method applying 4th SD to avoid human errors in circumference measurement and its entry is effective and appropriate.

Corrective action, clarification and forward action requests	Ref. to checklist Table 1	Summary of project owner's response	Conclusion
		measurements of every stratum that is in the 4th standard deviation above the mean. The 4th SD is identified in column L of the Statistics worksheet. Column O of the Circ worksheet compares these thresholds with each circumference measurement. If the value is in the 4th SD it is excluded. A new mean is calculated for each stratum in Column O of the Statistics worksheet.	
<u>Forward Action Request 1</u> **Please indicate the name of quantifiers in the Ex-post Strata spreadsheet in subsequent monitoring period so that the verifier can notice who was responsible for each PA and consider it while making a site visit plan.**	C.2.3	This has been done and is reflected in the revised verification spreadsheet ("Ex-post Strata" worksheet, columns I and J).	OK The verifier confirmed that it is already indicated in the spreadsheet /2-6/ and available for future verifications.
<u>Forward Action Request 2</u> **(1) The verification team noticed that some of the trees were dead or thinned after the latest quantification (monitoring).** **(2) The verification team raised a concern of mistake of counting coppices of Eucalyptus trees.** **(3) It was further noted that the data of strata in circumference monitoring were not consistent with the information of existing strata in the ex-post monitoring spreadsheet. Mitigation measures are to be established in future monitoring periods so that the project proponent can ensure to avoid mistake in terms of such aspects.**	E.2.3	(1) With 18,000 PAs in the PD, almost 40,000 PAs in all the current TIST PDs and over 50,000 total groves, it is impossible to have current results for every PA. The Project is designed to update the monitoring data as often as possible and to replace old data with the most recent data. (2) This was not a concern that was voiced in the field. In fact, I was present on many site visits where the verifiers asked the Quantifiers whether they counted coppiced tree. The Quantifiers told them they did not and demonstrated which ones they count and which ones were excluded because of coppicing. From my observations, the Quantifiers demonstrated knowledge of the Projects policy and the ability to identify which trees were coppiced. (3) 1. The circumferences that have ages prior to 2004 are errors. We can eliminate those in the future. 2. We will add a new test to the circumference query that checks for matching strata. If the stratum of a circ record does not appear in the Strata Summary, it will not be included in the circ download. 3. We are investigating changing the date collection forms on	OK (1) As discussed in CL 10 above, the project is designed so that the loss due to dead trees or thinning is reflected in the next verification and GHG removals are conservatively calculated. (2) The verifier confirmed by the on-site visit and quantifiers' monitoring work that the quantifiers are correctly following the quantifiers manual. (3) The verification team has concluded that the proposed measures are appropriate and requests VVBs to verify the implementation in subsequent verifications. The team identified inconsistency between strata in circumference quantification record in "Circ"

Corrective action, clarification and forward action requests	Ref. to checklist Table 1	Summary of project owner's response	Conclusion
		the hand-held devices. The idea would be for the Quantifiers to download the data from the previous quantification in a format that displays the existing strata and tree count, with a blank next to each stratum for entering the new tree count. There needs to be some flexibility to allow for the addition of new strata and corrections, so we would need to have appropriate warnings and training to make sure it is implemented properly. It will probably be months before we can deploy these changes.	datasheet and currently existing strata in "Ex-post Strata" datasheet. The team found 60,105 strata in the "Circ" sheet and 9,707 of them did not exist in this monitoring period. The circumference quantification record included old quantifications and most of 9,707 PAs would have been lost after the quantifications. However, some of the record showed errors such as inappropriate tree age (planted prior to 2004) and thus mitigation measures for such input errors were requested for future monitoring. The 95% confidence interval of this monitoring period was within 10% and therefore the verification team did not request correction in this verification but in future monitoring periods.
<u>Forward Action request 3</u> **Each Cluster meeting is to keep updated information about what is happening at the Small Group level and to individual groves. Such information includes PAs status of removal or pending.**	Table 2 CAR 2	The activity of the cluster meetings will be improved so that TIST management keep updated information about what is happening at the Small Group level and individual groves including information about PAs status of removal or pending.	OK The measures are appropriate and it is to be reviewed in subsequent verifications.

