VERIFICATION OF

TIST PROGRAM IN UGANDA, VCS-001

Document Prepared By: EPIC Sustainability

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Summary:

Clean Air Action Corporation has appointed EPIC Sustainability Services Private Limited to perform the third periodic verification of the emission reductions reported for the project titled "TIST Program in Uganda, VCS-001" (Project ID: 824) for the period from 01-January-2014 to 17-April-2019. The verification was based on the validated project description (PD) corresponding validation report, previous monitoring and verification reports and other supporting documents made available to the verification team by the client.

UG PD-VCS-001 is a small scale (grouped) AFOLU project, eligible under the Afforestation, Reforestation and Revegetation (ARR) category. It is a subset of the TIST project in Uganda and initially applied to 291 Small Groups, 1662 members, 1000 project areas and 777 ha. The PD was validated and first verified on 20 March 2012, the second verification was done on 27 October 2014 for the period up to 31 December 2013. At that time all of the Project Areas were established and the monitoring systems were in place. 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 verification team identified, through the verification process, 03 CARs, 05 CLs and 01 FAR to the monitoring report and 02 CLs and 01 FAR to the Non-Permanence Risk Report. The client has taken actions and submitted to EPIC the revised monitoring report and supporting evidence. The verification team, through the verification process, confirmed that the emission reductions achieved by the project activity during the monitoring period are correctly calculated in the monitoring report, Version 02, dated 09/01/2020. Therefore, EPIC certifies the net emission reductions amounting to 153,595 tCO2e for the period 01-January-2014 to 17-April-2019 (both days inclusive).

Verified removals in the above reporting period:

Gross Reductions:	153,595 tCO2 equivalents
Buffer:	15,359 tCO2 equivalents
Issuance:	**138,235** tCO2 equivalents

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1 INTRODUCTION

1.1 Objective

EPIC Sustainability Services Private Limited (EPIC) has been contracted by Clean Air Action Corporation (CAAC) to undertake the third periodic independent verification of the project activity titled “TIST Program in Uganda, VCS-001”.

- 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

- 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 01-January-2014 to 17-April-2019.

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 Uganda, VCS-001”. The verification of this project was based on the validated and validated project description (PD), validation report, previous 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 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 small scale grouped AFOLU project, eligible under the Afforestation, Reforestation and Revegetation (ARR) category. It is a subset of the TIST project in Uganda and initially applied to 291 of the Small Groups, 1,662 members, 1,000 project areas and 777.1 ha. The PD was validated and first verified on 20 March 2012, the second verification was done on 27 October 2014 for the period up to 31 December 2013. At that time all of the Project Areas were established and the monitoring systems were in place, for the current (third) verification, the monitoring demonstrated 463 project areas, 546 ha and 465,654 trees. 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

2.1 Method and Criteria

The 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 Issued: 21 June 2017, Agriculture, Forestry, and Other Land Use Requirements v3.6 Issued: 21 June 2017, 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 06 and AFOLU Non-Permanence Risk Tool v3.3 Issued: 19 October 2016 and latest valid version of VCS verification template. 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. For this verification, 21 samples were visited during the site visit and the active samples in the project activity numbered 428. The number of trees were sampled such that a 5% tree size overall was reached. At each site, strata based sampling – Eucalyptus, Pinus, C*upressus* and Others was followed across the different ages for the trees. For the desktop verification, equivalent sample size was chosen. 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.

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

- mistakes had been made that directly impacted on the project results; or
- VCS requirements had not been met; or

- there was a risk that the project would not be accepted as a VCS project or that emission reductions will not be certified.

The Clarification Requests (CL) 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 previous verifications of the project activity. The list of the CARs, CLs and FARs are summarised in Appendix I.

The following team members from EPIC were involved in verification process:

Name	Role	Components reviewed
Mr A. Prabu Das	Lead Auditor	Completeness check, desk review, onsite inspection, Interview with project representatives, issuance of findings, report preparation.
Mr. Mugaju Robert	Host Country Expert	Interviews with community and forestry land use patterns
Dr Vishnu	Technical Reviewer	Checking and verifying of information related to draft final report.

2.2 Document Review

The verification was performed primarily based on the review of the monitoring report 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 frequency of measurements, the quality of metering equipment including calibration requirements, 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 monitoring report, Version 01, dated 17 April 2019 was 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 verification, the revised monitoring report and the supporting documents were evaluated to confirm the actions taken by the PP to the CARs, CLs and FARs issued by EPIC. The documents reviewed by EPIC are listed in references section of this report. EPIC reviewed the final version of the monitoring report Version 02 dated 09 January 2020 to confirm that all changes agreed had been incorporated. The entire list of documents reviewed is summarised in Section 6.0.

2.3 Interviews

After the review of the Project description and documents a site visit was carried out from 15th to 20th July 2019, as part of the common site visit for six TIST projects (TIST Program in Uganda, VCS-001 to VCS-006). During the site visit physical inspection of the project components followed by interviews with the on-site personnel was carried out to verify the project details. A follow-up meeting was also conducted with the project representatives. The following persons were interviewed.

