

GAP VALIDATION AND VERIFICATION OF TIST PROGRAM IN UGANDA, VCS-005



Document Prepared By: EPIC Sustainability

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Summary:

Clean Air Action Corporation has appointed EPIC Sustainability Services Private Limited to perform the second periodic verification of the emission reductions reported for the project titled “The International Small Group and Tree Planting Program, Uganda, VCS-005” (Project ID: 993) for the period from 01-Jan-03 to 07-Jul-17 for original instances, 01-Jan-03 to 07-Jul-17 for new instances and 13-Nov-12 to 07-Jul-17 for net reductions achieved. The verification was based on the validated project description (PD) corresponding validation report, first monitoring and verification reports and other supporting documents made available to the verification team by the client.

The International Small Group and Tree Planting Program (TIST) is a combined reforestation and sustainable development project, in Uganda, carried out by subsistence farmers. The farmers plant trees on their land and retain ownership of the trees and their products. They receive training from TIST and a share of the carbon revenues from CAAC.

UG PD-VCS-005 is a grouped AFOLU project, eligible under the Afforestation, Reforestation and Revegetation (ARR) category. The initial project description (PD) is for a subset of the TIST project in Uganda and consisted of 301 of the Small Groups, 1,799 members, 953 project areas and 722.6 ha which was validated and verified in March 2013. In this verification report, 1,755 new instances expanding the PD to 672 of the Small Groups, 4,248 members, 2,708 project areas and 2,434 ha. The main species planted are *Pinus patula*, *Eucalyptus*, and *Cupressus* spp.

The verification team identified, through the verification process, 05 CLs. No FAR is raised in this verification. 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 2, dated 17th October 2017. Therefore, EPIC certifies the emission reductions amounting to **464,116** tCO₂e for the period from 01-Jan-03 to 07-Jul-17 for original instances, 01-Jan-03 to 07-Jul-17 for new instances and 13-Nov-12 to 07-Jul-17 for net. (both days inclusive).

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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 validation and second periodic independent verification of the project activity titled "TIST Program in Uganda, 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
- 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-Jan-03 to 07-Jul-17 for original instances, 01-Jan-03 to 07-Jul-17 for new instances and for net from 13-Nov-12 to 07-Jul-17.

1.2 Scope and Criteria

The validation scope for the newly added instances includes an independent and objective review of the Project VCS project description (PD), the project's baseline study, monitoring plan and other relevant documents. Specifically, the objectives of the validation work involve:

- To verify whether the project activity meets the requirements of VCS standard including additionality, proof of title and compliance with local laws.
- To assess whether the baseline and monitoring plan are in conformance with the methodology applied from the VCS approved GHG program.
- To certify that the information presented are complete, consistent, transparent and free of material error.

The Project Description was reviewed against VCS standard and the VCS program guidelines and the applied CDM methodology. EPIC has performed the validation based on a risk based approach focusing mainly on the significant risks to meet the qualification criteria and the ability to generate VCUs. The work carried out by EPIC is free from any conflict of interest.

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-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 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

UG PD-VCS-005 is a 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 301 of the Small Groups, 1,799 members, 953 project areas and 722 ha. The PD was validated and first verified on 07 March 2013. In this monitoring report, Project proponent have added 1,755 new instances expanding the PD to 672 of the Small Groups, 4,248 members, 2,708 project areas and 2,434 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

2.1 Method and Criteria

The Gap Validation of the newly added instances and verification process consisted of the following phases:

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

The Validation and 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 validation and verification, sampling was based upon the active samples with minimum criteria of covering at least 2.5 % sample size. For this verification, 66 samples were visited during the site visit which amounted to more than 2.5 % of the sample size considering the number total active samples. The number of trees were sampled such that a 5% tree size overall was reached. At each site, strata based sampling – Eucalyptus, Pine 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 validation and verification, non-fulfilment of the verification protocol 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 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 (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 IRs (Information Requests) were requested when additional information was required. The list of the findings are summarised in Appendix I.

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

Name	Role	Components reviewed
Dr R Madhukar	Lead Auditor	Completeness check, desk review, onsite inspection, Interview with project representatives, issuance of findings, report preparation.
Dr G Vishnu	Team Leader	Completeness check, desk review, issuance of findings, report preparation.
Mr. Mugaju Robert	Host Country Expert	Interviews with community and forestry land use patterns

Mr A. Prabu Das and Mr R. Vijayaraghavan	Technical Review team	Checking and verifying of information related to draft final report.
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2.2 Document Review