Appendix 2

VCS Non-Permanence Risk Assessment Checklist

Table 1

1 INTERNAL RISK

Project Management					
Risk Factor	Checklist question	Risk report	Assessment by VVB	Draft conc.	Final Conc.
a)	Species planted (where applicable) associated with more than 25% of the stocks on which GHG credits have previously been issued are not native or proven to be adapted to the same or similar agro-ecological zone(s) in which the project is located.	0	It is confirmed from the monitoring report and the spreadsheet of the monitoring report that the only species that exceed or have the potential to exceed 25% are Eucalyptus and Grevillea robusta. It was confirmed by the World Agroforestry Center web-site that Eucalyptus Grandis was introduced in Africa before 1885 and East Africa during 1890-1920[3]. It was also confirmed that Grevillea robusta has been introduced into warm, temperate, subtropical highland regions around the world and widely planted in many countries in Africa[4] and well-established in Kenya[5]. Hence, it is concluded that the species planted associated with more than 25% of the stocks are proves to be adapted to the same or similar agro-ecological zone(s) in which the project is located.	0	0

[3] http://www.tist.org/tist/docs/PDD-Documents/TIST%20UG%20PD-VCS-Ex%2027%20World%20Agroforestry%20Eucayptus%20Grandis.pdf
[4] http://www.worldagroforestrycentre.org/sea/Products/AFDbases/af/asp/SpeciesInfo.asp?SpID=921
[5] http://www.researchkenya.or.ke/Search%20by%20Author?field_author_name_value_op=contains&field_author_name_value=Tyndall

b)	Ongoing enforcement to prevent encroachment by outside actors is required to protect more than 50% of stocks on which GHG credits have previously been issued.	0	It was confirmed from the on-site visit of the project areas that the project areas are on lands owned by the small group members that plant the trees and protected by the farmers living there. Hence, it is confirmed that ongoing enforcement to prevent encroachment by outside actors is not required.	0	0
c)	Management team does not include individuals with significant experience in all skills necessary to successfully undertake all project activities (ie, any area of required experience is not covered by at least one individual with at least 5 years experience in the area).	0	It is confirmed during the on-site visit that the management team has extensive experience that exceeds five areas in all areas. CAAC created TIST in 1999 and began tree planting in 2000.[6] **<u>Forward Action Request R1</u>** **Please explain how to maintain the management system during the long time project operation, in particular, when the key management team in CAAC and TIST was changed.**	0 **FAR R1**	0 OK
d)	Management team does not maintain a presence in the country or is located more than a day of travel from the project site, considering all parcels or polygons in the project area.	0	It was confirmed that a full time professional staff in Meru and Nanyuki and no site is more than a day of travel from staff. They coordinate the activities in the field including training, quantification and auditing. It was also confirmed that they are in regular contact with project managers in US, quantifiers and farmers. **<u>Clarification Request R1</u>** **Please inform about regular contacts such as;** **(1) between TIST management and Quantifiers (frequency, topics)** **(2) cluster meetings (frequency, topics)** **(3) Please provide examples of recent records of above.**	**CL R1**	0 OK
e)	**Mitigation:** Management team includes individuals with significant experience Management team includes individuals with significant experience in AFOLU project design and implementation, carbon accounting and reporting (eg, individuals who have successfully managed projects through validation,	-2	CAAC, the project proponent, founded the TIST program in 1999 and has been expanding TIST to Kenya, Uganda, India and Tanzania. Since 1999, TIST participants have been identifying local sustainable development goals that include tree planting and sustainable agriculture. TIST expects to provide long-term revenue for the Small Group	-2	-2

[6] https://www.tist.org/i2/

	verification and issuance of GHG credits) under the VCS Program or other approved GHG programs.		participants through the sale of greenhouse gas credits (GHG)[7]. It is confirmed from the interviews with PP & TIST management and records of TIST projects that the management team includes individuals have significant experience in AFOLU project design and implementation, carbon accounting and reporting under the VCS Program and other approved GHG program including CDM project[8].		
f)	**Mitigation:** Adaptive management plan in place	0	NA	NA	0
Total Project Management [a + b + c + d + e + f]		**-2**		-2	**-2**