Name Designation	Company	Interview Topics
Ms. Pamela Barigye	TIST	Project design, Project implementation, Procedures, Monitoring plan and Procedures
Mr. Apollo	TIST	Monitoring plan and Procedures, Training details, field measurement
Mr. Bachwa Hakim	TIST	
Mr. David	TIST	
Mr. Edward	TIST	
Mr Joshua	TIST	
9 nos	TIST Quantifiers	Field measurements, Species identification, data entry
21 PA members (Kabale, Kanungu, Bushenyi and Tigania East counties)	TIST Program members	Farming practices followed, Knowledge of TIST policies, Attendance at cluster meetings

2.4 Site Inspections

An onsite visit was conducted during the period 15th to 20th July 2019. 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 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 MR and data from other sources
5) A check of the monitoring equipment including calibration performance, and observations of monitoring practices against the requirements of the PD and the applied methodology

6) A review of calculations and assumptions made in determining the GHG data and ERs, and
7) An identification of QA/QC procedures in place to prevent, or identify and correct, any errors or omissions in the reported monitoring parameters.

2.5 Resolution of Findings

Resolution of Clarification and Corrective Action Requests

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 03 CARs, 05 CLs and 01 FAR to the monitoring report and 02 CLs and 01 FAR to the Non-Permanence Risk Report were raised.

All the findings 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 I of this report and documented in more detail. All the corrective actions have been incorporated into the monitoring report.

Internal quality control

A Technical Reviewer is appointed to review the final draft verification report and the final verification report. 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.

2.5.1 Forward Action Requests

FARs raised during the previous verification are carried forward in the current verification

2.6 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

3.1 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 review of the 'program/standards' websites 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 reference section /36/ of this report.

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3.2 Methodology Deviations

No methodology deviations found in this monitoring period.

3.3 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
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.	The entire TIST program in Uganda 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 neighbour's about changes, at a more sustainable cost. The ideal schedule for Cluster meetings is one per month, increasing the frequency of opportunity to learn about changes at the grove level.	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.
Not Addressed	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	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

	"remove" categories 'l' through 'y' in section 2.1 of the MR, they are no longer active in the PD. The name of the grove is kept on the monitoring spreadsheet (Appendix 14), the reason for the removal is given in the "Status V3" column of the "PA Summary" worksheet of Appendix 14, and the carbon sequestered from the PA is zeroed out. By zeroing the carbon, all of the carbon credits previously issued from the PA is replaced.	and the status of the PAs is indicated in the worksheet, Appendix 14. The carbon is taken as zero and is not counted.
Not Addressed	Removing Duplicate Registrations: During the (current) third verification, a GIS review of the KML files showed numerous instances of Project Area overlaps that indicated the same area was being counted twice. Some of these areas were spatial duplicates in this PD and others were spatial duplicates with PAs in other PDs. There are several reasons that the overlaps happened: • New quantifiers unfamiliar with the Small Group may not know the original name of a PA and Small Group members may not be familiar with the name given to an existing PA. When a new quantifier visits the PA, the confusion with the name means that the Quantifier cannot find the PA on the database and creates a new one. • There are cases where the farmer expanded his/her planting area and the Quantifiers retracked the new and old areas as one new one. • There are some very similarly named PAs that due to extra spaces, periods	The deviation is acceptable, as the PP has provided adequate explanation on instances how the duplicate registration has occurred, and how the existing Desk Audit tool has proved to be effective in identifying the duplicate registrations. As a result the duplicate registration is identified, and the wrong ones are removed. In total 29 PAs are marked 'removed' in the new KML file. PAs with double registration were marked "Remove-Double Registration" in the "Status V2" column of the PA Summary worksheet. The PP provided the new KML file and has also notified the VCS of the change. Further, all of the credits issued for these wrong PAs were set to zero and previously issued credit s have been replaced by new removals.

	or unprintable characters caused the same PA to be tracked as separate PAs. None of these are acceptable and has resulted in a reissuance of the KLM files. The duplicate registrations were identified and the appropriate ones were marked "removed" in the waypoint name of the KML file. The tracks were reduced to a single point so that the track is no longer visible when viewed on Google Earth. This approach was taken so that there would be a history of the removals. There were 29 PAs marked removed in the KML file. The double registrations were also addressed in the monitoring spreadsheet. PAs with double registration were marked "Remove-Double Registration" in the "Status V2" column of the PA Summary worksheet. As with any removal, the carbon sequestered from the PA is zeroed out. By zeroing the carbon, all of the carbon credits previously issued from the PA is replaced with growth from the existing trees in the PD.	

3.4 Grouped Project

There have been no new project instances to this grouped project. No project activity instance exceeds one percent of the capacity limit and therefore the project complies with the requirement of grouped project.