The validation and 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 Project design, Monitoring Plan and monitoring methodology, paying particular attention to the monitored parameters and QA/QC requirements, and Internal SOPs.
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 7th July 2017 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 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 monitoring report Version 02 dated 17th Oct. 2017 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 17th to 23rd September 2017. 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.Jennifer Turyatamba	TIST Field Manager	Project design, Project implementation, Procedures, Monitoring plan and Procedures
Mr. Martin Weru	TIST Field Manager	Monitoring plan and Procedures, Training details, field measurement
Mr. Bachwa Hakim	TIST Field Manager	Monitoring plan and Procedures, Training details, field measurements

• Jackson Aermarj • Nahukunda Jennesher • Byaruhanga Florence • Pamela Barigye • Coleb Kayahuki • Twijukye Leoriane	TIST Quantifiers	Field measurements, Species identification, data entry																																																																						
<table><tr><th>Groove Name</th><th>TIST Number</th></tr><tr><td>Paddy 011</td><td>2008UG116</td></tr><tr><td>Paddy 02</td><td>2008UG116</td></tr><tr><td>Paddy 02</td><td>2008UG116</td></tr><tr><td>Mrs. Bikangiso</td><td>2009UG62</td></tr><tr><td>Mukwasibwe</td><td>2010UG181</td></tr><tr><td>Amuthaheire</td><td>2010UG181</td></tr><tr><td>Agaba 07</td><td>2005UG46</td></tr><tr><td>Mangada 02</td><td>2005UG46</td></tr><tr><td>Agaba 3</td><td>2005UG46</td></tr><tr><td>Agaba 4</td><td>2005UG46</td></tr><tr><td>Agaba 8</td><td>2005UG46</td></tr><tr><td>Agrey 001</td><td>2005UG46</td></tr><tr><td>Ezera 06</td><td>2005UG64</td></tr><tr><td>Baturine P 01</td><td>2003UG332</td></tr><tr><td>Ninsiima 002</td><td>2003UG252</td></tr><tr><td>Pady 02</td><td>2003UG252</td></tr><tr><td>Sam 01</td><td>2010UG 184</td></tr><tr><td>Timbenderana C</td><td>2009UG86</td></tr><tr><td>Fabith K</td><td>2009UG86</td></tr><tr><td>Nyakatare 02</td><td>2009UG86</td></tr><tr><td>Martha</td><td>2008UG224</td></tr><tr><td>Keroyi</td><td>2006UG193</td></tr><tr><td>Monday</td><td>2006UG106</td></tr><tr><td>Turyatunga J01</td><td>2008UG101</td></tr><tr><td>Mrs. Turyatunga J01</td><td>2008UG101</td></tr><tr><td>Mutumba</td><td>2006UG195</td></tr><tr><td>Agaba 05</td><td>2005UG46</td></tr><tr><td>Kyomukoma 11</td><td>2005UG46</td></tr><tr><td>Mangada 01</td><td>2005UG46</td></tr><tr><td>Nahurria D</td><td>2010UG44</td></tr><tr><td>Biriso E</td><td>2005UG64</td></tr><tr><td>Biriso</td><td>2005UG64</td></tr><tr><td>Matayo 01</td><td>2009UG91</td></tr><tr><td>Monday Erric 01</td><td>2007UG199</td></tr></table>	Groove Name	TIST Number	Paddy 011	2008UG116	Paddy 02	2008UG116	Paddy 02	2008UG116	Mrs. Bikangiso	2009UG62	Mukwasibwe	2010UG181	Amuthaheire	2010UG181	Agaba 07	2005UG46	Mangada 02	2005UG46	Agaba 3	2005UG46	Agaba 4	2005UG46	Agaba 8	2005UG46	Agrey 001	2005UG46	Ezera 06	2005UG64	Baturine P 01	2003UG332	Ninsiima 002	2003UG252	Pady 02	2003UG252	Sam 01	2010UG 184	Timbenderana C	2009UG86	Fabith K	2009UG86	Nyakatare 02	2009UG86	Martha	2008UG224	Keroyi	2006UG193	Monday	2006UG106	Turyatunga J01	2008UG101	Mrs. Turyatunga J01	2008UG101	Mutumba	2006UG195	Agaba 05	2005UG46	Kyomukoma 11	2005UG46	Mangada 01	2005UG46	Nahurria D	2010UG44	Biriso E	2005UG64	Biriso	2005UG64	Matayo 01	2009UG91	Monday Erric 01	2007UG199	TIST Program members	Farming practices followed, Knowledge of TIST policies, Attendance at cluster meetings
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Nalongo	2007UG187		
Byranhanga 01	2007UG126		
Byranhanga 02	2007UG126		
Peace K 01	2003UG301		
Mgunga Violet 01	2003UG361		
Church 02	2003UG 310		
Pada 03	2004UG52		
Lashid 04	2003UG252		
Mugisha 02	2006UG394		
Mugisha 03	2006UG394		
Michel 01	2006UG394		
Mugisha 01	2006UG394		
Michel 02	2006UG394		
Michel 03	2006UG394		
Akampuria 02	2012UG32		
Akampuria	2012UG32		
Neema Tobert	2009UG93		
Kateeba VI	2006UG192		
Kateeba V	2006UG192		
James 05	2006UG320		
James 04	2006UG320		
Akankwatsa BVI	2006UG323		
Akankwatsa III	2006UG323		
Akankwatsa IV	2006UG323		
Bahemuka J1	2006UG320		
Akankwatsa BV	2006UG323		
Akankwatsa II	2006UG323		
Bahemuka J	2006UG323		
Akankwatsa B	2006UG323		
James 03	2006UG320		
Deus	2012UG29		
Adah	2012UG29		