Financial Viability					
a)	Project cash flow breakeven point is greater than 10 years from the current risk assessment	NA		NA	NA
b)	Project cash flow breakeven point is between 7 and up to less than 10 years from the current risk assessment	NA		NA	NA
c)	Project cash flow breakeven point between 4 and up to less than 7 years from the current risk assessment	NA		NA	NA
d)	Project cash flow breakeven point is less than 4 years from the current risk assessment	0	It is confirmed from the project financial plan that Project cash flow breakeven point is less than 4 years. (Exhibit 7)	0	0
e)	Project has secured less than 15% of funding needed to cover the total cash out before the project reaches breakeven	NA		NA	NA
f)	Project has secured 15% to less than 40% of funding needed to cover the total cash out required before the project reaches breakeven	NA		NA	NA

[7] https://www.tist.org/i2/

[8] http://cdm.unfccc.int/Projects/DB/TUEV-SUED1253867373.9/view

g)	Project has secured 40% to less than 80% of funding needed to cover the total cash out required before the project reaches breakeven	NA		NA	NA
h)	Project has secured 80% or more of funding needed to cover the total cash out before the project reaches breakeven	0	It is stated in the Non-Permanence Risk Report that the project had all the funds secured to cover the total cash needs to reach breakeven. **<u>Clarification Request R2</u>** **Please provide the evidence to show the statement "the project had all the funds secured to cover the total cash needs to reach breakeven".**	**CL R2**	0 OK
i)	**Mitigation:** Project has available as callable financial resources at least 50% of total cash out before project reaches breakeven	-2	Ref. **CL R2**	**(CL R2)**	0
Total Financial Viability [(a, b, c or d) + (e, f, g or h) + i]=-2		**0**		**0**	**0**
Note: Total may not be less than 0.					

Opportunity Cost					
a)	NPV from the most profitable alternative land use activity is expected to be at least 100% more than that associated with project activities; or where baseline activities are subsistence-driven, net positive community impacts are not demonstrated	NA	NA	NA	NA
b)	NPV from the most profitable alternative land use activity is expected to be between 50% and up to100% more than from project activities	NA	NA	NA	NA
c)	NPV from the most profitable alternative land use activity is expected to be between 20% and up to 50% more than from project activities	NA	NA	NA	NA
d)	NPV from the most profitable alternative land use activity is expected to be between 20% more than and up to 20% less than from project activities; or where baseline activities are subsistence-driven, net positive community impacts are demonstrated	0	**<u>Clarification Request R3</u>** **(1) Please inform about PAs which were removed from TIST program in the past.** **(2) Please inform the reasons of the removal, if applicable.** **(3) Are there any PAs removed from the project due to the reason that the land was converted to more profitable alternative?** **(4) What kind of more profitable alternative land use is estimated in the crediting period?**	**CL R3**	OK 0

e)	NPV from project activities is expected to be between 20% and up to 50% more profitable than the most profitable alternative land use activity	NA	NA	NA	NA
f)	NPV from project activities is expected to be at least 50% more profitable than the most profitable alternative land use activity	NA	NA	NA	NA
g)	**Mitigation:** Project proponent is a non-profit organization	0	NA The Institute for Environmental Innovation (I4EI) is a co-sponsor but they are not PP.	0	0
h)	**Mitigation:** Project is protected by legally binding commitment to continue management practices that protect the credited carbon stocks over the length of the project crediting period (see project longevity)	-2	It was found that some PAs were removed from the project. **<u>Clarification Request R4</u>** **Please inform how many PAs were removed from the project with knowledge of the legally binding commitment.**	**CL R4**	OK 0
i)	**Mitigation:** Project is protected by legally binding commitment to continue management practices that protect the credited carbon stocks over at least 100 years (see project longevity)	NA	NA	NA	NA
Total Opportunity Cost [(a, b, c, d, e or f) + (g + h or i)]		**0**		**0**	**0**
Note: Total may not be less than 0.					