4 VERIFICATION FINDINGS

4.1 Project Implementation Status

The verification based on the onsite observation and document review, found that there is no material discrepancies between the project implementation and the project description, other than the instances wherein *265 Project Areas (8% of the carbon volumes) have been removed from the PD since the second verification and 5 PAs (0.4% of the carbon volumes) are in a "Pending" category, down from 15 in the second verification*. The verification team checked the status of monitoring plan the completeness of monitoring system and found no discrepancies between the actual monitoring system and the monitoring plan set in the validated project description except the deviations mentioned in section 2.2.2 of MR which are not significant in the view of VCS applicability. The project is not applied for under any other GHG scheme and there will not be any double counting. The verification team was able to conclude the project has been implemented as described in the validated project description.

4.2 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 Appendix 14	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	Appendix 3	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 14	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 04	The data was verified to be in conformance with project design
Baseline strata	Appendix 04	The data was verified to be in conformance with project design
Project trees	Appendix 04	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 14	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 14	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.
Total CO2	Appendix 14	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.

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

4.3 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 4.2 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.

4.4 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 1.5 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 12 of the MR version 02 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 II.

5 SAFEGUARDS

5.1 No Net Harm

The verification team confirmed that the TIST has conducted numerous evaluations of the program in Uganda under CCB and has determined that there are no negative environmental or socio-economic impacts. The program was designed to be beneficial to the farmers and environment. No mitigation is necessary.

5.2 Local Stakeholder Consultation

The local stakeholder consultation was carried out during the validation. During the current verification there was no stakeholder consultation carried out as it is not a requirement.

6 VERIFICATION CONCLUSION

EPIC Sustainability Services Private Limited has been engaged by Clean Air Action Corporation to perform the third periodic verification of the emission reductions reported for the project titled "TIST Program in Uganda, VCS-001" (Project ID: 824) for the period from 01 January 2014 – 17 April 2019.

The verification 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 are 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 January 2014 to 17 April 2019 and on the calculation of GHG emission reductions from the project based on the verified emissions for the same period.

The verification was carried out in accordance with the requirements of the VCS Validation and Verification manual Version 3.2 and VCS Standard 3.7. As a result of the verification, the verification team confirms that for the reporting period:

- the project is implemented as described in the validated PD except the deviations mentioned in section 2.2.2 of MR
- the monitoring plan is in accordance with the approved monitoring methodology applied by the project activity except the deviation mentioned in section 2.2.2 of the MR
- the deviations in the project deception & monitoring plan are not significant and do not impact applicability of methodology, baseline and additionality of the project
- the monitoring has been carried out in accordance with the validated PD
- the monitoring aspects (i.e. additional monitoring parameters, monitoring frequency and calibration frequency) were in place and functional, with the installed equipment essential for generating emission reduction operating appropriately and the calibration of all the equipment had been carried out accordingly, and
- the GHG emission reductions achieved were calculated correctly on the basis of approved monitoring methodology

We have verified that the information included in the final monitoring report (Version 02, dated 09 January 2020) was correct and that the emission reductions achieved had been determined correctly. In our opinion, the GHG emission reductions for the period from 01 January 2014 to 17 April 2019 in the monitoring report (Version 02, dated 09 January 2020) for the project are fairly stated.

EPIC confirms that the GHG emission reductions were calculated without material misstatements for the whole monitoring period. Our opinion is based on the project's GHG emissions and resulting GHG emission reductions reported, and, to the valid and validated project baseline and monitoring documents. We confirm the following:

Verification period: From *[01-January-2014]* to *[17-April-2019]*

Net GHG emission reductions or removals (tCO_2e)	Risk rating	Buffer pool (VCUs)	Tradable VCUs
153,595	**10%**	15,359	**138,235**

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

Year	Baseline emissions or removals (tCO_2e)	Project emissions or removals (tCO_2e)	Leakage emissions (tCO_2e)	Net GHG emission reductions or removals (tCO_2e)
01-January-2014 to 17-April-2019	0	153,595	0	153,595
Total	0	153,595	0	153,595

Prepared by	Approved by:
	
A Prabu das Verification Team Leader	Mr. K. Suryanarayana Murthy Managing Director

7 LIST OF DOCUMENTS REVIEWED

S.No.	Document Details
1	PD version 1.0
2	Georeference file for Landsat image
3	Landsat 4/5 image with project area locations
4	Georeference file for Landsat image
5	Landsat 7 image with project area locations
6	Project boundaries for use with Google Earth
7	Excel spread sheet with all project data
8	Standalone VCS risk analysis
9	List of project areas for risk analysis
10	Previous Monitoring report text
11	Previous Monitoring report data
12	Validation Report
13	Validation Statement & Validator's Risk Assessment
14	Third Risk Assessment
15	Verifiers Report
16	Verification Representation
17	VCS risk analysis for Verification 03 (Appendix 09)
18	Monitoring Report for Verification 03 (Appendix 10)
19	Monitoring Data for Verification 03 (Appendix 11)
20	Auditors Manual
21	Cluster Audit Schedule
22	Connect Palm to Internet Manual
23	Zip file with GHG Contracts
24	Uganda Weekly Audit Report
25	PD Grove Status Spreadsheet
26	Quantifier Training records
27	Quantifiers Training Attendance
28	Sample Desk Audit Page
29	TIST Baseline SOP 100425
30	TIST Circumference Quantification SOP
31	TIST Grove selection
32	Tract System SOP

