

GAP VALIDATION AND VERIFICATION OF THE INTERNATIONAL SMALL GROUP AND TREE PLANTING PROGRAM, KENYA, VCS-005



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EPIC Sustainability Services Private Limited

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Summary

Clean Air Action Corporation has appointed EPIC Sustainability Services Private Limited to perform the Gap Validation and second periodic verification under VCS and CCB standards. The assessment covered the scope of the gap validation and verification of the emission reductions reported and sustainable benefits achieved for the project titled "TIST Program in Kenya, VCS-005" (Project ID: 737) for the period from 9-Jun-11 to 08-Nov-2016.

The verification was based on the project description (PD), VCS Monitoring reports, CCB PIR reports and previous monitoring and verification reports and other supporting documents made available to the assessment team by the client.

The project activity 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 1,179 Small Groups, 8,692 members, 6,710 project areas and 2,556.1 ha. The PD was validated and first verified on 11 April 2011 and the first verification has been completed up to 31- December-2010. At that time all of the Project Areas were established and the monitoring systems were in place. During the current validation and verification, the project comprises of 5,173 of the Small Groups, 36,582 members, 21,692 Project Areas and 11,151 ha. Hence the scope of the Gap Validation covered the new areas added.

The project Combines sustainable development with carbon sequestration and supports the reforestation and biodiversity efforts of the subsistence farmers. Carbon credit sales generate participant income and provide project funding to address agricultural, HIV/AIDS, nutritional and fuel challenges. Additional certification includes CCBA.

The scope of this assessment is defined as a periodic independent review and ex post determination by EPIC, of the proposed and monitored VCS project design and CCBA indicators during defined verification period, and consisted of the following three phases

1. Desk review of the project documents and supporting evidences;
2. Physical site inspection and follow-up interviews with project stakeholders;
3. Resolution of outstanding issues and the issuance of the final report

The overall verification, from Contract Review to Verification Report & Opinion, was conducted using EPIC's internal procedures.

The assessment team identified, through the assessment process, Corrective Action Requests (CAR) and Clarification and Information Requests (CR). A total of 2 CARs and 14 CLs were identified in the current assessment. The client has taken actions and submitted to EPIC the revised reports and supporting evidence. The assessment team, through the validation and verification process, confirmed that the project applies the applicable methodology and meets the requirements of the monitoring aspects of the methodology and is able to record real and measurable emission reduction emission reductions which are achieved by the project activity. The emission reductions during the monitoring period are correctly calculated in the VCS monitoring report, Version 1, dated 21st November 2016. Therefore, EPIC certifies the emission reductions amounting to 480,617 tCO₂e for the period 9-Jun-11 to 08-Nov-2016 (both days inclusive).

On the basis of the physical site inspection of the project activity and review of the documents submitted by the project participant, the assessment team confirms that, the newly added areas confirm with VCS and CCB requirements and for verification period from 9-Jun-11 to 08-Nov-2016, and both the GHG reductions and the CCB indicators have been monitored in

line with CCBA requirements. In conclusion, it is EPICs opinion that the CCBA Project Description for TIST Program in Kenya VCS-005 dated 1st March 2017 Version 01 and CCBA Project Implementation Report dated 1st March 2017 Version 01, meets all relevant requirements established by the CCB Standard, Methodology as applicable including the identification of social economic and environmental impacts as well the presentation of the results obtained in accordance to the CCBA indicators.

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1. INTRODUCTION

1.1 Objective

EPIC Sustainability Services Private Limited (EPIC) has been contracted by Clean Air Action Corporation to undertake the second periodic independent verification of the project activity titled “TIST Program in Kenya, VCS-005”.

- To verify that the actual monitoring system and procedures are in full compliance with the system and procedures described in the monitoring plan of validated PD as well as with the applicable methodology;
- To verify the monitoring report with deviations are in compliance with monitoring plan and VCS rules
- identification of social economic and environmental impacts as well the presentation of the results obtained in accordance to the CCBA indicators
- To verify that the data reported were accurate, complete, consistent, transparent and free of material error or omission by checking the monitoring records and the emissions reduction calculation; and
- To verify and certify GHG emission reduction reported for the project for the period from 9-Jun-11 to 08-Nov-2016.

1.2 Scope and Criteria

The scope of the verification was the independent and objective review and ex-post determination of the monitored reductions in GHG emissions from “TIST Program in Kenya, VCS-005”. The verification of this project was based on the validated and validated project description (PD), validation report, first monitoring and verification reports and supporting documents made available to the verification team. These documents were reviewed against the requirements of the VCS standard version 3.7, VCS guidelines, the CDM Modalities and Procedures, related rules and guidance, and the VCS Validation and Verification manual Version 3.2.

The CCB Standard for this project activity being complimentary to the VCS, does not in itself set the criteria regarding the project type, location, and size, crediting period or baseline and monitoring methodologies; it covers only criteria of climate community and biodiversity impact of the project but not for emission reduction itself.

The scope of the verification covers the independent evaluation of this specific project activity by a certifying entity against the requirements of the CCB Standard and its indicators, on the basis of the Project Implementation Report (PIR) report submitted.

The implementation status of the monitoring regarding the Climate, Community and Biodiversity indicators are verified based on CCB Standard (Third Edition) in order to confirm that the impacts arising from a carbon offset project for the indicators are documented with adequate justification and can be reasonably verified.

The verification is not meant to provide any consulting towards the client. However, stated request for clarifications and/or corrective actions may provide input for improvement of the project design.

1.3 Level of Assurance

In line with VCS requirements and as per ISO 14064-3:2006 para A.2.3.2, a reasonable level of assurance is defined for the verification of the project. This implies that based on the process and procedures conducted EPIC should state whether the information in the monitoring report is materially correct and is a fair representation of the actual project details, and is prepared in accordance with the VCS requirements and the applied CDM methodology for information pertaining to additionality, GHG quantification, monitoring and reporting.

1.4 Summary Description of the Project

The project activity 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 1,179 Small Groups, 8,692 members, 6,710 project areas and 2,556.1 ha. The PD was validated and first verified on 11 April 2011 and the first verification has been completed up to 31- December-2010. At that time all of the Project Areas were established and the monitoring systems were in place. During the current validation and verification, the project has added new instances and comprises of 5,173 of the Small Groups, 36,582 members, 21,692 Project Areas and 11,151 ha. The project Combines sustainable development with carbon sequestration and supports the reforestation and biodiversity efforts of the subsistence farmers. Carbon credit sales generate participant income and provide project funding to address agricultural, HIV/AIDS, nutritional and fuel challenges. Additional certification includes CCBA.

2. VERIFICATION PROCESS

The overall verification process, beginning from the Contract Review to Verification report, certification statement & opinion, was conducted using internal procedures of EPIC Sustainability Services Pvt. Ltd. (ESSPL). As part of this assessment, validation of the inclusion of new project activity instances into this grouped project in addition to verification was also performed.

The validation and verification process consisted of the following phases:

- a document review of the project design documents, monitoring reports and preparation of verification protocol;
- on-site visit to the project activity and interviews with project developer and project consultant;
- and resolution of outstanding issues and the issuance of final verification report and opinion

The Verification was based on the guidance documents provided by VCS which included the following: VCS Standard version v3.7, Agriculture, Forestry, and Other Land Use Requirements v3.6, Simplified baseline and monitoring methodologies for small-scale afforestation and reforestation project activities under the clean development mechanism implemented on grasslands or croplands AR-AMS0001, Ver 05 and AFOLU Non-Permanence Risk Tool v3.3 and latest valid version of VCS verification template.

During the assessment, non-fulfillment of the criteria or identified risks to the fulfilment of project objectives were raised as either CAR or CR. Corrective Action Requests (CAR) were issued, where:

- mistakes had been made that directly impacted on the project results; or
- VCS / CCB requirements had not been met; or
- there was a risk that the project would not be accepted as a VCS / CCB project or that emission reductions / sustainable benefits will not be certified.

The Clarification Requests (CR) were issued where additional information was needed to clarify issues, and Forward Action Requests (FAR) for issues relating to project implementation that required review during the first verification of the project activity. The list of the CARs and CRs are summarised in Appendix 1.

1.5 Audit Team Composition

The following team members from EPIC were involved in the assessment:

Name	Role	Components reviewed
Dr G Vishnu	Lead Auditor	Completeness check, desk review, onsite inspection, Interview with project representatives, issuance of findings, report preparation.
Dr R Madhukar	Auditor	Completeness check, desk review, preparation of draft report
Ms. Kibe Nkatha Winnie	Host Country Expert	Interviews with community and forestry land use patterns
Mr R Vijaya Raghavan & Mr A. Prabu Das	Technical Review team	Checking and verifying of information related to draft final report.

The summary of the audit team is provided as below:

Dr. G. Vishnu holds a Masters and Doctorate in Environmental Science. He has around 8 years of experience in the field of research and consultancy related to water, wastewater, solid waste management systems, implementation of new, Cleaner Production technologies and biomass assessment studies. He has more than four years' experience in validation verification of more than thirty CDM and VCS projects and has undergone extensive training on GHG validation and verification and has been qualified as Lead Auditor for various technical areas. He is also an ISO 26000 lead auditor certified by Professional Evaluation and Certification Board (PECB). He is a Certified Sustainability Assurance Practitioner (CSAP) from AccountAbility, UK. He has successfully completed the e-course on Carbon Monitoring in CDM Afforestation and Reforestation projects conducted by World Bank Institute. He has participated in forestry projects across various regimes and has undergone training in methodologies and processes related to forestry auditing. He has experience in community forestry projects under VCS, CCB and Plan Vivo in African region.

Mr. A Prabu Das holds a Masters Degree in Energy management and is a qualified Energy auditor. He has around 8 years of experience in the field of energy auditing and GHG project development and consulting. He has more than four years' experience in validation verification of more fifteen CDM and VCS projects and has undergone extensive training on GHG validation and verification and has been qualified as Lead Auditor for various technical areas. He is also an ISO 26000 lead auditor certified by Professional Evaluation and Certification Board (PECB). He is a Certified Sustainability Assurance Practitioner (CSAP) from AccountAbility, UK. He has successfully completed the e-course on Carbon Monitoring in CDM Afforestation and Reforestation projects conducted by World Bank Institute. He has participated in forestry projects across various regimes such as such as VCS, CCB, GS, REDD and has undergone training in methodologies and processes related to forestry auditing and is a qualified forestry auditor.

Mr. R. Vijayaraghavan holds BE in Mechanical Engineering, M.Tech in Energy Conservation and Management and MBA in Technology Management. He is certified as Energy Auditor by Bureau of Energy Efficiency (BEE), Government of India. He has 10 years of working experience in energy sector including validation / verification of fifty CDM and VCS/GS projects and has undergone extensive training on CDM validation and verification and has been qualified as Lead Auditor for various technical areas. He is also an ISO 26000 lead auditor certified by Professional Evaluation and Certification Board (PECB). He is a Certified Sustainability Assurance Practitioner (CSAP) from AccountAbility, UK. He has successfully completed the e-course on Carbon Monitoring in CDM Afforestation and Reforestation projects conducted by World Bank Institute. He has participated in forestry projects across various regimes such as VCS, CCB, GS, REDD and has undergone training in methodologies and processes related to forestry auditing and is a qualified forestry auditor.