Project Longevity					
a)	Without legal agreement or requirement to continue the management practice	NA	Ref **CL R4.**	**(CL R4)**	OK
b)	With legal agreement or requirement to continue the management practice	0	During the on-site visit, it was observed that some trees were cut due to several reasons, such as; (1) cut for construction (2) cut for public purpose such as securing the space for transmission lines (3) land is sold partially and grove was cut partially **<u>Clarification Request R5</u>** **Please explain about the impact to the project risk factor due to above reasons.**	**CL R5**	0 OK
Total Project Longevity		0		**-**	**0**

Note: Total may not be less than zero. Any project with a legally binding agreement that covers at least a 100 year period from the project start date will be assigned a score of zero. Any project with a project longevity of less than 30 years fails the risk assessment				
Total Internal Risk (PM + FV + OC + PL)	**0**		**–**	**0**
Note: Total may not be less than zero				

2 EXTERNAL RISK

Land and resource tenure					
a)	Ownership and resource access/use rights are held by same entity(s)	0	**<u>Clarification Request R6</u>** **(1) Any changes in the ownership and resource access/use rights during the 2nd monitoring period are confirmed including the impact to the project risk factor.**	**CL R6**	OK 0
b)	Ownership and resource access/use rights are held by different entity(s) (eg, land is government owned and the project proponent holds a lease or concession)	NA		NA	NA
c)	In more than 5% of the project area, there exist disputes over land tenure or ownership	0	NA, refer to **CL R6**	NA	0
d)	There exist disputes over access/use rights (or overlapping rights)	0	**(2) Existence of any disputes or potential disputes are to be confirmed.**	**CL R6**	OK 0
e)	WRC projects unable to demonstrate that potential upstream and sea impacts that could undermine issued credits in the next 10 years are irrelevant or expected to be insignificant, or that there is a plan in place for effectively mitigating such impacts	NA	ditto	NA	NA
f)	**Mitigation:** Project area is protected by legally binding commitment (eg, a conservation easement or protected area) to continue management practices that protect carbon stocks over the length of the project crediting period	-2	Ref **CL R4**	**(CL R4)**	-2

g)	**Mitigation:** Where disputes over land tenure, ownership or access/use rights exist, documented evidence is provided that projects have implemented activities to resolve the disputes or clarify overlapping claims	NA	Ref **CL R6 (2)**	**(CL R6)**	NA
Total Land Tenure [(a or b) + c + d + e + f +g)]		**0**		**–**	**0**
Note: When a risk factor does not apply to the project, the score shall be zero for such factor Total may not be less than zero					

Community Engagement					
a)	Less than 50 percent of households living within the project area who are reliant on the project area, have been consulted	0	It was confirmed by the on-site visit that 100% of the households within the project area have been consulted.	0	0
b)	Less than 20 percent of households living within 20 km of the project boundary outside the project area, and who are reliant on the project area, have been consulted	0	It was confirmed by the on-site visit that 100% of the households within the project area have been consulted.	0	0
c)	**Mitigation:** The project generates net positive impacts on the social and economic well- being of the local communities who derive livelihoods from the project area	-5	To be finalized based on **CL R3** & **CL R4**.	**CL R3** **CL R4**	OK -5
Total Community Engagement [a + b + c]		**-5**		**-**	**-5**
Note: When a risk factor does not apply to the project, the score shall be zero for such factor Total may be less than zero					

Political Risk					
a)	Governance score of less than -0.79	NA	NA		
b)	Governance score of -0.79 to less than -0.32	4	It was confirmed from the Worldwide Governance Indicators (http://info.worldbank.org/governance/wgi/index.aspx#reports) and that the average score of all six indicators for 2007 and 2012 are -0.72.	4	4
c)	Governance score of -0.32 to less than 0.19	NA	NA	NA	NA
d)	Governance score of 0.19 to less than 0.82	NA	NA	NA	NA
e)	Governance score of 0.82 or higher	NA	NA	NA	NA

f)	**Mitigation:** Country implementing REDD+ Readiness or other activities such as: a) The country is receiving REDD+ Readiness funding from the FCPF, UN-REDD or other bilateral or multilateral donors b) The country is participating in the CCBA/CARE REDD+ Social and Environmental Standards Initiative c) The jurisdiction in which the project is located is participating in the Governors' Climate and Forest Taskforce d) The country has an established national FSC or PEFC standards body e) The country has an established DNA under the CDM and has at least one registered CDM A/R project	-2	It was confirmed that Kenya is receiving REDD+ Readiness funding from the World Bank Forest Carbon Partnership Facility. (https://www.forestcarbonpartnership.org/kenya-0)	-2	-2
Total Political [(a, b, c, d or e) + f)]		**0**		**0**	**0**
Note: When a risk factor does not apply to the project, the score shall be zero for such factor Total may not be less than zero					