33	Cluster Best Practices
34	Cluster Checklists
35	Quantifier Manual
36	https://mer.markit.com/br-reg/public/index.jsp?name=TIST&entity=project&entity_domain=Markit,GoldStandard https://cdm.unfccc.int/ https://globalgoals.goldstandard.org/

OTHER GHG PROGRAM SPECIFIC DOCUMENTS:

- VCS Standard version v3.7 Issued: 21 June 2017
- Agriculture, Forestry, and Other Land Use Requirements v3.6 Issued: 21 June 2017
- 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 06
- AFOLU Non-Permanence Risk Tool v3.3 Issued: 19 October 2016

APPENDIX I: RESOLUTION OF FINDINGS

Classification and ID of findings	Corrective action request / Clarification Request/ Request for Information	Response by the PP	EPICs Assessment of Response
CL 01	PP to explain the following statements in the submitted MR:- • Sec 1.10 of MR says "*TIST project areas provide linkage and buffers with high conservation value areas*" • Sec 2.1 of MR says "Loss of a few PAs was discussed in the External Risk section of the Non-Permanence Risk Report", however it could not be found in the Risk report	Sec 1.10. TIST PAs are distributed over a wide area of the landscape. Included in the landscape are the Bwimbi Impenetrable Natural Forest, Queen Elizabeth National Park and several preserves. TIST "forests" provide areas where wild life can find shelter as they migrate across the area. The buffers are TIST "forests" near the boundaries of the protected area. Sec 2.1. We believe this is addressed in Land Tenure and Resource Access/Impacts" section F: "Each area is subject to a Small Group GhG contract that protects that carbon stock over the length of the crediting period. Although there have been violations of the contract by some of the members, it has proven to be effective over 96% of the carbon stocks."	• The explanation provided by the PP is found to be acceptable, as the PAs are found to be distributed in the landscapes where national park and natural forest exist. It was also conformed during on-site visit. • Explanation provided by PP is accepted. **CL 01 closed**

CL 02	It is stated in the MR, ver 2.0 that *"458 Project Areas (9.6% of the carbon volumes) have been removed from the PD since validation and the **first** verification. In addition, 5 PAs (0.4% of the carbon volumes) have been put in a "Pending" category. The carbon of all removed or pending PAs have been set to zero. This means that remaining PAs must first make up the carbon loss before any new credits can be issued"* • Considering the current verification is third, PP is requested to re-conform the above statement. Also explicitly state how many PA are removed during the current verification. • PP to explain how the make up of the carbon loss is ensured, by means of calculation. Will the make up be done by the remaining PA's or it will be replaced by new PA's.	The MR has been changed to state: "265 Project Areas (8% of the carbon volumes) have been removed from the PD since the second verification. In addition, 5 PAs (0.4% of the carbon volumes) are in a "Pending" category, down from 15 in the second verification." The carbon loss is made up by setting the Adjusted V3 CO2e of non-active PA to zero. Go to the PA Summary worksheet of Appendix 14, monitoring spreadsheet. Col AV is the accumulated CO2e in each PA since the Start Date. Filter Col AY by non-active. Note that any value in Col AV is set to zero in Col AW. Now look at the totals in AV1004 and AW1004. The difference is the amount in the non-active PAs. AW1004 is the basis for the claim of credits and it reports to AU1009. The "Net GHG emission reductions or removals (tCO2e)" (MR section 4.4) is in AU1012. It is the total accumulated reductions less the previous verifications. Since the "Net GHG emission reductions or removals (tCO2e)" contains no removals from the non-active PAs, any previously credits for those PAs has been made up. Due to the method described above, the "make-up" is done by the existing PAs in the PD.	• Revised MR correctly reflects the Projects Areas that is applicable for the current (third verification, it has been conformed through review of spread sheet and the database maintained. • The explanation provided for the make up of carbon loss is accepted, review of spreadsheet also conforms the same. **CL 02 closed**

CL 03	From the review of verification report pertaining to second Monitoring period (07 Oct 2011 to 31 Dec 2013), it is evident that 15 PA's were in pending category – PP to clarify the status of those PA's in the current MR period. (It is acknowledged that 5 PA's have been put in pending category in the current period.)	This can be addressed by filtering Col BA (Status V2) of the PA Summary worksheet (Appendix 14) by any "pending" entry. The 15 PAs from the second verification should now be displayed. The status for the third verification is in Col AY (Status V3). A comparison shows that 5 remain "pending"; 4 are "No Strata" and need further investigation; and 6 are "removed". Regardless of the category, all of these have zero tonnes in Col AW.	• The explanation provided for the make up of carbon loss is accepted, review of spreadsheet also conforms the same. **CL 03 closed**