Dr. R. Madhukar holds a Doctorate in Environmental Science. He has more than 9 years of experience in different industries, consultancy and research and development in Environment Impact Assessments. He has three years' experience in validation verification of more than ten CDM and VCS projects and has undergone extensive training on CDM validation and verification and has been qualified as Auditor for various technical areas. He is also an ISO 26000 lead auditor certified by Professional Evaluation and Certification Board (PECB). He has successfully completed the e-course on Carbon Monitoring in CDM Afforestation and Reforestation projects conducted by World Bank Institute. He has participated in community forestry projects under VCS, CCB and Plan Vivo in African region. He has participated in forestry projects across various regimes and has undergone training in methodologies and processes related to forestry auditing and is a qualified forestry auditor.

Ms. Kibe Nkatha Winnie holds a Master's degree in Agroforestry and Rural Development and Bachelor's degree in environmental science and community development from the Kenyatta University. She has work experience at operations level in National Drought Management Authority (NDMA) at various counties in Kenya. She is fluent in English and the local language Swahili and has participated in community level agricultural programs as a trainer. She is qualified as a host country expert for agroforestry related projects in Kenya as per EPICs procedures.

1.6 Method and Criteria

The verification and sampling plan methodology was based on VCS guidance documents and ISO 14064-3. For this monitoring period, sampling was based upon the active samples with minimum criteria of covering at least 1% sample size. For this verification, 200 samples were visited during the site visit and the farmers owning the properties were interviewed, which amounted to almost 1% of the sample size considering that the active samples numbered 20,444. For the desktop verification, sample size was chosen such that the total sample coverage was 1.2% of active samples. The number of trees were sampled such that a 5% tree size overall was reached. At each site, strata based sampling – Non-Eucalyptus and Eucalyptus was followed across the different ages for the trees. A risk based approach was used to select the samples to allow a review of members targeted to represent a wide geographic range of sites; sufficient to provide the necessary sample size and to meet a reasonable level of assurance.

1.7 Document Review

The verification was performed primarily based on the review of the PD, monitoring report and PIR submitted and the supporting documentation. This process included:-

1. review of data and information presented to verify their completeness
2. review of the Monitoring Plan and monitoring methodology, paying particular attention to the on field measurements, and the QA/QC procedures, and
3. an evaluation of data management and the QA/QC system in the context of their influence on the generation and reporting of ERs.

The documents submitted were initially reviewed and further EPIC requested the PP to present the supporting evidences. Additional background information and documents related to the project performance were also reviewed by EPIC. Through the process of the validation and verification, the revised monitoring report and the supporting documents were evaluated to confirm the actions taken by the PP to the CARs and CRs issued by EPIC. The documents reviewed by EPIC are listed in References section of this report. EPIC reviewed the final version of the documents, VCS Monitoring report, version 1.0 dated 21st November 2016, CCB PD Version 1.0 dated 1st March 2017 and CCB PIR Version 1.0 dated 1st March 2017 to confirm that all changes agreed had been incorporated. The entire list of documents reviewed is summarized in Section 6.0.

1.8 Interviews

Name Designation	Company	Interview Topics
Mr. Martin Weru	TIST Field Manager	Project design, Project implementation Monitoring plan and Procedures, Training details, field measurement
Mr. Charles Iberere	TIST Field Manager	Monitoring plan and Procedures, Training details, field measurements
Josephine Mwangi Moses Mwaingi Mary Wanthira	TIST Quantifiers	Field measurements, Species identification, data entry

Rosemary Githanga James Njogi Chanty Wanderi Patrich Wachura Virgini Warima Joseph Thita Eunice Wambui		
Mr Evans Maneno	Meru County Ecosystem Manager	Procedures and policies of Kenyan government for forestry conservation and community forestry.
Centre code: Narumoro Lamuria Tlmau Wiyumirie Nyahururu Laikipia Ntugi Wendo Igember Kinyaritha Chugu Imenti Kirimara Kirinyaga	TIST Program members and Groves	Farming practices followed, Knowledge of TIST policies, Attendance at cluster meetings, Carbon measurement practices.

1.9 Site Inspections

An onsite visit was conducted during the period 22nd April to 1st May, 2017. The sampling criteria were based on the total active number of samples as described in section 2.1. The on-site assessment which was conducted as a part of verification activity involved:

- 1) An assessment of the implementation and operation of the VCS and CCB project activity as per the registered PD
- 2) A review of information flows for generating, aggregating and reporting of the monitoring parameters
- 3) Interviews with relevant personnel to confirm that the operational and data collection procedures are implemented in accordance with the Monitoring Plan
- 4) A cross-check between information provided in the PD, MR and data from other sources
- 5) Observations of monitoring practices against the requirements of the PD and the applied methodology
- 6) Interviews with local stakeholders to confirm that the project meets the sustainability benefits criteria as defined by CCB
- 7) A review of calculations and assumptions made in determining the GHG data and ERs, and
- 8) An identification of QA/QC procedures in place to prevent, or identify and correct, any errors or omissions in the reported monitoring parameters.

1.10 Resolution of Findings

The objective of this phase of the verification was to resolve the corrective action requests and clarifications and any other outstanding issues which needed to be clarified prior to EPIC positive conclusion on the monitoring report and the project design. During the verification process 02 CARs and 14 CLs were raised.

All the CARs and IRs were resolved during this phase. In order to ensure the transparency of the validation process, the concerns raised and responses that were given are summarized in Appendix 1 of this report and documented in more detail in the Verification in Appendix 1. All the corrective actions have been incorporated into the monitoring report.

Internal quality control

A Technical Reviewer is appointed to review the final draft reports. The comments made by the Technical Reviewer are taken into consideration and incorporated in the final report. The final report (after resolutions of all findings) is then submitted to the Head – Operations for review and approval.

1.10.1 Forward Action Requests

There is no FAR raised during this verification process.

1.11 Eligibility for Validation Activities

EPIC is accredited for validation and verification for the scopes 1-11 and 13-15 by CDM UNFCCC and as well as by the VCS board.

3. VALIDATION FINDINGS

Validation of the inclusion of new project activity instances into this grouped project was performed as part of this assessment.

The project activity 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 1,179 Small Groups, 8,692 members, 6,710 project areas and 2,556.1 ha. The PD was validated and first verified on 11 April 2011 and the first verification has been completed up to 31- December-2010. At that time all of the Project Areas were established and the monitoring systems were in place. During the current validation and verification, the project comprises of 5,173 of the Small Groups, 36,582 members, 21,692 Project Areas and 11,151 ha. Hence the scope of the Gap Validation covered the new areas added.

1.12 Participation under Other GHG Programs

The project has not applied for other GHG programs such as CDM, GS, etc. The same is verified through the declaration letter from PP confirming that the project is not claiming any other environmental credits. The additional certification is under CCBA which does not quantify GHG credits by itself and is rather used as a qualitative aspect for the community and social aspects. The verification team also checked the national as well as international credits trading systems to assess double counting risks and the web links for the same have been listed in the appendix of this report.

1.13 Methodology Deviations

No methodology deviations were found in this monitoring period

1.14 Project Description Deviations

The following deviations from project descriptions are found in the monitoring report:

Original description in PD	Revised description in MR	Verification team's opinion
<p>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.</p>	<p>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 including information that might assist in monitoring the actual GhG removal. 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 neighbors 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</p>	<p>The deviation is within the permissible limits of the applied methodology and does not impact the monitoring of the emission reductions significantly. Rather the approach was an internal goal of TIST which was not practically implantable due to logistical constraints and now the cluster approach replaces the annual quantification. The verification team has through onsite visit, observations and interviews with both cluster servants and farmers identified this approach to be acceptable and implementable.</p>

	changes at the grove level.	
Not Addressed	<p>Removing Project Activity Instances: While it was expected that there would be loss of trees from the PD due to harvest, etc., the loss of PAs was not addressed. When a member or Small Group quits or harvests their trees, or if a PA is found to fall within one of the “remove” categories I through v in section 2.1, above, they are no longer active in the PD. The name of the grove is kept on the monitoring spreadsheet (Appendix 11), the reason for the removal is given in the “Status V2” column of the “PA Summary” worksheet of Appendix 11, and the carbon sequestered from the PA is zeroed out. By zeroing the carbon, all of the carbon credits previously issued from the PA are replaced.</p>	<p>The deviation is acceptable as the loss of the PA has occurred due to valid reasons which are described in the monitoring report. Also it is observed that as per policies of TIST, the PAs are removed and the status of the PAs is indicated in the worksheet, Appendix 11. The carbon is taken as zero and is not counted.</p>

As explained above, these changes are minor corrections which do not impact the applicability of the methodology, additionality or the appropriateness of the baseline scenario of the project.

1.15 Minor Changes to Project Description

No minor changes to project description were found in this monitoring period

1.16 Grouped Project

The steps taken to validate the inclusion of new project areas and communities into the (grouped) project, included the following:

Eligibility criteria for new projects	Assessment of verification team
A total of 14,982 new project activity instances have been added to the project in this verification period.	The verification was done by means of document review to confirm the number of new instances added.

<p>The project zone maps have been updated to include locations of the new project areas and communities</p>	<p>The submitted zone maps have been verified from the geo reference file which displays the landsat image in which the new locations have been updated.</p>
<p>The new project areas and communities have compiled with the stakeholder identification and analysis process.</p>	<p>The stakeholder identification process set out in the project description is verified from the local stakeholder consultation meetings held and site visit observations.</p>
<p>Conformance of the new project activity instances, project areas and communities with the eligibility criteria set out in the project description.</p>	<p>The site visit observations and document review verified that the new project activity instances confirmed with the eligibility criteria set out in the project description. Also Any instances that may be added in the future has been indicated to be limited to the defined area which is Kenya. The new instances and their communities which listed in the Grove Summary worksheet of Appendix 04b have been reviewed and it was further indicated by the PP that identification of communities to be added in future verifications would be limited to this area.</p>
<p>Conformance of the new project areas and communities with the scalability limits set out in the project description.</p>	<p>The measures specified in the project description have been applied to all the new instances added. Each new instance shall be and is treated in the same manner as the original instances and in accordance with the verified PD.</p>
<p>Actions taken to mitigate risks that may result from adding project areas and communities.</p>	<p>Risk assessment is verified to be in accordance with the VCS requirements based on the risk analysis document submitted.</p>
<p>Changes to the project's governance structures, and any changes to roles and responsibilities that may result from the addition of new project areas or communities.</p>	<p>The projects governance structures is verified to not have changed from the previous validation and verification and is thus valid for this addition of new instances.</p>
<p>Sampling process for validation of new project activity instances, project areas and communities.</p>	<p>The sampling process has been verified to be in accordance with TIST procedures and methodology requirements. Quantifiers counted every tree in each discrete project area. Counting each tree is 100% sampling and provides greater than 10% precision at the 95% confidence level. Up to 20 circumference readings for each strata in a project area were taken and archived, to develop a localized database of growth data by strata. This data provided the circumference data for each stratum. This sampling exceeds the 10% precision at the 95% confidence level required by the methodology.</p>
<p>Quality and completeness of evidence, data</p>	<p>Quantifiers counted every tree in each discrete</p>

<p>and documentation relating to the new project activity instances, areas and communities.</p>	<p>project area. Counting each tree is 100% sampling and provides greater than 10% precision at the 95% confidence level. Up to 20 circumference readings for each strata in a project area were taken and archived, to develop a localized database of growth data by strata. This data provided the circumference data for each stratum. This sampling exceeds the 10% precision at the 95% confidence level required by the methodology.</p>
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Hence it is the opinion of the assessment team that the inclusion of the new project activity instances, areas and communities are valid and meet the requirements.