Total External Risk (LT + CE +PC)	**0**		**0**	**0**
Note: Total may not be less than zero				

3 NATURAL RISK

Risk Category Factors		LS Value	Mitigation	Risk Rating	Assessment by VVB		
a)	Fire (F)	1	0.5	0.5	The verifier confirmed that during the 2nd verification 2 PAs were lost to fire (0.01% of PAs and 0.22% of the carbon stocks). Also, there is no fire information since the beginning of the project. Hence, LS= 1 is appropriate. Many small project areas are dispersed in wide area. Hence, mitigation factor =0.5 is appropriate.. **Clarification Request R7**	**CL R7**	0.5 OK

					(1) The record of past occurrence of fire and damages to the forest in the project area is to be provided, if any. **(2) Any preventive measures implemented, if applicable.** **(3) Loss by the accident is to be explained.**		
b)	Pest and Disease Outbreaks (PD)	2	0.5	1.0	The project is consists of approx. 18,000 separate and widespread project areas, loss by pest and disease outbreaks bigger than 5% carbon loss is inconceivable. Verifier confirmed that part of grevillea trees in a PA was removed by termite and it is 0.1% of the carbon stock. Hence, significance rank of “insignificant” is appropriate. Likelihood of less than 10 yeas is appropriate. ∴ LS=2 Many small project areas are dispersed in wide area and the mitigation factor =0.5 is appropriate. Hence, score by pest and disease outbreak=1.0 is appropriate. **<u>Clarification Request R8</u>** **(1) The record of pest and disiese outbreak in the project area (including the adjacent areas) during the monitoring period are to be provided, if any.** **(2) Any preventive measures implemented, if applicable.** **(3) Loss by the accident is to be explained.**	**CL R8**	1.0 OK
c)	Extreme Weather (W)	2	0.5	1.0	It is considered appropriate from the previous TIST verification that the 2-years trees carbon loss by extreme weather (drought) is the risk to the project carbon stock. The carbon stock of the 2-years trees is less than 5 % of the carbon stock and it is considered appropriate that the significance rank is “insignificant”. Likelihood of less than 10 yeas is appropriate. ∴ LS=2 Many small project areas are dispersed in wide area and the mitigation factor =0.5 is appropriate. Hence, score by pest and disease outbreak=1.0 is appropriate.		1.0

d)	Geological Risk (G)	0	0.5	0.0	Geological risk is little.		0.0
e)	Other natural risk (ON1)	NA	NA	NA	NA		NA
Total Natural Risk [F + PD + W + G + ON]							**2.5**

Note: When a risk factor does not apply to the project, the score shall be zero for such factor
Risk rating is determined by [LS x M]
Note: Total may not be less than zero
If the Total Natural Risk is above 35 then the project fails the entire risk analysis

STEP 2: OVERALL NON-PERMANENCE RISK RATING AND BUFFER DETERMINATION

Risk Category		Rating
a)	Internal risk	0
b)	External risk	0
c)	Natural Risk	2.5
Overall risk rating (a + b + c)		**2.5**

Note: Overall risk rating shall be rounded up to the nearest whole percentage
The minimum risk rating shall be 10, regardless of the risk rating calculated
If the overall risk rating is over 60 then the project fails the entire risk analysis

Total Risk Assessment		**10%**
Net change in the project's carbon stocks		**342,874 tCO_2**
TOTAL NUMBER OF CREDITS TO BE DEPOSITED IN THE AFOLU POOLED BUFFER ACCOUNT		**34,287 tCO_2**