CL 04	**Sec 2.2.2 - Project Description Deviations** of the MR mention that several duplicate registrations are identified and removed in the current monitoring period. In QA/QC, under the head Multiple tracks, it is said that each GPS track of the parcel was measured at least twice, or until two tracks that reliably define the project area, are obtained. Quantifiers re-trace the tract with each quantification to verify that they are at the correct project area and that they are counting the correct trees – In spite of the existence of this quality control, PP to explain how the duplicate registration occurred and also detail the safe guards that are required/or established to prevent duplicate registration in future	This can happen when a quantifier goes to a Small Group and ends up making a new PA with a new name because they are unfamiliar with the existing groves. They could be unfamiliar because they are new quantifiers or because they are new to the Cluster. The re-tracking is supposed to prevent it from happening but if the PA is given a new name and new location ID, the original track does not come down to the mobile device from the database and the overlap is not caught while in the field. Our Desk Audit tool was developed as a mechanism to catch this. When the Desk Auditor receives notice of a new quantification, the screen displays all of the potential overlaps. The auditor looks at each possible instance of an overlap and marks them “no overlap”, “minor overlap” or “significant overlap”. The Desk Auditor generally calls the quantifier and discussed the overlaps and they decide which to remove and any other action that might be necessary (such as a requantification). During the review that identified the overlapping groves, we checked the overlaps on the Desk Audit page. The overlaps that had not been deleted showed up as overlaps indicating the tool is working. Further investigation showed that the problem was due to the auditors not having the time to go back and review all the PAs and groves created before the tool was brought on line. The Desk Auditor is focused on the new quantifications and does not have the time to go back and look at the older ones. Since the auditors have to manage over 60,000 locations (38,000 PAs and the remainder not in PDs), and because the Desk Audit page was built after many groves were put into PAs, we missed some. When we found that there were some significant overlaps in the dataset, we underwent a detailed review of all the UG PAs on Google Earth. We pulled in all six KML files at once and went down the list looking for overlaps. This allowed us to identify overlaps within a PD and overlaps with PAs in other PDs. We believe this was a thorough process and that what was identified to VCS and the VVB were all that there were in the PDs. It should be noted that due to the method we use to address inactive groves, all of the credits issued for these PAs were set to zero and previously issued credit s have been replaced by new removals.	The PPs explanation on how the duplicate registration occurred, and how the existing Desk Audit tool is working is found to be acceptable. The duplicate registration is identified, and the PP provided the new KML file and has also notified the VCS of the change. Further, all of the credits issued for these wrong PAs were set to zero and previously issued credit s have been replaced by new removals. **CL 04 closed**

CL 05	During site visit, for Project Area ID, 2005UG94 – Kyomuhangi, the information captured as in the database is 16 number of red sandal wood trees, but the actual trees planted are stinkwood, in the same id, the age of the pine trees are captured as 4 years, but they appear to be older than 10 years – PP is requested to submit the relevant documents for clarifying the issue raised	The Uganda Team confirms the errors as noted. The quantifier says the mix-up on the species was a typing error and that the age of the pines was an entry error. It should be noted that the species error did not have an effect on the carbon calculations since both species use the "other" allometric equation. Since the age of the pines that was entered was 6 years younger than they actually were, it lowered the amount of carbon calculated. These errors did not result in an overstatement of carbon removals.	The verification team accepts the observed error as typo, and also accepts the fact that the species error do not impact the carbon calculations. Regarding the age of the pines, the calculations yielded lesser carbon values than the actuals. It is accepted by the verification team. **CL 05 closed**

CAR 01	PP to submit the following documents pertaining to the current MR period:- • Quantifier training records and topics • Quantifier training manual for the new recruits • List of cluster meeting and their agenda • Internal audits	• Quantifier training records and topics. All of the quantifier meetings and their topics are summarized on "TIST UG Quantifier Meetings 2014-2019.xlsx", available on the Google Drive link: https://drive.google.com/drive/folders/1dU7APlnSUihO06Wd3AynuDTrbFPx54-f. • Quantifier training manual for the new recruits. The most current version of the Quantifier Training Manual is available at this link. http://www.tist.org/tist/docs/PDD-Documents/TIST%20UG%20PD-VCS-Ex%2040%20Quantifier%20Manual%20101221.doc. The procedure has not changed during the monitoring period and this is still valid. In addition, we are in the process of converting our data collection system from the Palm OS to Androids. We are providing the first draft of the new Android SOP on the Google Drive. (TIST UG PD-VCS-Ex 42 Android Forms SOP 191106.docx). • List of cluster meeting and their agenda. All of the quantifier meetings and their topics are summarized on "TIST UG Cluster Summary 2017-2019.xlsx", available on the Google Drive link: https://drive.google.com/drive/folders/1dU7APlnSUihO06Wd3AynuDTrbFPx54-f. No Cluster meetings were held before 2017 because the Clusters were still being organized. • Internal audits. The quantifier audit files are provided on the Google Drive, https://drive.google.com/drive/folders/1dU7APlnSUihO06Wd3AynuDTrbFPx54-f. 2014 and 2015 are doc files, 2016 to 2019 are pdf files of scans of the field reports.	The verification team reviewed the submitted Quantifier training records along with their topics, Quantifier training manual for the new recruits, list of quantifier meetings and the agenda of the meeting, the internal audit reports for the years 2014 to 2019. For the TIST best practice, the newsletter TREE share the best practices with the members, the verification team reviewed the newsletter archived at the office, and also carried along by the quantifies and members. The team reviewed the contents of the newsletters, articles, testimonials among other points are elaborated in it. Also TIST mobile site also detail information on best practices. It has been verified that sharing of best practices has been continually followed by the PP through various modes, this also been conformed through interview of members, quantifiers and the TIST office staff.