2.4 Site Inspections

An onsite visit was conducted during the period 17th – 23rd September 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 the validation and 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 of the project design 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 05 CLs 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 revised monitoring report, Version 02.

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

There are no FARs raised during this verification process.

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

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

UG PD-VCS-005 is a grouped AFOLU project, eligible under the Afforestation, Reforestation and Revegetation (ARR) category. The initial project description (PD) is for a subset of the TIST project in Uganda and consisted of 301 of the Small Groups, 1,799 members, 953 project areas and 722.6 ha which was validated and verified in March 2013. In this Gap Validation and verification report, 1,755 new instances expanding the PD to 672 of the Small Groups, 4,248 members, 2,708 project areas and 2,434 ha have been added. The main species planted are *Pinus patula*, *Eucalyptus*, and *Cupressus* spp. Hence the scope of the Gap Validation covered the new areas added.

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 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.

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	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.

	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 changes at the grove level.	
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 “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.	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.

3.4 Grouped Project

The project activity is a grouped AFOLU 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 1,755 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.
The project zone maps have been updated to include locations of the new project areas and communities	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.
The new project areas and communities have compiled with the stakeholder identification and analysis process.	The stakeholder identification process set out in the project description is verified from the local stakeholder consultation meetings held and site visit observations.
Conformance of the new project activity instances, project areas and communities with the eligibility criteria set out in the project description.	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 and limits the new instances to the following districts of Uganda: Bushenyi, Kabale, Kanungu, Kisoro, Mbarara, Ntungamo, and Rukungiri. Also Any instances that may be added in the future has been indicated to be limited to the defined area which is Uganda. 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.
Conformance of the new project areas and communities with the scalability limits set out in the project description.	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. An instance is limited to one percent which for a 30 year project is 4,800 tonnes.
Actions taken to mitigate risks that may result from adding project areas and communities.	Risk assessment is verified to be in accordance with the VCS requirements based on the risk analysis document submitted.
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.	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.
Sampling process for validation of new project activity instances, project areas and communities.	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.
Quality and completeness of evidence, data and documentation relating to the new project activity instances, areas and communities.	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.

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

4.1 Project Implementation Status

The validation and verification based on the onsite observation, found that there is no material discrepancies between the project implementation and the project description. 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 has 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 and the added new instances conform to the eligibility criteria.

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 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	Appendix 04 a/b and 11 a/b	The area of the project was verified from

area		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. Appendix 4a/b	The baseline tree data was verified from the earlier monitoring and verification reports and was found to be in conformance with the project design. For the newly added instances the same was verified by document review and site visit.
Baseline tree circumference	Appendix 4a/b	The data was verified to be in conformance with project design. For the newly added instances the same was verified by document review and site visit.
Baseline strata	Appendix 4a/b	The data was verified to be in conformance with project design. For the newly added instances the same was verified by document review and site visit.
Project trees	Appendix 4a/b	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 a/b	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 a/b	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 na 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 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 09 of the MR version 02 or to the Non-permanence risk report version 02 dated 17th Oct. 2017 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 II.

5 SAFEGUARDS

5.1 No Net Harm

The validation 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 for the validation of newly added instances. The stakeholder identification process set out in the project description is verified from the local stakeholder consultation meetings held and site visit observations. The document appendix 14 was verified for the inputs from the local stakeholders. No negative comments were received from the local stakeholders.

6 VERIFICATION CONCLUSION

EPIC Sustainability Services Private Limited has been engaged by Clean Air Action Corporation to perform the second periodic verification of the emission reductions reported for the project titled “TIST Program in Uganda, VCS-005” (Project ID: 993) from 01-Jan-03 to 07-Jul-17 for original instances, 01-Jan-03 to 07-Jul-17 for new instances and 13-Nov-12 to 07-Jul-17 for net reductions achieved. The Gap validation was based on the validated project description (PD), corresponding validation report, and other supporting documents made available to the verification team by the client.