Table 2: Resolution of Corrective Action and Forward Action Requests

Corrective action, clarification and forward action requests	Ref. to checklist Table 1	Summary of project owner's response	Conclusion
<u>Clarification Request R1</u> **Please inform about regular contacts such as;** **(1) between TIST management and Quantifiers (frequency, topics)** **(2) cluster meetings (frequency, topics)** **(3) Please provide examples of recent records of above.**	Project management (d)	(1) Contact between TIST management and Quantifiers is frequent but more event driven than scheduled. 1. TIST management sometimes attends Cluster meeting and audits Cluster. 2. TIST Management audits each quantifier about several times per year. 3. TIST Management holds Quantifier training seminars at least once per year 4. TIST Management conducts a desk audit of each quantifier's work whenever new information is uploaded. If the information is out of the ordinary, it triggers and email, SMS or telephone discussion. 5. TIST Management and Quantifiers talk on the phone as necessary. (2) Generally, clusters meet monthly. The training topics in a given month are different for each Cluster. The general topic are: What is TIST, TIST eligibility, TIST values, GHG contract, nursery development, Conservation Farming, improved stoves, tree species/indigenous trees, riparian buffers, Erosion control, HIV/AIDS, developing best practices, other. Other (3) The recent Cluster information is kept on the TIST mobile website. The following are pdf prints from the sit and are provided as examples: • TIST KE PD-VCS-006 CAR Verif #2	OK The verifier was provided with the Quantifiers meeting records /10/,/11/ It is confirmed from the records that meeting is held monthly in average and there are close contact between TIST management and quantifiers. It was confirmed from the cluster meeting records that the meetings contribute to the project management improvement and sharing information and experiences between project participants.

Corrective action, clarification and forward action requests	Ref. to checklist Table 1	Summary of project owner's response	Conclusion
		140515e Cluster Schedule.pdf: This is the Cluster meeting schedule for the Meru project area. • TIST KE PD-VCS-006 CAR Verif #2 140515f Cluster Training.pdf: This shows some of the trainings done at the clusters. • TIST KE PD-VCS-006 CAR Verif #2 140515g Cluster Training Topics.pdf: On the Mobile website, these are links to some of the downloadable content available for training.	
<u>Clarification Request R2</u> **Please provide the evidence to show the statement "the project had all the funds secured to cover the total cash needs to reach breakeven".**	Finance (h)	The project is secured by USAID funds and VCUs from TIST projects including other TIST projects.	OK It was confirmed by the explanation of CAAC that the project had all the funds secured to cover the total cash needs to reach breakeven and the project is financially sound.
<u>Clarification Request R3</u> **(1) Please inform about PAs which were removed from TIST program in the past.** **(2) Please inform the reasons of the removal, if applicable.** **(3) Are there any PAs removed from the project due to the reason that the land was converted to more profitable alternative?** **(4) What kind of more profitable alternative land use is estimated in the crediting period?**	Opportunity Cost (d)	(1) Please see the response to Clarification Request #3 of the Verification Check list, above, and the "PA Summary" worksheet of the verification spreadsheet. (2) Please see the response to Clarification Request #3 of the Verification Check list, above, and the "PA Summary" worksheet of the verification spreadsheet. (3) We believe that some of the ones harvested for timber were done so because the owners felt it was a more profitable alternative. (4) We believe that there could be more trees harvested during the crediting period. That said, harvesting is not necessarily the more profitable land use. While it might generate a spike in income, it is spaced out over many years. As determined in our CCB Gold level survey,	OK (1), (2) Refer to CL 3. (Section 4.1) (3) OK (4) It is confirmed that the total value of the benefit of staying in TIST project is the most profitable alternative land use from the long-term and other benefits such as carbon benefits, sustainable wood use, fodder, fruits, nuts, income by thinning, etc.

Corrective action, clarification and forward action requests	Ref. to checklist Table 1	Summary of project owner's response	Conclusion
		as of 2011, TIST members had already received over $25 million in benefits from participating in the program. Some of this comes directly from the presence of live trees such as sustainable wood use, fodder, fruits and nuts. Participation also provides training on many subjects that have additional value to the farmer, such as Conservation Farming, use of more efficient wood stoves and health. We believe that much of the harvest can be stopped with improved training. The approaches necessary are: 1. The contract is a legally binding document. While CAAC has the legal right to obtain injunctive relief to halt any harvesting and can sue the farmers whom have already harvested, it is politically difficult. We started TIST to help these farmers and feel that legal action by an American company would undo much of the good that TIST is doing. Instead we need to use the results of this Verification to reopen the dialogue on these at all levels of the TIST, especially through Cluster training. 2. The effects of harvesting on the program and on other TIST members. Due to decades of assistance programs where organizations give out free things and then disappear after a few years, some farmers think that TIST is more of a donor organization and fail to understand it is a business. TIST farmers will receive 70% of the profits. When a neighbour	