	• TIST Best practices	• TIST Best practices. We use the Tree, the Uganda newsletter, to share best practices with the members. They are done as testimonials to demonstrate how other members have benefited from TIST programs and as specific articles on various topics. We refer you to this link that contains all of the issues of the Tree: http://www.tist.org/i2/moreinfo.php. For example, please see the March 2019 issue: http://www.tist.org/i2/docs/NL/2019.03.March.UG%20Newsletter.pdf In it there are testimonials that tell how TIST has helped individual members, steps to raising teak trees, an article on how to know you are a good leader and news about the upcoming profit sharing payment. Other best practice documents are available on the TIST websites. The best forestry practices is available in the document: http://www.tist.org/tist/docs/PDD-Documents/TIST%20UG%20PD-VCS-Ex%2023%20Best%20Forest%20Practices%20130110.doc Training Best Practices are available on the Training page of the TIST Mobile site (guest login required) at: https://www.tist.org/mobile/training/menu.php?type=guides&ses=gea0rj8ej2odmk314l6difd7q3 Other Best Practices can be accessed at on Policies, Procedures and SOP page of the TIST Mobile site (guest login required) at: https://www.tist.org/mobile/training/menu.php?type=guides&ses=gea0rj8ej2odmk314l6difd7q3	**CAR 01 closed**

CAR 02	PP to explain the data archiving mechanism followed for the project activity	The data is archived in the MySQL database in the Amazon cloud. Data is collected on the mobile device (either a Palm OS or, now, an Android) and that data is synchronized to the server. The data is parsed on to the appropriate tables with a sequential ID. It is given a start valid date. When new data for a PA comes in that supersedes the data on the table, the old data is automatically given an end valid date and the new data becomes the valid data. With this method the database table keeps all of the historical data. Being on the Amazon Cloud, we have regular backups of the data.	Data archiving mechanism described by the PP is as per the practice followed by the project, accepted by the verification team. **CAR 02 closed**

CAR 03	During site visit, it was observed that no standardised procedures in tree counting, DBH measurement etc was followed among the quantifiers, for example – a) When the procedure require the barks are to be removed before DBH measurement, few quantifiers did not follow them b) Tree with multiple trunks (Y/U shaped) at DBH point are not measured uniformly c) The measuring tapes used are sourced from the local market by the quantifiers themselves, no standardised tapes are used, at few instances torn tapes were also used, human error in taking the reading were also observed	The PAs are not all planted in the same way and therefore a "standardized" method for tree counting is not always used. However, during the field visit, when the VVB asked about the procedure of counting trees, it was explained to him that trees are generally counted according to the lines or rows they are planted in. Normally 4 lines are counted from one end to another by putting tree branches in a line that makes a temporary boundary to avoid double counting. This is repeated until the whole grove is finished. • Removing the bark of the tree. Removing bark for DBH should only be done in special circumstances and with the permission of the tree owner because complete girding will kill the tree. For this reason, our training manual does not ask the quantifiers to remove the bark. We will ask the Uganda Team to address this in a quantifier meeting. • DBH measurement tree with multiple trunks (Y/U shaped). It was explained to the VVB that when there is a (Y/U) shaped trunk, only one trunk is measured. This simplifies the data collection and is in line with the Quantifier Manual (p.51 and 52). This approach results in a conservative calculation of removals. • Measuring tapes used. The VVB observed that the measuring tapes used by quantifiers were different colors and that one was torn. We source the tapes from local markets and buy what is available. We believe they are acceptable for taking DBH. Obviously, the torn tape will need to be replaced but if the subtraction is done correctly, even a torn section can provide an accurate DBH. Regarding the "human error," we believe this is referencing the fact that the quantifiers were entering whole centimeters. The application used to record the circumference readings on the smart phones does not accept fractions. We believe that the VVB observed the circumferences being both rounded up and rounded down depending on the fraction. This combined with the fact that our pinus and other allometric equations require DBH and the conversion requires dividing the circumference by 3.14, we believe any error is minor and acceptable.	The explanation provided by the PP for all the monitoring related issues raised are found to be acceptable to the verification team. The team has also reviewed the quantified manual, which has the set of instructions for the quantifiers to undertake the measurement. **CAR 03 closed**