4. VERIFICATION FINDINGS

1.17 Public Comments (Rules 4.6)

Public comments were submitted during the public comment period. It has been verified that the project proponent has taken due account of these comments satisfactorily. The public comments period for this current verification was intimated to relevant stakeholders by e-mail on 20th April 2017 and the public meeting was held on 4th April 2017 at Meru, Kenya. The notices in both English and Swahili were sent to stakeholders on 28th March as verified from public advertisements. The public comments received were positive.

1.18 Summary of Project Benefits

Climate Benefits

The project has estimated 602,657 ex-post tonnes total gross reductions under VCS Standard of which 480,617 new net tonnes is verified during this period.

Community Benefits

27,890 new TIST members have been added as part of the new instances and the total cumulative number is 36,582. The local employment status indicates an improvement with 4 new contracts added and overall contracts numbering 64. The total carbon payments in TIST Kenya are calculated as \$869,497 (cum) of which \$658,203 corresponds to this period. Monetized benefits from CF, fruits, nuts, fodder, firewood have also recorded an increase in this period. Capacity building initiatives have been initiated and training in subjects such as conservation farming, nursery development reforestation, climate change, biodiversity, building and using more fuel-efficient stoves have been provided to up to a level of 95%.

Biodiversity Benefits

The project comprises of 11,151 cum hectares (8,595 hectares corresponding to new areas this period) in which there are 410,389 cum indigenous trees planted over an area of 1,858 hectares. From the previous period, this represents an increase of 334,509 trees and 1,555 hectares. KFS is being assisted by TIST in reforesting the Lower Imenti Forest which is a HCV area. In this period, invasive shrubs have been removed and 13,213 indigenous trees over 33.1 ha have been planted. There are no proposed mitigation measures as this programme is specifically to address historic degradation in the Lower Imenti Forest. Exceptional Community

Benefits as confirming to Gold Level have been demonstrated as the project has net positive impacts on community in a poor area. Survey results show that participants experience a range of economic benefits and positive social impacts, regardless of socioeconomic status, gender or part of more vulnerable groups. The average benefits are \$1,450 per TIST member (\$1060 has been estimated average benefits for the added new areas).

The information provided is in line with the requirements related to monitoring of the data and has been identified accordingly. The achievements reported have been verified based on information provided in the monitoring report.

1.19 General

1.19.1 Implementation Status (G1.9)

Following aspects were assessed according to the requirement of Section G.1.9:

The current validation and verification have not identified existence of any material discrepancies between project implementation and the project description. Compared to the previous period, there have been no material changes to the implementation status of the monitoring plan and the completeness of monitoring, including the suitability of the implemented monitoring system except for a minor deviation, which does not affect the overall monitoring or results. The project start date is January 1, 2004. The CCB project life is 60 years. The GHG crediting period is 30 years, with the option of renewal. A number of Gantt Charts indicate the timing of events for the project – already completed and planned such as:

- Main planting schedule (project).
- Replacement planting schedule (project).
- Monitoring (project).
- Verification (project).
- Thinning (project area).
- Fruit and nut harvest (project area).
- Deadwood harvest (project areas).

It was verified that there the information provided for this indicator in the project zone has been updated for the current period.

The project is currently under VCS certification and additionally certified under CCB. The GHG emission reductions or removals generated by the project have not become included in any other emissions trading program or any other mechanism that includes GHG allowance trading. The project has not received nor sought any other form of environmental credit, or has become eligible to do so since validation or previous verification. The project also has not participated or been rejected under any other GHG programs since validation or previous verification. There have not been any previously validated methodology deviations, project description deviations, and minor changes to the project description (each verification report must contain an exhaustive list of all deviations or changes applied to the project). It has also been verified that overall the project has been implemented as described in the project description.

1.19.2 Risks to the Community and Biodiversity Benefits (G1.10)

As inferred in the PIR and PDD this is unchanged from the previous validation and the assessment was done as follows:

1. Risks due to the uncertainties of the carbon market is mentioned referring to the acceptance of credits from AR projects in future
2. Risk of farmers leaving the program is also mitigated as there are thousands of farmers who have joined the programme which continue to grow
3. Natural risks such as drought, pestilence and fire are mitigated by the fact there are thousands of individual project areas spread over thousands of square kilometres and the loss is not significant.

A risk analysis for the PIR period was conducted for the project using AFOLU tool specified by VCS and the risk was verified by EPIC indicating a low level of risk to project. The risk assessment is further added to this report as Appendix B. Assessment was done by review of the PIR, MR and PDD submitted, site visit interviews and document review.. Findings were raised based on which the information pertaining to the indicator was adequately addressed. As part of the VCS requirements, a risk analysis was conducted. Based on the VCS tool, this project has a risk of 2.5, which is exceptionally low and verified to be appropriate.

1.19.3 Community and Biodiversity Benefit Permanence (G1.11)

As inferred in the PIR and PDD this is unchanged from the validation and the following information is provided as below:

- Training in the benefits of specific tree species such as macadamia trees for their nuts, citrus trees for their fruits and *Croton megalocarpus* as a source for biofuels.
- Training in the maintenance of a sustainable woodlot not limited to project lifetime.
- Training in the benefits of biodiversity include more productive soil, return of edible indigenous plants, enhanced area ecotourism, and return of native wildlife that is useful to them personally (e.g. bees).

These benefits apart from the carbon revenues have helped in providing long lasting measures beyond project lifetime. Assessment was done by review of the PIR, MR and PDD submitted, site visit interviews and document review. Findings were raised based on which the information pertaining to the indicator was adequately addressed. Refer Appendix A for details.

1.19.4 Stakeholder Access to Information (G3.1- G3.3)

TIST consults community leaders, village heads/village leaders, local NGOs and local government officials to determine if there is an interest in the program. If there is an interest, TIST holds a public seminar to present the program, answer questions, address concerns and receive comments. This is followed by regular and ongoing meetings where the public is invited to attend. TIST representatives have met with numerous State, District and Village officials seeking comment and showing them the project. In addition to the meetings, information about TIST is disseminated by word of mouth; using the "Mazingira Bora," a multi-lingual newsletter published by TIST Kenya; and direct contact with community leaders and government officials.

At the Small Group level, member farmers meet with TIST representatives regularly at Cluster meetings, where they have an opportunity to ask more questions and make more comments.

Since one of TIST's main focuses is adopting best practices, these are forums to review what is working about the program and how it can be improved. Changes to the program are announced in the newsletter.

The result of this stakeholder process has led to numerous invitations for TIST to come to new villages and numerous positive comments about TIST. There have been no negative comments received. Based on the comments and responses above, no changes were necessary for the project.

The information presented is verified to be sufficient for the indicator. Assessment was done by review of the PIR, MR and PDD submitted, site visit interviews and document review. Findings were raised based on which the information pertaining to the indicator was adequately addressed. Refer Appendix A for details.

1.19.5 Stakeholder Consultation (G3.4 – G3.5)

TIST announced the intent to verify this project in two major Nairobi papers and in an email to stakeholders. Comments on behalf of CCB were solicited. In addition, a publicly accessible webpage that lists and contains all of the documents associated with this and the associated VCS project are available. It includes the PDDs, PIRs, maps, KML files, risk reports, spreadsheets, monitoring reports, verification reports and appendices. No negative comments were received during the comment period.

The e-mail to stakeholders was also marked to EPIC and further the advertisements in the local Nairobi newspapers were verified. Hence, the requirements relating to the public commenting have been sufficiently addressed as relevant for the indicator. Assessment was done by review of the PDD and PR, e-mail to stakeholders, advertisements in local newspapers, publically available documents. Findings were raised based on which the information pertaining to the indicator was adequately addressed. Refer Appendix A for details.

1.19.6 Stakeholder Participation in Decision-making and Implementation (G3.6)

TIST consults community leaders, village heads/village leaders, local NGOs and local government officials to determine if there is an interest in the program. If there is an interest, TIST holds a public seminar to present the program, answer questions, address concerns and receive comments. This is followed by regular and ongoing meetings where the public is invited to attend. TIST representatives have met with numerous State, District and Village officials seeking comment and showing them the project. In addition to the meetings, information about TIST is disseminated by word of mouth; using the "Mazingira Bora," a multi-lingual newsletter published by TIST Kenya; and direct contact with community leaders and government officials.

At the Small Group level, member farmers meet with TIST representatives regularly at Cluster meetings, where they have an opportunity to ask more questions and make more comments. Since one of TIST's main focuses is adopting best practices, these are forums to review what is working about the program and how it can be improved. Changes to the program are announced in the newsletter.

The result of this stakeholder process has led to numerous invitations for TIST to come to new villages and numerous positive comments about TIST. There have been no negative comments

received. Based on the comments and responses above, no changes were necessary for the project. The information presented is verified to be sufficient for the indicator. Findings were raised based on which the information pertaining to the indicator was adequately addressed. Refer Appendix A for details.

1.19.7 Anti-discrimination (G3.7)

The sexual harassment policy, and non-discrimination policy, is posted on the TIST Mobile website, where it is accessible by members with a mobile phone. In addition, the February 2017 Mazingira Bora publication had an article on sexual harassment, discrimination and the grievance procedure. A member that has been found to discriminate or sexually harass can be removed from TIST. A TIST worker that discriminates or sexually harasses can be dismissed. The information presented is verified to be sufficient for the indicator. Assessment was done by site visit interviews and document review.

1.19.8 Stakeholder Feedback and Grievance Redress Procedure (G3.8)

The process of addressing grievances and conflicts is described in the PIR as follows:

1. Internal process where TIST policies and Values are used as the basis.
2. For new issues beyond the policies, it is brought to the next seminar or Leadership Council meeting, where decisions are made by representatives of the Small Groups, Kenya Staff and TIST Management
3. If conflicts or grievances cannot be resolved internally, CAAC will submit to arbitration in through the Chartered Institute of Arbitrators, Kenya Branch within 30 days for notice by the aggrieved party indicating they wish to appeal the internal process.

It was verified that TIST has not received any formal grievances during this verification period. Assessment was done by review of the PIR, MR and PDD submitted, site visit interviews and document review. No findings were raised as the information pertaining to the indicator was adequately addressed.

1.19.9 Worker Relations (G3.9 – G3.12)

The following assessment was done to verify the project proponent has taken actions and implemented measures to ensure that the relationship between the project and workers meet the requirements of G3.9 – G3.12.

Build the capacity of the communities through job training and employment.

The PIR summarises the local expertise and experience TIST. Almost complete localisation is achieved as both TIST quantifier and managers are Kenyans and are adequately trained at the various annual seminars and events organised. Hence it is verified that the information provided is sufficient to address the indicator.

Ensure people from the communities are given an equal opportunity to fill work positions.