Corrective action, clarification and forward action requests	Ref. to checklist Table 1	Summary of project owner's response	Conclusion
		harvests, all of the missing carbon must be made up from the rest of the participants. While the neighbour receives quick cash from sale of their trees and the participants suffer in two ways. First the loss of the trees means that the trees needed to offset the loss will produce no carbon income. Second, the farmers that sold the trees have been paid advances every year based on their stem counts. These payments are now sunk costs of which 70% will be borne by the remaining farmers. We believe that as we focus more training on this, the farmers committed to TIST will help mitigate this problem. 3. We don't believe we have trained adequately on the value of all the benefits of TIST. As the results of the surveys have indicated, for most, the total value of the benefit of staying in TIST is the most profitable alternative land use. We need to get this better understood. 4. Another higher value alternative is to maintain the trees and remain in TIST and using beneficial thinning to increase annual income that can be stretched over the life of TIST. Our model and PDs have always allowed thinning and the sustainable use of the trees.	
<u>Clarification Request R4</u> **Please inform how many PAs were removed from the project with knowledge of the legally binding commitment, if available.**	Opportunity Cost (h)	There are a total of 173 PAs (0.96% of the PA and 1.66% of the carbon stocks) being removed. Of these we would exclude Double Registration, Registration Error, Overlaps and Unauthorized	OK It is confirmed from interviews with CAAC & TIST members and on-site visit that some PAs are removed and some PAs are pending as discussed in CL 3.

Corrective action, clarification and forward action requests	Ref. to checklist Table 1	Summary of project owner's response	Conclusion
		Registration from this category because they are not eligible to be in the Project. Their inclusion in the PD was an error. That leaves 67 PAs (0.37% of the PAs and 1.24% of the carbon stocks) that are being removed where the members had knowledge of a legally binding commitment. In addition, there are probably another 256PAs (1.41% of the PAs and 1.34% of the carbon stocks) that are marked as pending that fall in this category. They are PAs where there is a Change in Ownership, Groups Quit and Members Quit. The total potential in this category is 1.78% of the PAs and 2.58% of the carbon stocks. Looked at another way, the contract is over 97% effective.	It is confirmed by the spreadsheet /2-6/ that the values are correct and the position is clearly indicated as below. 173 PAs are removed, among these; - 106 PAs: not eligible PA to the project and removed the project, - 67: baseline error, change in ownership, harvest, member quit, tree removed, etc. 256 PAs are pending due to change in ownership, group quit and member quit Hence, the total potential PAs of above category is 67 + 256 = 323 and 1.78% of 18,099 PAs. Potential carbon stock is 4159.1 + 4599.5 = 8758.6 tCO_2 and 2.55% of 2nd verification carbon stock 342,874 tCO_2. ∴ The contract is over 97% effective.
<u>Clarification Request R5</u> **Please explain about the impact to the project risk factor due to following reasons.** **(1) cut for construction** **(2) cut for public purpose such as securing the space for transmission lines** **(3) land is sold partially and grove was cut partially**	Project Longevity (b)	TIST is unlike most AR projects in that it is made up of thousands of individual subsistence farmers. As with any project in which there are many actors, some violate the rules. Harvesting for any reason is a violation of the GhG agreement and results in expulsion from TIST. The Verifiers also noted that there were cases where trees were cut for construction and transmission lines. We do not consider this harvesting. It is a reaction to the needs of the farmers and community. Many TIST farmers are among the poorest people in the world and they are doing their best to better their lives. Cutting down trees for the opportunity to get electricity is one of	OK It is considered appropriate that cutting trees for the purpose of community such as transmission lines, etc. is not taken as harvesting. It is confirmed from the spreadsheet that the effect on the risk is limited (0.28% of the carbon stock)./2-6/