CL01R	PP to explain the following:- • Any changes in the ownership and resource access/use rights during the 3rd monitoring period • Existence of disputes/potential disputes • Instances of forest fires	• Change in Ownership. There were two cases where there was a change in ownership during this monitoring period; 2006UG195-Kabusheeshe (16396) and 2008UG177-Tibyetu Pulic (17888). The ownership of the trees and carbon go with the land title. When this happens the new owner can sign a GhG contract with TIST and receive the carbon revenues. In both of these cases, however, neither buyer wished to belong to TIST. Their status had been marked "Remove-Change in ownership" and we have zeroed out the previously claimed carbon and are claiming zero credits for this monitoring period. • Disputes. There were no disputes/potential disputes this monitoring period. When it does happen the LC intervenes and attempts to settles the matter. There is also a grievance policy should a formal issue arise: http://www.tist.org/tist/docs/PDD-Documents/TIST%20UG%20PD-VCS-Ex%2033%20Grievance%20Policy%20170120.doc It should be noted that since the land ownership is private, TIST has no jurisdiction should a dispute in land ownership arise. It is in the hands of the community and local jurisdiction. • Forest Fires. The monitoring reports show one incident of fire this monitoring period, 2003UG249-Hakiri 01 (19488). It has been marked status "pending" as the farmers and TIST determine what to do. If the loss is partial, the farmer may do nothing and only the surviving trees will be counted during the next quantification. If the loss is severe, they are encouraged to plant again. With the status listed as pending, we have zeroed out the previously claimed carbon and are claiming zero credits for this monitoring period	• Instances of ownership change and their continuation status with TIST is adequately explained by the PP. The submitted excel spreadsheet captures the changes of this nature. The reason for the ownership change was also verified during interaction with the members during on-site visit. • Dispute resolution does not cover the ownership of land, but it covers other issues which are bound by the contract between the TIST and the project members. The members are aware of their rights and the grievance policy of the project. • Instance of forest fires and the measures taken by the PP in accounting the emission calculations is accepted by the verification team. **CL01R closed**

CL02R	PP to conform the values of Total Internal Risk and Land Tenure (LT) as indicated in the Risk report	The Internal Risk has been set to zero. The Long Term Tenure seems correct to us. We have selected a) with a risk rating of zero because the members own the land and resources (trees and their products). The PP purchases the carbon rights through a separate contract the explicitly excludes the land and resources. This interpretation has been upheld in 14 PDs, 28 verifications and review by VCS. The Overall Risk Rating has been rounded up to a whole number.	PP's explanation is accepted as it is inline with the contract terms with the project members. **CL02R closed**
FAR's from Previous verification			
FAR 01	Each Cluster meeting is to keep updated information about what is happening at the Small Group level and to individual groves. Such information includes PAs situation of removal or pending.	When a Quantifier hears about a change in PA status at a Cluster meeting, they go to the PAs to verify the information. The change in status is reported to the UG Team and they are updated on spreadsheets which are incorporated in the monitoring reports. Sample documents have been provided on the Google Drive (https://drive.google.com/drive/folders/1dU7APlnSUihO06Wd3AynuDTrbFPx54-f). "Harvest Report 1" and "Harvest Report 2" are samples of the field reports. "TIST UG PD-VCS-001-004 Verif 03 PA Summary A.xlsx" is a sample of the spreadsheets kept by the UG team.	Cluster meeting discusses the project status and the information is captured in the spreadsheets and archived. This provides as inputs to the monitoring reports. The verification team has also reviewed the submitted sample reports, interaction with the PA members and quantifiers also conform the same. **FAR01 is closed for this verification and shall be reviewed for future verification**

FAR 01R	Please explain how to maintain the management system during the long time project operation, in particular, when the key management team in CAAC and TIST was changed.	Personnel are the key to maintaining the management system. CAAC managers are aware that new management will be needed in the coming years and is taking steps to hire and train them. During the verification period, we added a new member that is learning about the program and taking on more and more responsibility. I4EI, the not-for-profit entity that helps support our sustainable development activities, hired a new director in 3rd quarter 2019. In December 2019, we began a search for a new VP of Operations that will be groomed to become CEO or COO. In Uganda, we have moved to a leadership council so that more farmers are familiar with the operation and what is necessary for a long term project. The technical aspects of the management systems are being upgraded. We are replacing the aging but robust Palm OS smart phones with Androids. The Android quantification system has been completed and we are in testing with the audit and accounting forms. The database was moved to the Amazon cloud in 2012; we expect to rely on their servers to maintain a robust on-line data system.	The PP is aware of the need to have a management system that oversees the smooth functioning and future expansion of the project in new areas and for the long term operation of the project. To this effect, they have the recruitment's and capacity building system in place for the leadership role. The technical aspects of the managements are upgraded to the latest systems that are in available in the market. **FAR01R is closed for this verification and shall be reviewed for future verification**