The PIR describes that the 50-plus Cluster Servants (formerly termed Quantifiers) are TIST farmers trained to use the monitoring system and hired based on ability, not gender, religion or tribal affiliation. TIST farmers are trained as trainers. TIST holds regular training seminars and makes a concerted effort to make sure attendance has a gender balance. During this Verification Period, four new Cluster Servants were added. Three of them were female. Most of the farmers on the west side of Mt Kenya are Kikuyu and the farmers on the east side are Meru giving TIST an overall mix of tribal affiliations. Hence it is verified that the information provided is sufficient to address the indicator.

Ensure the project is in compliance with all relevant laws and regulations regarding worker's rights and workers are informed of their rights.

The relevant host country laws as applicable for the project are:

- The Employment Act, 2007
- Regulation of Wages and Conditions of Employment Act
- National Hospital Insurance Fund Act, 1998

Most of the Kenyans working for TIST are aware of their rights before starting employment. However CAAC uses an employment contract that was vetted by local counsel that reiterates the more important parts of the relevant employment law such as salary, types of leave, rest days and termination. Quantifiers are contracted independently and their contract has been reviewed by local counsel. Candidates are given the contract to read well in advance of signing and given the opportunity to ask any questions about the terms.

Hence it is verified that the information provided is sufficient to address the indicator as TIST operations is in conformance to applicable laws and regulations.

Inform workers of risks and how to minimize risk. Minimize workplace risk using best work practices. TIST has a safety manual for Quantifiers which addresses the occupational risks sufficiently. Hence it is verified that the information provided is sufficient to address the indicator. Assessment was done by review of the PIR, TIST documents on employment policy, agreement templates, recent appointments, site visit and interviews.

1.19.10 Management Capacity (G4.2 – G4.3)

The following assessment was done to verify that the project proponent has taken actions and implemented measures to ensure the capacity exists to implement the project over the project lifetime.

- The project demonstrates the project possesses or is acquiring the key technical and management skills required to implement the project successfully. The PIR summarises the local expertise and experience TIST. Almost complete localisation is achieved as both TIST quantifier and managers are Kenyans and are adequately trained at the various annual seminars and events organised. Hence it is verified that the information provided is sufficient to address the indicator.
- The project demonstrates the financial health of the implementing organization is adequate to support project implementation, and in the case of grouped projects, the ability of the implementing organization(s) to provide adequate financial support to new project areas included in the project at this verification event is also verified. The process

of financial funding for the project is summarised in the PIR. From the time USAID cash funding ended in June 2013 TIST has been operating the project solely from carbon revenues. Confidential internal financial projections indicate the rate of TIST tree growth and sequestration is sufficient to provide enough credits over the life of the project to fund the project. The financial plan and the prices received in the carbon market for the credits generated indicate that the project is on target to achieve financial stability and sustainability. In addition, TIST has several issued VCUs in inventory and over the next 6 months it is expected to create several others under VCS. I4EI has provided sustainable development funding that offsets much of the project cost, obtaining funding through USAID (Kenya and Tanzania) and private donors. The fact that TIST is in its 17th year further demonstrates its longevity.

- The PIR and PDD affirm that the Project Proponent, or any of the other entities involved in project design and implementation, are not involved in, or are not complicit in any form of corruption such as bribery, embezzlement, fraud, favoritism, cronyism, nepotism, extortion, or collusion. CAACs top management, CEO and Vice President are active in the day to day operation and are very familiar with the financial aspects of CAAC and TIST and are aware of no instances of the aforementioned types of corruption within either organization. The USAID grants also contained prohibitions of these types of corruption. USAID has completed an audit of TIST Kenya in 2016 and found no evidence that these have occurred.

Hence it is verified that the information provided is sufficient to address the indicator. Assessment was done by review of the PIR, TIST documents, site visit and interviews

1.19.11 Commercially Sensitive Information (Rules 3.5.13 – 3.5.14)

There were no commercially sensitive information except the financial statements that were reviewed during this assessment.

1.19.12 Rights Protection and Free, Prior and Informed Consent (G5.1-G5.5)

The PIR describes the land use practices and legal property rights which is in line with the description in the PD. The Small Groups own the trees that they plant together and grant the rights to all carbon associated with TIST to Clean Air Action Corporation (CAAC) under a “Carbon Credit Sale Agreement.” Under the agreement the members affirm their ownership or rights to the land designated as project areas. The current land is used for agricultural purposes. The PIR describes that TIST takes place on the existing land of farmers and their families whom participate voluntarily. CAAC enters into contracts with the Small Group members. In the contract, the members attest in that they have the rights to plant on these lands.

Hence it is verified that the information provided is sufficient to address the indicator. The PIR infers that CAAC and TIST do not own or lease any of the project lands. Participation is strictly voluntary on lands owned by farmers. CAAC has no authority or desire to relocate any of the members or land owners. Illegal activities such as the following exist at the project zone:
Harvesting of trees and charcoal making:

TIST hopes to reduce this problem through its development of on-farm, sustainable, wood lots, which offer an alternate, sustainable source of fuel to some of the population. Hence it is verified

that the information provided is sufficient to address the indicator that the following is being complied with:

- There is no change in the land use and legal property rights in the project zone since the validation of the project.
- Existing property rights are recognized, respected and supported
- The project does not encroach uninvited on private, community or government property.
- The free, prior and informed consent has been obtained of those whose property rights are affected by the project.
- Appropriate restitution or compensation has been allocated to any parties whose lands have been or will be affected by the project.
- Project activities do not lead to the involuntary removal or relocation or property rights holders from their lands or territories, and does not force them to relocate activities important to their culture or livelihood.
- Actions have been taken, if necessary, to reduce illegal activities that could affect the project's impacts.
- No activities are undertaken by the project that could prejudice the outcome of an unresolved dispute relevant to the project over lands, territories and resources in the project zone.

Hence it is verified that the information provided is sufficient to address the indicator. Assessment was done by review of the PIR, TIST documents, site visit and interviews

1.19.13 Legal Status (G5.6)

TIST is subject to laws and regulations of Kenya as applicable which are listed below:

- The employment laws listed in G4.5.
- Companies Act, (Law of Kenya Cap. 486).
- Environmental Management and Co-ordination Act, 1999.

Further its funding partner is subject to USAID rules which are listed.

Hence it is verified that the information provided is sufficient to address the indicator. Assessment was done by review of the PIR, TIST documents, site visit and interviews

1.20 Climate

This CCB PDD uses the Climate Waiver:

- The project meets the requirements for validation under VCS. The VCS validation document for the original Project Areas is the original PD in line with the VCS requirements and the validation of the new Instances (Project Areas) is in the Monitoring Report.
- The project has the same name, is the same size, incorporates the same Project Areas, has the same Proponent, has the same project start date, uses the same activities and has the same without-project scenario.

1.20.1 Accuracy of GHG Emission Reduction and Removal Calculations

The verification of all the data ex-ante and data ex-post (monitoring parameters) including data measurement, data transfer, data archiving, aggregation and calculation of baseline emissions, project emissions and leakage emissions are tabulated below.

Parameter	Source considered	Conclusion by the verification team
Ex- ante		
Location of project area	As verified from the TIST website and VCS project website based on following documents Georeference file for Landsat image Landsat 4/5 image with project area locations Georeference file for Landsat image Landsat 7 image with project area locations Project boundaries for use with Google Earth	The location of the project area is verified to be consistent with the project design. In the samples visited, the GPS reading taken were found to corroborate with the data made available.
Boundary of project area	Landsat 7 image with project area locations Project boundaries for use with Google Earth	The boundary of the project area is verified to be consistent with the project design. In the samples visited, the GPS reading taken were found to corroborate with the data made available.
Area of project area	Appendix 11	The area of the project was verified from the available data and confirms with the project design. In the samples visited, the area surveyed were found to corroborate with the data made available.
Ownership of project area	Sample of ownership records.	The ownership records were verified to confirm with the available data. In the samples visited, the interview with the farmers confirmed the same.
Baseline trees	Previous validation and verification report and project design and monitoring reports.	The baseline tree data was verified from the earlier monitoring and verification reports and was found to be in conformance with the project design
Baseline tree circumference	Appendix 11	The data was verified to be in conformance with project design
Baseline strata	Appendix 11	The data was verified to be in conformance with project design
Project trees	Appendix 11	The data was verified to be in conformance with the monitoring data and was further verified with

		the samples visited
Ex- post		
Number of trees	Appendix 11	The data was verified to be accurate with errors within the acceptable limits. The samples visited were also subject to circumference measurement to both cross check the field measurement practices and the recording which was found to conform with the verification plan and TISTs procedures.
DBH	Appendix 11	The data was verified to be accurate with errors within the acceptable limits. The samples visited were also subject to circumference measurement to both cross check the field measurement practices and the recording which was found to conform with the verification plan and TISTs procedures.

The PP submitted emission reduction calculation in a excel sheet. The excel sheet is clear, un-protected and easily viewable. The calculation in the excel sheet is verified and found be correct. The methods and formulae set out in the project description for calculating baseline emissions, project emissions and leakage are correctly followed in the monitoring report and ER calculation sheet.

All the values are provided in the MR and ER calculation sheet are cross verified with its sources and confirmed no manual transposition errors between data sets have occurred. Also the consistency of values within MR is checked and found to be OK.

PP has described the reasons with justification for omission and inclusion of certain parameters with respect to the project monitoring:

1. The project does not monitor "height of tree" data or "basic wood density." As noted in paragraph 42, Step 2 of the methodology CDM AR-AMS0001, option is provided to monitor DBH which is implemented by the project and considered as appropriate.
2. Project monitoring relies solely on allometric equations that only require DBH and not the other parameters as mentioned above.
3. Each project area is considered as permanent sample plot as all trees are counted per project area and hence this is not considered as separate monitoring parameter which is an acceptable justification.
4. Ownership of project was a new parameter added as considering the large number of farmers, the verification is done with the carbon credit agreement to monitor any occurrence of ownership change.

Hence verification team concludes that the GHG emission reductions and removals have been quantified correctly in accordance with the project description and applied methodology.

1.20.2 Quality of Evidence to Determine GHG Emission Reductions and Removals

The GHG removals for the project reporting period are based on forest inventory measurements and calculation procedures and factors that have been assessed by the verification team, as described in Section 4.4.1 of this report. The verification team has attained a reasonable level of assurance that these measurements and procedures, including the internal quality control measures such as check plots, were designed and have been implemented to the highest level of quality. The verification team interviewed personnel from TIST relevant to the project and confirmed their qualifications and expertise. Further the QA/ QC procedures adopted by TIST for the monitoring of the GHG emission reductions were found to conform with the project design and monitoring plan which ensured a high degree of data reliability.

1.20.3 Non-Permanence Risk Analysis

The verification team reviewed the Non-Permanence Risk Assessment provided at project validation. There has been no change regarding the status or applicability of any of the risk factors since project validation, including political factors, socio-economic factors, environmental factors, or factors relating to implementation of project activities. The non-permanence risk rating is 2.5 and the required buffer is 10%. The verification team therefore concludes that the default minimum 10% risk rating is appropriate for the current reporting period. Please refer to the weblink for Appendix 09 of the MR version 01 or to the Non-permanence risk report version 01 dated 21st November uploaded along with the MR for a detailed description of the steps taken to assess the non-permanence risk rating determined by the project proponent. The verification team's assessment of the non-permanence risk rating is attached with this report as Appendix 2.