Corrective action, clarification and forward action requests	Ref. to checklist Table 1	Summary of project owner's response	Conclusion
		these. Removing some trees to improve their homes is another. The effect on risk is de minimis. There are 29 harvest and tree removal related PAs (0.16% of the PAs and 0.28% of the carbon stocks). In spite of the loss there has been an overall gain of 154,225 tonnes of sequestration in the 18 months since the first verification indicating that there is no risk to the carbon stocks.	
<u>Clarification Request R6</u> **(1) Any changes in the ownership and resource access/use rights during the 2nd monitoring period are confirmed including the impact to the project risk factor.** **(2) Existence of any disputes or potential disputes are to be confirmed.**	Land and resource tenure (a) (d)	(1) There are 7 PAs (0.04% of the PAs and 0.81% of the carbon stocks) that have been removed due to change in ownership. In addition there are 52 PAs (0.29% of the PAs and 0.08% of the carbon stocks) in this category that have been listed as pending. The fact that the total is less than 0. 9% of the carbon stocks and the fact that there has been an overall gain of 154,225 tonnes of sequestration in the 18 months since the first verification indicates that there is no risk to the project. (2) There are 6 pending PAs with Ownership Disputes (0.03% of the PAs and 0.01% of the carbon stocks). They are marked pending because the PAs remain eligible once the dispute is resolved and if the final owner wants to stay in TIST, he/she may. Excluded in this category are Overlaps. Overlaps are monitoring errors, not ownership disputes.	OK (1) Risk of change of ownership: It is confirmed that the effect on the risk is small (less than 0.9 % of the carbon stock). (2) Risk of disputes over access/use rights: It is confirmed that the effect on this risk is small (0.01% of the carbon stock).

Corrective action, clarification and forward action requests	Ref. to checklist Table 1	Summary of project owner's response	Conclusion
Clarification Request R7 **(1) The record of past occurrence of fire and damages to the forest in the project area is to be provided, if any.** **(2) Any preventive measures implemented, if applicable.** **(3) Loss by the accident is to be explained.**	Natural Risk Category Factors (a)	There are 2 PAs that have been lost to fire (0.01% of the PAs and 0.21% of the carbon stocks). The mitigation tools listed in the risk tool have proved to be adequate and no further action is necessary. The PAs are marked as pending because the PAs remain eligible under the PD. If the farmers replant, they can be monitored and included in subsequent verifications. In the risk tool, we rated the significance of fire loss as "insignificant (less than 5% loss of carbon stocks." The Project is 9 years old and we have not had a 5% loss, indicating that the risk rating in the tool is still valid.	OK (1) (3) Risk of fire and loss: It is confirmed that there are 2 PAs that have been lost to fire and the effect on the risk is small (0.21 % of the carbon stock) and insignificant. (2) The location of the project PAs are scattered in wide area and each PA's area is small in Kenya project. Hence, the risk of spreading fire is considered small.
Clarification Request R8 (4) **The record of pest and disease outbreak in the project area (including the adjacent areas) during the monitoring period are to be provided, if any.** (5) **Any preventive measures implemented, if applicable.** **(3) Loss by the accident is to be explained.**	Natural Risk Category Factors (b)	The Kenya team reports there have been no reports or losses due to pest and disease.	OK It was confirmed from the interviews with CAAC and TIST members that there have been no reports or losses due to pest and disease except loss by termite in a PA. The location of the project PAs are scattered in wide area and each PA's area is small in Kenya project. Hence, the risk of spreading pest and disease outbreak is considered small.
Forward Action Request R1 **Please explain how to maintain the management system during the long time project operation, in particular, when the key management team in CAAC and TIST was changed.**	Project management (c)	We are aware of the need for a succession plan for CAAC and TIST. We believe the best approach is to continue to build capacity in the host countries. Some of our key staffs have been involved with TIST and the PDs for well over five year. We have been building their capacity and will continue to do so	OK It is to be assessed in the next verification.

Corrective action, clarification and forward action requests	Ref. to checklist Table 1	Summary of project owner's response	Conclusion
		until they are able to take over the responsibilities currently held by CAAC personnel. It should be noted that the actual operations and daily oversight of the monitoring and monitoring system are already done by the host country staff. They have been involved in 7 validations and 8 verifications. In addition, we have staff in the other countries that can support one another. For example, we have just recently hired a Tanzanian in Dar es Salaam that had a long history with TIST before he went to University to become a programmer. He is in training with his US counterpart and is expected to take over management of the TIST Data System by the end of 2014.	