APPENDIX II: NON-PERMANENCE RISK ASSESSMENT CHECKLIST

Risk Factor	Risk Factor and/or Mitigation Description	Risk rating as per CAAC (refer Appendix 12)	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 Pinus Patula . 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 Pinus Patula was being planted in commercial plantation scale in Uganda since 1940. 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, Uganda National Forestry Authority website
b)	Ongoing enforcement to prevent encroachment by outside actors is required to protect more than 50% of stocks on which GHG credits have previously been issued.	0	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 the farmers themselves. Hence, it is confirmed that ongoing enforcement to prevent encroachment by outside actors is not required. Further voluntary self-interest is	Onsite inspection

			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 Bushenyi, 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 and issuance of GHG credits) under the VCS Program or other approved GHG programs.	-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

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 9
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	NA	NA	NA

	cover the total cash out required before the project 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 9
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 9
	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	NA	NA	NA

	demonstrated.			
b)	NPV from the most profitable alternative land use activity is expected to be between 50% and up to100% more than from project activities.	NA	NA	NA
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. Assessment of the net impacts of the project on social and economic well being of the communities was conducted as part of the Environmental Assessment report submitted to and approved by NEMA.	Exhibit 01 Exhibit 02 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	NA	NA	NA

	alternative land use activity.			
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 stocks over the length of the project crediting period.	-1.8	TIST Project contracts with each Small Group was verified which extend beyond the length of the project crediting period. During this verification there have been violations of the contract by some of the members it had proven to be effective over 96% of the carbon stocks	Exhibit 03 Exhibit 04
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)]	-1.8	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.	1.5	Contracts verified indicated that the project participants have formally committed for 60 years not to cut down the trees, except when implementing best	site visit inspection

			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 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. During the third verification, it was determined that there was harvest activity at 4.0% carbon stock and is dropped from the program, this is considered insignificant.	
c)	**Total Internal Risk (PM + FV + OC + PL)**	0	Risk rating perceived is appropriate in this section considering all applicable criteria	Applicable as above
EXTERNAL RISKS				
Land Tenure and Resource Access/Impacts				
a)	Ownership and resource access/use rights are held by	0	Control of project lands by project participants is clear and undisputed, either through a registered deed or by	Constitution of the Republic of Uganda, 1824, Section 237. Land

	same entity(s).		customary tenure. Customary tenure is an accepted form of ownership, where land rights are regulated by local customs. Ownership of lands is attested by each individual project participant in their Small Group contract.	Ownership & 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 overlapping rights).	0	NA	NA
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	-1.8	It is verified that each project area is subject to a Small Group GHG contract	Exhibits 03 and 04 and site visit

	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.		that protects the carbon stocks over the length of the crediting period. During this verification some contracts (4%) have been removed.	
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 households living within the project area, 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
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 Uganda program under the CCB standard.	Exhibit 29
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 (2013-2017) is -0.59. See Exhibit 11.	Exhibit 11
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	-2	Uganda is receiving REDD+ Readiness funding from the World Bank Forest	Forest Carbon Partnership Facility website

	this Section 2.3.3.		Carbon Partnership Facility.	
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	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	There are three species where a total loss would exceed 5% - eucalyptus, cypress and pinus. 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 ranked as "insignificant (less than 5% loss of carbon stocks)." Mitigation measures listed are considered effective	• World Agroforestry Center, AgroForestry Tree Database, • Ibid FAO 2007 • Exhibit 12

			to justify the score. During the third verification it was determined that 0 PAs were lost to pest, well below the 5% threshold	
W	Extreme Weather	0	It is not expected that Southeast Uganda will be affected by drought, so the likelihood is "risk is not applicable to the project area, which is considered acceptable.	Site visit inspection
G	Geological Risk	0	There are infrequent earthquakes in Uganda associated with the Rift Valley. The last significant earthquake was in 1994 near Kasese and during this verification period there was no such event. Because of the dispersed nature of TIST, none of these potential geological risks would have a significant impact on the carbon stocks of the project, even if they occurred. Because trees are flexible, the effects of an earthquake on carbon stocks would be minimal. Because none of these risks have been identified to impact any discrete project area, significance is considered "no loss." 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)	1.5	Risk rating perceived is appropriate in this section considering all applicable criteria. The applied mitigation scores of 0.5 to each of fire, pest, extreme weather and geological risk is acceptable.	Applicable as above

Summary of assessment:

Risk Category	**Risk rating**	**Requirements for risk rating**
a) Internal risk	0	Note: • Overall risk rating shall be rounded up to the nearest whole percentage. • The minimum risk rating shall be 10, regardless of the risk rating calculated. • If the overall risk rating is over 60 then the project fails the entire risk analysis.
b) External risk	0	
c) Natural risk	1.5	
Overall Risk rating a) + b) + c) (rounded up)	**2.0**	
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	153,595	
Emission reductions buffer	15,359	
Net emission reductions	**138,235**	