1.20.4 Dissemination of Monitoring Plan and Results (CL4.2)

The parameters as monitored for this period has been assessed based on the process described in section 4.4.1. Further the operational processes for monitoring the actual GHG removal by the sinks is described in the VCS MR. TIST Quantifiers visit each grove, at minimum, once every five years, to count trees and collect circumference, GPS, and other data. Quantifiers transmit the monitoring data via the Internet to the TIST website, where it is managed by CAAC. CAAC oversees the data and conducts QA/QC reviews. Feedback is provided to the TIST's Quantifiers and office staff. CAAC is responsible for tabulating carbon stocks. The TIST Data System stores all of the current and archived data. CAAC managers use customized reports to analyze the data and look for trends, missing data or obvious errors. TIST managers visit selected project areas and observe quantifications and audits. Quantifiers are also audited by the TIST Kenya staff. Hence the net reductions as estimated for this assessment for the period from 08-Jun-11 to 10-Nov-16 are 480,617 tonnes, which is calculated based on the gross estimate of 534,020 to which a 10 % buffer is applied.

Hence it is verified that the information provided is sufficient to address the indicator. Assessment was done by review of the PIR, TIST documents, Excel calculation sheet Appendix 11, site visit and interviews.

1.20.5 Optional Gold Level: Climate Change Adaptation Measures (GL1.3)

Not Applicable for the PDD and PIR

1.20.6 Optional Gold Level: Climate Change Adaptation Benefits (GL1.4)

Not Applicable for the PDD and PIR

1.21 Community**1.21.1 Community Impacts (CM2.1)**

The PDD and PIR list a number of positive community impacts which might not have occurred in the absence of the project:

- New job opportunities
- Direct Effects to Small Groups
- Small Group Structure
- Fruits and nuts from tree plantings
- Wood products and limited timber from trees
- Natural medicines, insecticides and other benefits from trees
- Capacity building on agricultural improvements, business skills, nursery development, and reforestation
- Small Groups organize to deal with other social and economic problems such as famine and AIDS
- Improved beauty of the landscape

Hence it is verified that the information provided is sufficient to address the indicator. Hence it is verified that the information provided is sufficient to address the indicator. Assessment was done by review of the PIR, TIST documents, Excel calculation sheet Appendix 11, site visit and interviews.

Findings were raised based on which the information pertaining to the indicator was adequately addressed. Refer Appendix A for details.

1.21.2 Negative Community Impact Mitigation (CM2.2)

During this assessment no negative community impacts have been identified for the validation and verification.

1.21.3 Net Positive Community Well-being (CM2.3)

A number of initiatives have been ongoing as part of positive community impact as listed in Section 4.5.1 was verified and assessed to be beneficial to the community.

1.21.4 Protection of High Conservation Values (CM2.4)

The PIR describes that the project does not have a negative effect on the HCV areas as it has been implemented on private lands that have been under human habitation and agriculture for generations. Further, the activities under this program does not cause displacement or move activities to the HCV areas. Hence it is verified that the information provided is sufficient to address the indicator.

1.21.5 Other Stakeholder Impacts (CM3.2-CM3.3)

There will be more local food from TIST implemented Conservation Farming and fruit and nut trees which demonstrate increased food security. Further benefits from the cluster meetings and trainings are Conservation Farming, successful tree planting, construction tree nurseries, building and using more fuel efficient stoves, indoor cooking pollution, use of trees for stabilizing soil and water courses, using mosquito nets, increase of locally sourced fuel wood. All these impacts summarizes to a positive impact on other stakeholders.

The information presented is verified to be sufficient for the indicator. PDD and First Monitoring period PIR, current PIR, site visit interviews and document review were assessed. Findings were raised based on which the information pertaining to the indicator was adequately addressed. Refer Appendix A for details.

1.21.6 Community Monitoring Plan (CM4.1, CM4.2, GL2.2, GL2.3, GL2.5)

The PDD and PIR list parameters for community monitoring which is a part of the monitoring plan. Further the Quantifiers collect all field level information from the cluster meetings and the records are available at the administrative level. In addition, more program components, such as GPS tracts of all the Project Areas, are being obtained in the climate change monitoring plan. The information presented is verified to be sufficient for the indicator.

PDD and First Monitoring period PIR, current PIR, site visit interviews and document review were assessed. Findings were raised based on which the information pertaining to the indicator was adequately addressed. Refer Appendix A for details.

1.21.7 Community Monitoring Plan Dissemination (CM4.3)

All of the CCB and VCS documents, including the monitoring data, are made available to the public on a dedicated web page. Stakeholders have been informed of this when they receive the email advising them of the public meeting, at the public meeting, through reading this report that will be made public on the CCB project page and through reading the VCS registry posting. The information presented is verified to be sufficient for the indicator.

1.21.8 Optional Gold Level: Short-term and Long-term Community Benefits (GL2.2)

Though net positive benefits have been demonstrated at the community level, a survey was conducted in August 2011, the process of which is described as below.

The four main topic areas of the survey were:

1. Demographic/basic information (including literacy, income);
2. TIST membership and participation information (including barriers to participation);
3. benefits from TIST activities (economic, environmental, and social, quantitative and perceptual) and negative impacts; and
4. Conservation Farming and food security.

In March 2015, a similar survey was conducted for TIST by Yale School of Forestry & Environmental Studies and New England College. Both these survey results indicated that the project is pro poor and provides exceptional community benefits across a range of criteria as indicated in the comparative table in section GL 2.2 of the PIR and PDD.

While the Negative Impact section indicated that there is a perception among a few that there are some negative impacts, they were a minority. To determine if TIST violates the "do not harm" tenet of the Gold Level, the overall monetary benefits to all three classes (entire survey population, vulnerable households and women) were observed and significant increases in participant income was noticed. Furthermore, all groups reported more perceived benefits than negative impacts from their participation. Combining this with some of the benefits noted in the climate, community and biodiversity sections of the monitoring report, it is clear that TIST has established that no member of a poorer, or more vulnerable, social group will experience a net negative impact on their well-being or rights.

1.21.9 Optional Gold Level: Smallholder/community member Risks (GL2.3)

Some of the perceived risks as indicated in the PIR and PDD are:

- The farmers could use too much of their farm land for tree planting and jeopardize their food security.
- They could spend money on seedlings but have their trees die. We do not want them spending money on seedlings. .
- Their trees could die. Early mortality is the biggest problem and it requires that the farmers follow the Conservation Farming method for their trees.

These risks are largely avoided by training the farmers in good farming practices.

1.21.10 Optional Gold Level: Marginalized and/or Vulnerable Community Groups (GL2.4)

Results show that the identified vulnerable households based on the two surveys experienced a range of benefits from sales and savings. Notably, incremental livestock and their products and harvesting tree products such as fruit, nuts, fodder and firewood was important for this sub-group, with the new survey showing it has higher values than the cash payments.

1.21.11 Optional Gold Level: Net Impacts on Women (GL2.5)

The Yale/NEC Survey showed that women receive 92% of the average benefits of men and attended more Cluster meetings and received more training than men. Further the benefits were monetized and the results indicated that there is net positive impact on women.

1.21.12 Optional Gold Level: Benefit Sharing Mechanisms (GL2.6)

The benefits from this program are mutual as carbon credits are generated of which the project proponent is the beneficiary. In exchange, the farmers get a prepayment based on tree count and will ultimately receive 70% of the profits. The farmers maintain ownership of their land, the trees and the tree products. They get 100% of any firewood, fodder, fruits or nuts that come from the trees. They receive training in many life improving topics at no cost. They choose which program is best for them and keep all the benefits derived from their adoption.

1.21.13 Optional Gold Level: Governance and Implementation Structures (GL2.8)

The governance and implementation structure as defined in the PDD and PIR describes the management team based in the US, the local operations team based in Kenya and the

quantifiers and also the cluster members. The chain of governance and responsibilities has been verified by means of interviews and it is demonstrated that the requirements related to the indicator are met.

1.21.14 Optional Gold Level: Smallholders/Community Members Capacity Development (GL2.9)

The small holders are part of a Small Group. They generally meet weekly for training, to share the Mazingira Bora newsletter, review the results of quantification, plant trees, tend nurseries, review the payment vouchers and work together on projects too big for one person. They practice rotating leadership so everyone gets a chance.

Cluster members meet once per month at a location within walking distance of the members. Each Small Group sends two representatives to each Cluster meeting, where they receive training from Cluster Servants and other trainers, pick up the Mazingira Bora, get the payment vouchers, and get their carbon prepayment through Mpesa. The Clusters have three administrators: Cluster Leaders, Co-leaders, and Accountability people. They serve for a period of four months. After four months of service, the Cluster leader rotates out, the Co-leader becomes the Leader, the Accountability person becomes the Co-leader and the Accountability person is filled by Small Group members from the Cluster. Both women and men are leaders.

The Host Country operations are managed by the Leadership Council. It is made up of six to eight TIST farmers and two full time managers (Kenyan). They oversee day-to-day operations. Leadership is internally rotational and several of the positions are externally rotational. A gender balance is kept.

The chain of governance and responsibilities has been verified by means of interviews and it is demonstrated that the requirements related to the indicator are met.

1.22 Biodiversity

1.22.1 Biodiversity Changes (B2.1)

PIR describes the historical scenario as grasslands or croplands on private lands owned by subsistence farmers. Natural wildlife populations were eliminated or driven off long ago and are currently restricted to transient animals. Hence the approach to improving biodiversity in the project was limited to planting indigenous trees. Isolated woodlots with indigenous trees also improve the connectivity of wildlife habitat between natural forests. This second verification lists the following:

- 420,373 new indigenous trees
- 1,884 ha of indigenous trees

Further, by providing fuel wood from sustainable wood lots and improving livelihoods, the project has a positive effect on biodiversity. Non-native trees such as eucalyptus, cypress and grevillea indirectly contribute to maintaining biodiversity as they reduce pressure for fuel wood and other purposes. The information presented is verified to be sufficient for the indicator.

PDD and First Monitoring period PIR, current PIR, site visit interviews and document review were assessed. Findings were raised based on which the information pertaining to the indicator was adequately addressed. Refer Appendix A for details.

1.22.2 Mitigation Actions (B2.3)

Compared to the baseline scenario, the negative impacts on biodiversity are minimum. As such, the only negative impacts identified are species selection, for which mitigation actions are proposed. No HCVs are affected as TIST does not have a negative effect on the three HCVs near the TIST Project Areas (Mt Kenya, Aberdare and Meru National Parks). TIST activities do not take place inside those areas and TIST trees are being planted where deforestation has taken place.

1.22.3 Net Positive Biodiversity Impacts (B2.2)

TIST has planted 410,389 indigenous trees covering 1,858 ha covered by 15,955 Project Areas. These are islands of biodiversity in a degraded landscape matrix that provide connectivity among the three aforementioned HCV areas and other natural forests. There are over 21,000 total Project Areas operated by farmers that are receiving ongoing training in biodiversity and natural resource management. Those of these that do not have indigenous trees still provide forest cover. In addition, there are 259,582 fruit and nut trees covering 1,177 ha. These provide a source of food and nectar for bees, birds, small animals living on, or around, the farms and larger animals when present.

Hence, comparing the without-project scenario and with-project conditions, it has been demonstrated that the project has a net positive impact on biodiversity. The information presented is verified to be sufficient for the indicator. PDD and First Monitoring period PIR, current PIR, site visit interviews and document review were assessed.

1.22.4 High Conservation Values Protected (B2.4)

No HCVs are affected as TIST does not have a negative effect on the three HCVs near the TIST Project Areas (Mt Kenya, Aberdare and Meru National Parks). TIST activities do not take place inside those areas and TIST trees are being planted where deforestation has taken place.

1.22.5 Invasive Species (B2.5)

Among the listed species screening has been done against the global database of invasive species. While two species on the list are included for Kenya, they are high value trees in Kenya, and, according to the Kenya Forest Service, are not invasive. The guava tree, *Psidium guajava* is a mainstay of the Kenyan diet and provides one of the most popular fruits. The second, *Leucaena leucocephala*, is widely planted for forage production and reforestation. Both the species in terms of population are below 0.5%.

1.22.6 Impacts of Non-native Species (B2.6)

Training, monitoring, and incentives are all structured to encourage farmers to plant diverse trees with diverse benefits. Because of all of these active steps taken to safeguard against deleterious environmental effects, negative impacts are not expected. The use of non-native species is left to the choice of the farmers.

1.22.7 GMO Exclusion (B2.7)

The Project Proponent has guaranteed that no GMOs have been used or will be used by the project to generate GHG emissions reductions or removals. Hence this requirement is not applicable.

1.22.8 Inputs Justification (B2.8)

From the project description and site visit, it is verified that there are no adverse effects of any inputs used by the project. It is TIST's policy to not use chemical fertilizers and pesticides. Farmers are trained to make and use their own compost and to use dung. In addition, the cost of chemical fertilizers and pesticides is prohibitive. Also there is no generation of waste products. Fallen leaves are left to decay back into the soil. Fallen woody material, from twigs to trees, are consumed as fuelwood, or used as construction material.

1.22.9 Negative Offsite Biodiversity Impacts (B3.1) and Mitigation Actions (B3.2)

No negative impacts have been identified and therefore no mitigation is needed. The information presented is verified to be sufficient for the indicator. PDD and First Monitoring period PIR, current PIR, site visit interviews and document review were assessed.

1.22.10 Net Offsite Biodiversity Benefits (B3.3)

There are no offsite biodiversity benefits identified during this period. Hence there are no net offsite biodiversity benefits applicable for this period.

1.22.11 Biodiversity Monitoring Plan (B4.1, B4.2, GL3.4)

As per the PIR, the biodiversity monitoring plan is described to be in operation from 2004 and is being implemented with no deviations. Annual monitoring of each site is the goal and a minimum of every five years is achieved. Monitoring in riparian areas is of special focus with the following:

1. At a landscape level, the number of hectares of riparian land improved with indigenous tree planting by TIST farmers and their location.
2. TIST Small Groups with land in riparian areas who plant indigenous trees to help preserve the area and reduce erosion caused by runoff and flooding receive an additional incentive per live tree.
3. Riparian areas were chosen for their critical importance in providing ecosystem services such as enhanced water quality, reduced sedimentation, and enhanced wildlife habitat.

The following are the results of the Monitoring Plan:

- Number of trees: 3,426,986
- Total hectares of the project: 11,026.2
- Number of Project Area: 21,692
- Number of trees and hectares by species
- Number of indigenous trees: 420,373
- Hectares of indigenous trees: 1,884
- Number of Project Areas with indigenous trees: 15,954
- Number of indigenous trees and hectares by species:
- The area and location of each Project Area:

Further the results for the HCV area (lower Imenti forest) is also summarized in the PIR, which is verified. Overall the biodiversity monitoring plan is verified to be implemented in accordance to the validated project description. PDD and First Monitoring period PIR, current PIR, site visit interviews and document review were assessed

1.22.12 Biodiversity Monitoring Plan Dissemination (B4.3)

All of the CCB and VCS documents including the monitoring data have been verified to be available to the public on a dedicated web page. Stakeholders have been informed of this when they receive the email advising them of the public meeting, at the public meeting, through reading this report that will be made public on the CCB project page and through reading the VCS registry posting. The information presented is verified to be sufficient for the indicator. PDD and First Monitoring period PIR, current PIR, site visit interviews and emails were assessed.

1.22.13 Threat Reduction Actions (GL3.4)

This indicator is not applicable for this period.

1.23 Additional Project Implementation Information

1.23.1 Optional Gold Level: Trigger Species Population Trends (GL3.3)

This indicator is not applicable for this period.

1.23.2 Optional Gold Level: Effectiveness

There is no additional project implementation information identified during the current period.

1.24 Additional Project Impact Information

There is no additional project implementation information identified during the current period.

5. VERIFICATION CONCLUSION

Clean Air Action Corporation has appointed EPIC Sustainability Services Private Limited to perform the Gap Validation and second periodic verification under VCS and CCB standards. The assessment covered the scope of the gap validation and verification of the emission reductions reported and sustainable benefits achieved for the project titled “TIST Program in Kenya, VCS-005” (Project ID: 737) for the period from 9-Jun-11 to 08-Nov-2016.

The project “The International Small Group and Tree Planting Program, Kenya, VCS-005”, complies with the verification criteria for projects set out in CCB Version 3 and VCS Version 3. It has been verified that the project has been implemented in accordance with the validated project description and any subsequently validated changes. For the new instances added, the validation of which covers the scope of this audit, it has been verified that the project complies with the validation criteria for projects set out in CCB Version 3 and VCS Version 3.

The net community and biodiversity benefits achieved by the project during the project implementation period has been verified with the actual implementation and verified to be a valid estimate. Further the newly added instances are on track to achieve its stated net community and biodiversity benefits and community and biodiversity objectives.

The verification of the GHG emission reductions was based on the validated PD, the baseline and monitoring methodology, validation reports, emission reduction spread sheets and other supporting documents made available to EPIC verification team by the project participant. The management of project proponents is responsible for the preparation and reporting of GHG emissions data, and the reported GHG emissions reduction on the basis set out within the project monitoring plan.



It is the responsibility of EPIC verification team to express an independent GHG verification opinion on the GHG emissions from the project for the monitoring period starting from 01-9-Jun-11 to 08-Nov-2016 and on the calculation of GHG emission reductions from the project based on the verified emissions for the same period

Verified GHG emission reductions and removals in the current verification period:

Net GHG emission reductions or removals (tCO ₂ e)	Risk rating	Buffer pool (VCUs)	Tradable VCUs
534,020	10%	53402	480,617

Verified GHG emission reductions and removals in the above verification period:

Year	Baseline emissions or removals (tCO ₂ e)	Project emissions or removals (tCO ₂ e)	Leakage emissions (tCO ₂ e)	Net GHG emission reductions or removals (tCO ₂ e)
01-9-Jun-11 to 08-Nov-2016	0	534,020	0	534,020
Total	0	534,020	0	534,020

Prepared by:	Approved by :
	
Dr G Vishnu (Lead Auditor)	K Sudheendra (Head Operations)

6. LIST OF DOCUMENTS REVIEWED

S.No.	Document details
1	VCS monitoring report, Version 1, dated 21st November 2016
2	CCBA Project Description for TIST Program in Kenya VCS-005 dated 1 st March 2017 Version 01
3	CCBA Project Implementation Report dated 1 st March 2017 Version 01
4	Georeference file for Landsat image
5	Landsat 4/5 image with project area locations
6	Georeference file for Landsat image
7	Landsat 7 image with project area locations
8	Project boundaries for use with Google Earth
9	Summary of Excel spreadsheet with all project data
10	Validation Report
11	First verification monitoring report
12	First validation and verification Risk Assessment
13	VCS risk analysis report(Appendix 09)
14	Monitoring Data for Verification 02 (Appendix 11)
15	Auditors Manual
16	Cluster Audit Schedule
17	Connect Palm to Internet Manual
18	Zip file with GhG Contracts
19	Kenya Weekly Audit Report
20	PD Grove Status Spreadsheet
21	Quantifier Training Manual
22	Quantifiers Training Attendance
23	Sample Desk Audit Page
24	TIST Baseline SOP 1
25	TIST Circumference Quantification SOP
26	TIST Grove selection
27	Tract System SOP
28	Cluster Best Practices
29	Cluster Checklists
30	Extract of monthly newsletters
31	Quantifier Manual
32	e-mail to stakeholders for current validation and verification,
33	Advertisements in local newspapers for inviting the local stakeholders

APPENDIX 1: RESOLUTION OF FINDINGS

Classification and ID of findings	Corrective action request / Clarification Request	Response by the PP	EPICs Assessment of Response
CAR 1	<p>Appendix 04b, "Grove Summary" worksheet, Column AG could not be accessed for verification for information related to applicability condition</p> <ul style="list-style-type: none"> • <i>Project activities are implemented on lands where the area of the cropland, within the project boundary, displaced due to the project activity is less than 50 per cent of the total project area</i> • <i>Project activities are implemented on lands where the number of displaced grazing animals is less than 50 percent of the average grazing capacity of the project area.</i> 	<p>The spread sheet is 67 mb and can't be emailed. It is available at this link: http://www.tist.org/tist/docs/PDD-Documents/TIST%20KE%20PD-VCS-005e%20App04b%20Data%20161130.xls</p> <p>All the "Ns" in Col AG mean "no". They are all "Ns" meaning there is no displaced activity, either on cropland or grazing animals.</p>	<p>Review of spread sheet was done for information related to meeting the applicability conditions.</p> <p>CAR 1 Resolved.</p>
CAR 2	<p>Appendix 04b could not be accessed for verification of Baseline trees in the samples areas as observed from the site visit.</p>	<p>Please see CAR 1 to access the spreadsheet.</p>	<p>Review of spread sheet was done for information related to meeting the baseline conditions.</p> <p>CAR 2 Resolved.</p>

<p>CL 1</p>	<p>For the baseline strata, clarify on the approach to determine the percentage of cropland and grass land in each of the new instances.</p>	<p>Per Section 2.3 Grouped Projects, 1. Applicability of Methodology, second bullet: “This condition was deemed met through a survey of the individual members that farm the land and through field observations. In the surveys, 100% of the farmers indicated there was no displacement of cropland. Field observation shows that many of the farmers have chosen to plant trees along property lines and/or to plant their trees widely spaced in their fields and practice agro forestry. There were no observations that indicate that this condition was not met.”</p> <p>We have a baseline survey on the Palm computers that is used to prompt the questions and record the answers. Please see the Quantifier Manual for more information. http://www.tist.org/tist/docs/PDD-Documents/TIST%20KE%20PD-VCS-Spt%2003%20Quantifier%20Manual%20101221.doc</p>	<p>The interview with the farmers during site visit confirmed that there was no displacement. The baseline survey date was verified to confirm the same.</p> <p>CL 1 Resolved</p>
<p>CL 2</p>	<p>Clarify the reason or including project trees under section 3.1 of the monitoring report, which would essentially have only baseline trees.</p>	<p>The section is titled Data and Parameters Available at Validation. If there are project trees at that time, we include them. Since validation is not required until the 5th year, they are included. Also, we use them for our ex-ante projection in the PD.</p>	<p>The explanation provided is considered acceptable.</p> <p>CL 2 Resolved</p>

<p>CL 3</p>	<p>While the number of trees are counted based on Ongoing measurement taken by Quantifiers as they visit project areas it is indicated that each PA could be visited as much as once per year. However the deviation in the MR mentions that visiting each PA once per year is not possible. Clarify on the approach for periodicity of the quantification visits based on TIST internal procedures.</p>	<p>As noted in Section 2.2.2 Project Description Deviations, our goal was one visit per year but it became cost prohibitive. The methodology sets a 5 year requirement. With a shift to Clusters we are still learning what the average frequency should be. We try to get there as often as possible and if we do not get there within 5 years, we mark it pending in the verification data and zero out the carbon.</p>	<p>The explanation provided is considered acceptable for frequency of monitoring the groves.</p> <p>CL 3 Resolved</p>
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<p>CL 4</p>	<p>In the App 11, Monitoring data sheet, the PA Summary work sheet indicates a column T specifying the number of trees in Ver 1. Further the columns AL and AM specify number of trees in Ver 1 and Ver 2 respectively. Clarify as the column T has same number of trees as column AM, whereas AL has 0 trees.</p>	<p>In App 11a, the title of Col T is “Validation Trees” and the title of Col AK is “Verific 01 Trees.” This refers to the original PAs when the validation and first verification were done at the same time. The values in Col T are the same as Col AK. The values in Col AL are the tree counts for this verification.</p> <p>In App 11b, the title of Col T is “Ver 1 Trees.” This is a mistake; it should be “Validation Trees” and I am correcting it. Since these are new instances, there was no Verification 01 with respect to the entire PD (original PAs and new instances). The values in Col AL (“Verific 01 Trees”) are therefore zero. Col AM (“Verific 02 Trees”) are the same as Col T (now “Validation Trees”) because the new instances are being validated and verified concurrently.</p> <p>The reason for all this complication is in anticipation of subsequent verifications. We may combine App 11a and 11b and will want to be able to have a record of each validation and verification.</p>	<p>Corrected App 11a) is considered acceptable.</p> <p>CL 4 Resolved</p>
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<p>CL 5</p>	<p>In the PA summary worksheet, it is observed in many cases that the date of baseline is at a later date than the age class of the tree. For example 05-04-2013 is baseline date and 29-04-2016 is monitoring date for particular instance in which age class of tree is 2006 (planting year). Hence clarify the approach used for fixing the date of the baseline. Also clarify how the quantifier has identified project trees from baseline trees during the baseline quantification.</p>	<p>These are cases where the baseline had to be redone. Because of the number of groves and amount of data collected, our desk audit focuses on new quantifications. Older groves that had incomplete baselines don't get picked up until we run our spreadsheets for verifications. To make sure we differentiate baseline trees from project trees:</p> <ol style="list-style-type: none"> 1) The quantifiers talk to the farmers. They are an excellent source of information. 2) We have the historical data about the PA. If the age of a tree predates the age of the grove or is older than the project, it is baseline. 3) The older trees are often obvious because of size, species and often where planted. 	<p>The identification of baseline trees from the project trees is done by means of the survey by quantifiers and field visits confirmed the same.</p> <p>CL 6 Resolved</p>
<p>CL 6</p>	<p>In the PA summary worksheet, it is observed that there are some instances where monitoring has been done from 2009 to 2011 for active areas. Clarify the periodicity of the monitoring as according to the methodology, monitoring should be done at least every 5 years.</p>	<p>The PAs should be monitored at least every 5 years. Because of the number of PAs and the vast area involved, sometime a PA gets missed. In that case our options are to drop the PA or reduce all the accumulated carbon to zero. We do not believe it is in the best interest of TIST of the farmer to drop them so we zero out the carbon. By zeroing out the carbon, the PAs are treated like they have been removed. If they are within the 5 year limit at the next verification, their carbon is counted. The Kenya staff has been notified that these PAs need to be quantified.</p>	<p>The instances where the monitoring date does not meet the criteria that monitoring should be done at least every 5 years is not accounted. The approach is acceptable as it meets the requirements of the methodology.</p> <p>CL 6 Resolved</p>

<p>CL 7</p>	<p>There are some 5 instances noticed from the PA summary sheet where the numbers of trees are below 20. However values seem to have been estimated in the column Adj V2 CO2e. Clarify on this based on the information that as per TIST procedure circumference sample is not usually taken if less than 20 trees in PA. Also clarify the approach of including such samples under the active category as no carbon is supposed to be estimated.</p>	<p>There are 1,026 PA that have less than 20 tree and all but 16 have values in Adj V2 CO2e. We do not have a policy of not estimating carbon when there are less than 20 trees. Our procedures are:</p> <ol style="list-style-type: none"> 1) Our SOP calls for taking up to 20 circumferences per PA. A comparison of the PA in PA Summary with the PA represented by the Circ work sheet will show that most of the PAs with under 20 trees have circumference readings. 2) We pool the circumferences by PD so the even if we don't have a circumference from a specific grove we have one for the stratum. In this PD we have 740,000 data points by age and species strata. 3) There is nothing in the PD or methodology that says we do not calculate carbon if there are fewer than 20 trees. <p>The Quantifier Manual is available at http://www.tist.org/tist/docs/PDD-Documents/TIST%20KE%20PD-VCS-Spt%2003%20Quantifier%20Manual%20101221.doc</p>	<p>The explanation is considered acceptable as it is in line with the SOP and Quantifier Manual.</p> <p>CL 7 Resolved</p>
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<p>CL 8</p>	<p>It was indicated in the emission section of the MR that no clearing of baseline trees is one of the conditions as per the TIST project. During the site visit it was observed that in some cases the baseline trees have been cut by the farmers for their personal use. Clarify the approach how the project would include these as part of the emissions.</p> <p>Also During site visit in one of the samples (Geoffrey Mugambi), the presence of tree stumps of recent age (after the planting year) were observed in the farm. Clarify if TIST includes the loss of the trees as part of leakage as it has occurred in the project area.</p>	<p>We don't consider these project emissions. These trees belong to the farmer and we have no rights to these trees. Also, were these baseline trees within the PA boundaries? Lastly, the methodology does not require any monitoring of the baseline trees after validation because the carbon in the baseline trees is considered below the relevant threshold.</p> <p>If they are project trees, thinning is allowed. The quantifiers to not count closely spaced trees (skip counting) so, in actuality, there are more trees than the numbers shown in the monitoring data and used to estimate carbon. If the tree is a project tree that has been cut down (not a skip counting situation), it won't be included in the next quantitation.</p>	<p>The explanation provided is considered acceptable as carbon from the baseline trees is not counted and their cutting down by farmers for personal use is not considered under emissions. Also for project trees thinning is allowed.</p> <p>CL 8 Resolved</p>
<p>CL 9</p>	<p>Risk analysis community engagement indicates that 100% of the community have been consulted. Clarify on the approach used for local stakeholder consultation for the added new instances and current verification and provide supporting documents for the same.</p>	<p>It is the same process that was used with the original PAs. TIST is voluntary and farmers join because they have heard about TIST and want to join. There is a multi-month registration and orientation process before they become members. They have to sign the GhG contract at which time they have the opportunity to ask additional questions. We hold regular Cluster meetings where they can ask questions and receive training about TIST. See Section 3.2 of the CCB PDD and the associated references (TIST KE PD-CCB-005a PD Text 170301.docx) which is already in your possession.</p>	<p>The cluster meeting records have been verified and the site visit confirmed that the farmers attend the periodic cluster meetings. Further the public comments period for this current verification was intimated to relevant stakeholders by e-mail on 20th April 2017 and the public meeting was held on 4th April 2017 at Meru, Kenya. The notices in both English and Swahili were sent to stakeholders on 28th March as verified from public advertisements. The public comments received were positive.</p> <p>CL 9 Resolved</p>

<p>CL 10</p>	<p>Clarify on the statement in the risk analysis that “During the second verification it was determined that 0 PAs were lost to pest, well below the 5% threshold” as it was observed based on interview with the farmers that in some instances that the trees have been affected by a bacterial infection (locally called fusilimum). It was also observed from some trees that the effect is to make the tree hollow (loss of biomass) which effectively makes the tree dead. Clarify on the approach adopted by TIST to monitor and mitigate such attack by pests and whether these have been adequately considered in the risk analysis for the current verification period.</p>	<p>We understand that during the verifier’s visit to 2008KE2490-Kirimi magiri B, he observed signs of an infection locally called fusilimum. Field personnel report that there were 2 trees out of 899 8 years old tree grevillea had shown. Field personnel also report these are the last two trees in a long row. Field personnel also confirm that this is a rare occurrence and that it is neither widespread on the farm or throughout the project. TIST quantifiers and Leadership Council are now aware of the situation and will monitor it to see if it spreads. While we have added this observation to the risk analysis, we stand by the statement that “during the second verification it was determined that 0 PAs were lost to pest, well below the 5% threshold”. The remaining 897 trees appear to be free of the disease and the PA was not lost. If and when a tree dies, it is removed from the inventory at the subsequent monitoring.</p>	<p>The explanation provided is considered acceptable as the incident is an isolated case and not a major outbreak. The revised risk analysis has also added this observation.</p> <p>CL 10 Resolved</p>
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<p>CL 11</p>	<p>In the MR, under pending category, the classification for harvest indicates that there have been a few cases of removal of eucalyptus trees in order to plant indigenous trees. Clarify in this case why this practice has been allowed and if allowed, why is not analysed as a risk factor?</p>	<p>Eucalyptus is an exotic and controversial short-rotation tree. It is the Projects policy to keep short rotation trees such as Eucalyptus below 33%. Removal of Eucalyptus and replanting with indigenous trees is generally encouraged. Since the PD is an aggregate of thousands of groves and millions of trees, and because we have seen a steady increase in carbon stocks despite this activity, we believe it is environmentally sound from both a biodiversity and carbon vantage. It is addressed as a risk factor in Project Longevity, section b).</p>	<p>The explanation provided is considered acceptable as the risk analysis covers the scope of planting eucalyptus trees.</p> <p>CL 11 Resolved</p>
<p>CL 12</p>	<p>As per the information in the MR, it is assessed that instances amounting to approx. 6% of total carbon volume has been declared as pending or removed due to various reasons for the current verification period. Clarify whether this is an acceptable level of risk and how this has been analysed in the risk analysis.</p>	<p>One of the benefits of a program like TIST is that it is designed to withstand loss of members, trees and project areas without an overall loss of carbon. The same mitigation factors described in the Natural Risks sections of the Non-Permanence Report applies to the project of a whole. That this design works is demonstrated by the fact even with zeroing out all of the carbon in the pending and removed groves, there has been an increase of 140,175 tonnes of carbon in this period in the original groves.</p>	<p>The explanation provided is considered acceptable as the mitigation factors balance the risk and overall there has been an increase of carbon for the current verification period.</p> <p>CL 12 Resolved</p>

<p>CL 13</p>	<p>From the monitoring data as per the ex post strata work sheet the following clarifications are raised:</p> <ul style="list-style-type: none"> a) it is observed that for some species, the scientific name is not indicated (mentioned as N/A or Unknown). Clarify then on the basis on which the allometric equations are used in line with the methodology. b) It is observed for some samples, the quantifier is indicated as N/A. Clarify then on the basis of which the quantification data was accepted. 	<p>There are only 2 allometric equations used: Eucalyptus and Other. The quantifiers are very familiar with eucalyptus so it is almost certain that any unknown tree species would be classified as Other. As such, whatever the species, the Other equation would be used.</p>	<p>The explanation provided is considered acceptable.</p> <p>CL 13 Resolved.</p>
<p>CL 14</p>	<p>During site visit it was observed that for some cases of the farmers interviewed (eg. NuciaKagwira), the cluster meetings had not been attended for some time. Clarify on the approach used by TIST to ensure that cluster meetings are attended by the farmers.</p>	<p>As a voluntary program, we cannot require attendance at the Cluster meeting. For those that don't attend, they can still attend Small Groups meetings. TIST encourages Small Groups to hold weekly meetings at convenient times and dates where those who don't attend Cluster meetings can get briefed. Also they have access to the newsletter.</p>	<p>The explanation provided is considered acceptable as information is disseminated at all levels and it was observed from the site visit that the farmers are aware of TIST policy and practices.</p> <p>CL 14 Resolved</p>

APPENDIX 2: NON-PERMANENCE RISK ASSESSMENT CHECKLIST

Risk Factor	Risk Factor and/or Mitigation Description	Risk rating as per CAAC (refer Appendix 09)	VVB opinion	Method of verification
INTERNAL RISKS				
Project Management				
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 verified from the document review 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 1890-19203. 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 and well-established in Kenya. Hence, it is concluded that the species planted are associated with more than 25% of the stocks are proven to be adapted to the same or similar agro-ecological zone(s) in which the project is located	Document review: Monitoring report and the spreadsheet Appendix 11 World Agroforestry Center, AgroForestryTree Database, Nancy Karen Karanja, Kaleb Adamba Mwendwa Felipe Zapata, "Growth response of Grevillea robusta A. Cunn. seedlings to phosphorus fertilization in acid soils from Kenya, Biotechnol. Agron. Soc. Environ. 1999 3 (1), 57–64.
b)	Ongoing enforcement to prevent encroachment by outside actors is required to protect more than 50% of	0	The on-site visit inspection indicated that the project areas are on lands owned by the small group members that plant the trees and protected by	Onsite inspection

	stocks on which GHG credits have previously been issued.		the farmers themselves . Hence, it is confirmed that ongoing enforcement to prevent encroachment by outside actors is not required. Further voluntary self-interest is promoted by means of cash incentives which minimise encroachments.	
c)	Management team does not include individuals with significant experience in all skills necessary to successfully undertake all project activities (i.e., any area of required experience is not covered by at least one individual with at least 5 years experience in the area).	0	It was verified during the on-site visit that both CAAS management team and TIST local team has extensive experience that exceeds five areas in all areas. Hence the experience and skills of the personnel are considered as sufficient to meet the criteria.	Onsite inspection
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 verified that full time professional staff are located in Meru and Nanyuki and no site is more than a day of travel from these locations. The activities in the field including training, quantification and auditing are coordinated by managers, quantifiers and farmers, being in touch with project managers in US	Onsite inspection
e)	Mitigation: Management team includes individuals with significant experience in AFOLU project design and implementation, carbon accounting and reporting (e.g., individuals who have successfully managed projects through validation, verification	-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 has been managed by staff with sufficient expertise in AFOLU project design and implementation, carbon accounting and reporting as verified from the ongoing projects of TIST.	CAAC and TIST website

	and issuance of GHG credits) under the VCS Program or other approved GHG programs.			
f)	Mitigation: Adaptive management plan in place.	NA	NA	NA
Total Project Management [a + b + c + d + e + f]		-2	Risk rating perceived is appropriate in this section considering all applicable criteria	Applicable as above
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 10 years from the current risk assessment	NA	NA	NA
c)	Project cash flow breakeven point between 4 and up to 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 verified from the project financial plan that Project cash flow breakeven point is less than 4 years.	Exhibit 7
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	NA	NA	NA

	reaches breakeven.			
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 verified from the project financial plan that Project cash flow breakeven point is less than 4 years.	Exhibit 7
i)	Mitigation: Project has available as callable financial resources at least 50% of total cash out before project reaches breakeven.	-2	It is verified from the project financial plan that Project cash flow breakeven point is less than 4 years.	Exhibit 7
	Total Financial Viability (FV) [as applicable, ((a, b, c or d) + (e, f, g or h) + i)]	0	Risk rating perceived is appropriate in this section considering all applicable criteria	Applicable as above
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	
b)	NPV from the most profitable alternative land use activity is expected to be between 50% and up to 100% more than from project activities.	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
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	Verification of third party environmental assessment indicated that the project benefited the social and economic well being of the communities, which derive livelihoods from the project areas . In addition, a subset of TIST represented by 14 previous VCS PDs were verified under the Climate, Community and Biodiversity standard, indicated the social and economic benefits of TIST.	Exhibit 12 Exhibit 13
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
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
g)	Mitigation: Project proponent is a non-profit organization.	NA	NA	NA
h)	Mitigation: Project is protected by legally binding commitment (see Section 2.2.4) to continue management practices that protect the credited carbon	-2	TIST Project contracts with each Small Group was verified which extend beyond the length of the project crediting period.	Exhibits 02 and 03.

	stocks over the length of the project crediting period.			
i)	Mitigation: Project is protected by legally binding commitment (see Section 2.2.4) to continue management practices that protect the credited carbon stocks over at least 100 years.	NA	NA	NA
	Total Opportunity Cost (OC) [as applicable, (a, b, c, d, e or f) + (g or h)]	-2	Risk rating perceived is appropriate in this section considering all applicable criteria	Applicable as above
Project Longevity				
a)	Without legal agreement or requirement to continue the management practice.	NA	NA	
b)	With legal agreement or requirement to continue the management practice.	0	Contracts verified indicated that the project participants have formally committed for 60 years not to cut down the trees, except when implementing best practices (to improve growth) for agro-forestry developed by TIST as verified from site inspection and interviews. Thinning is allowed (i.e. it is not considered "harvest" in the context of the VCS Non-permanence tool) and is an acceptable forest practice used to improve the growth and health of surviving trees. While thinning may cause a dip in carbon stocks at a specific PA, the numerous project areas, different planting schedule and	Exhibits 02 and 03 and site visit

			different species means that there will not be a dip in overall carbon stocks. With a 60 year longevity, the risk is $(30-(60/2))=0$.	
c)	Total Internal Risk (PM + FV + OC + PL)	0		
EXTERNAL RISKS				
Land Tenure and Resource Access/Impacts				
a)	Ownership and resource access/use rights are held by same entity(s).	0	Control of project lands by project participants is clear and undisputed, either through a registered deed or by customary tenure. Kenyan law is in transition from customary tenure to registered deed, but the process will take time. Ownership of lands is attested by each individual project participant in their Small Group contract. IR 02 was issued as a finding which was resolved.	Exhibits 02 and 03 and site visit
b)	Ownership and resource access/use rights are held by different entity(s) (e.g., 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	NA
d)	There exist disputes over access/use rights (or	0	NA	NA

	overlapping rights).			
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	NA	NA
f)	Mitigation: Project area is protected by legally binding commitment (e.g., a conservation easement or protected area) to continue management practices that protect carbon stocks over the length of the project crediting period.	-2	It is verified that each project area is subject to a Small Group GhG contract that protects the carbon stocks over the length of the crediting period.	Exhibits 02 and 03 and site visit
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	NA	NA
	Total Land Tenure (LT) [as applicable, ((a or b) + c + d + e+ f + g)]	0	Risk rating perceived is appropriate in this section considering all applicable criteria	Applicable as above
Community Engagement				
a)	Less than 50 percent of	0	It was verified by on-site visit that 100% of the households within the	Site visit

	households living within the project area, who are reliant on the project area, have been consulted.		project area have been consulted.	
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 verified by on-site visit that 100% of the households within the project area have been consulted.	Site visit
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	Verified from third party environmental assessment and by similar subset of the TIST Kenya program under the CCB standard.	Exhibits 12 and 13
d)	Total Community Engagement (CE) [where applicable, (a+b+c)]	-5	Risk rating perceived is appropriate in this section considering all applicable criteria	Applicable as above
Political risk				
a)	Governance score of less than -0.79.	NA	NA	NA
b)	Governance score of -0.79 to less than -0.32.	4	Average score of all six indicators for the five most recent years (2008-2012) is -0.71. See Exhibit 14.	Exhibit 14.
c)	Governance score of -0.32 to less than 0.19.	NA	NA	NA
d)	Governance score of 0.19 to less than 0.82.	NA	NA	NA
e)	Governance score of 0.82 or higher.	NA	NA	NA

f)	Mitigation: Country is implementing REDD+ Readiness or other activities, as set out in this Section 2.3.3.	-2	Kenya is receiving funds from Forest Carbon Partnership for REDD Readiness.	REDD Readiness Progress Fact Sheet, Kenya, March 2, 2011
g)	Total Political (PC) [as applicable ((a, b, c, d or e) + f)]	2	Risk rating perceived is appropriate in this section considering all applicable criteria	Applicable as above
	Total External Risk (LT + CE + PC)	0	Risk rating perceived is appropriate in this section considering all applicable criteria	Applicable as above
NATURAL RISKS				
F	Fire	1 X 0.5 = 0.5	The average project area represents 0.01% of the total carbon stocks. While there is always a possibility that one of the projects areas could be lost to fire, the impact would be minimal. The fire risk significance is rated as "insignificant (less than 5% loss of carbon stocks). As no fire incidents were reported for this verification, it is well below the threshold. Mitigation measures (0.5) listed are considered effective to justify the score.	Site visit inspection
PD	Pest and Disease Outbreaks	2 X 0.5 = 1.0	There are three species where a total loss would exceed 5% - eucalyptus, cypress and grevillea. Research suggests the possible diseases that could affect these species, which however are not widespread in severity. Because of the thousands of separate and widespread project areas, loss above 5% of the total carbon is inconceivable and significance is	<ul style="list-style-type: none"> World Agroforestry Center, AgroForestryTree Database, Ibid FAO 2007 Exhibit 15 and 16

			ranked as "insignificant (less than 5% loss of carbon stocks)." Mitigation measures (0.5) listed are considered effective to justify the score.	
W	Extreme Weather	2 X 0.5 = 1.0	Drought can also affect larger trees. However, in spite of the droughts discussed under likelihood, TIST tree counts continue to rise and there is no indication that there has been any carbon loss. However, some loss probably takes place so to be conservative a significance rank of "insignificant (less than 5% loss of carbon stocks)." Mitigation measures (0.5) listed are considered effective to justify the score.	Site visit inspection
G	Geological Risk	0 X 0.5 = 0	Historical data indicates that none of the risks such as earthquakes, volcanic activity have been identified to impact any discrete project Area. Hence significance is considered "no loss." Hence the score is justified	Web Data links as per Appendix 09
ON	Other Natural risk	NA	NA	NA
	Total Natural Risk (as applicable, F + PD + W + G + ON)	2.5	Risk rating perceived is appropriate in this section considering all applicable criteria	Applicable as above

Summary of assessment:

Risk Category	Risk rating	Requirements for risk rating
a) Internal risk	0	Note: <ul style="list-style-type: none"> • 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.
b) External risk	0	
c) Natural risk	2.5	
Overall Risk rating a) + b) + c)	2.5	
Total risk assessment buffer applicable	10%	VVB Assessment: The buffer applied reflects the risk rating as applicable to the project activity and meets the requirements of AFOLU Non-Permanence Risk Tool.
Gross emission reductions	534,020	
Emission reductions buffer	53402	
Net emission reductions	480,617	