The verification was based on the validated PD, the baseline and monitoring methodology, validation reports, monitoring report, 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 from 01 January 2003 to 07 July 2017 for original instances, 01 January 2003 to 07 July 2017 for new instances and 13 November 2012 to 07 July 2017 for net reductions achieved 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 which does not impact applicability of methodology, baseline and addtionality 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 monitoring procedures in place 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 17th Oct. 2017) was correct and that the emission reductions achieved had been determined correctly. In our opinion, the GHG emission reductions for the period from 13 November 2012 to 07 July 2017 in the verified monitoring report 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 [13-November-2012] to [07-July-2017]

Net GHG emission reductions or removals (tCO ₂ e)	Risk rating	Buffer pool (VCUs)	Tradable VCUs
515,685	10%	51,569	464,116

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)
13-November-2012 to 07-July-2017	0	464,116	0	464,116
Total	0	464,116	0	464,116

Prepared by	Approved by:
	
Dr. G. Vishnu	Mr. K. Sudheendra
Verification Team Leader	Head-Operations

7 LIST OF DOCUMENTS REVIEWED

S.No.	Document Details
1	Validated PD and Validation report
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	First Monitoring report text
11	First Monitoring report data
12	Validation Report
13	Validation Statement & Validator's Risk Assessment
14	Second Risk Assessment
15	Verifiers Report
16	Verification Representation
17	VCS risk analysis for Verification 02 (Appendix 09) Version 2 dated 17 th Oct. 2017
18	Monitoring Report for Verification 02 (Appendix 10) Version 2 dated 17 th Oct. 2017
19	Monitoring Data for Verification 02 (Appendix 11 a/b)
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 120507
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	Local Stakeholder meeting details (Appendix 14)

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	The following inconsistencies observed is to be clarified on tree count: - For the sample Paddy 03 – 2008UG116, onsite observation of tree count indicated 197 trees as per the quantifier. However, the reference sheet given during onsite indicates the tree count as 362 and the Excel sheet indicates 357 trees. - Tree counts were observed to both increase and decrease (up to approx. 5000) in the excel sheet provided when compared to the first verification.	Regarding Paddy 03, the Monitoring Report for the first verification shows 357 trees were quantified 30 Aug 2012. The spreadsheet we supplied you for the Monitoring Report for the second verification shows 362 trees quantified on 15 Mar 2014. The data for this Monitoring Report was pulled 7 Jul 2017. The website shows a subsequent quantification on 22 Aug 2017 and 197 trees which is what was seen on the field trip. TIST is dynamic: new trees are planted, some trees are lost, and sometimes the tree counts have errors. The program addresses these changes through an ongoing quantification program. The inconsistency observed can happen and as seen with the updated numbers on the website, are self-correcting. This is true for the overall changes observed between the monitoring reports. In cases where there has been thinning or harvest there could be a significant decrease in tree count. For example, if trees are originally planted at 1 meter spacing and are thinned to 2 meter spacing, there would be a 75% decrease in tree count. This is an acceptable practice because it provides fuelwood for the Small Group. In the case of harvest, this is not acceptable and results in the removal of the SG member from TIST. In other cases, the project area was defined but unplanted at the time of the first verification. For example, 2012UG54-Paul 01 went from zero trees to over 12,000. Again, TIST is dynamic and we see many changes between verifications and quantifications. In all cases the verified carbon is based on the aggregate for the PD at a point in time and we have continually show an increase in overall carbon (a 500,000 tonne increase for this PD). We believe the program is working as designed and providing significant increases in sequestration and benefits for the farmers.	The reply by the PP is considered acceptable. CL 01 Resolved

CL 02	It was observed during site visit that trees were harvested in sample Paddy 03 – 2008UG116. Clarify whether the trees were project trees or baseline trees with appropriate justification.	As indicated by the decreased tree count between 30 Aug 2012 and 22 Aug 2017, these were program trees. As noted with CL 01, a certain amount of change is acceptable and is often balance out by increased tree inventory in other project areas. Combined with growth, all of our PDs have achieved a significant increase in carbon for the first verification.	The reply by the PP is considered justified. CL 02 Resolved
CL 03	The following inconsistencies observed is to be clarified: - For the sample Biriso -- 2005UG64, reference sheet provided did not indicate the plantation date, baseline date, age and species. - For sample Agrey 001-2005UG46, it was observed during site visit that age of tree was 7 years (planting date 2017), whereas in the excel sheet it is 11 years (planting date 2006)	None of this data is present because there are no trees. This verification presents an opportunity to add 1,700 new instances that would have to be abandoned from the carbon market if they were not added to the PD at this time. 2005UG64-Biriso appears on the database as a baselined grove so we included it to give the member the opportunity to plant some trees in the future. As of the last quantification he/she had not. No carbon is being claimed for this project area. A review of the data on the spreadsheet and website indicates the trees are in the 10 to 11 year range. The difference between the 10 and 11 would be based on the algorithm used to calculate age. If the 11th anniversary of the planting record was after 17 April 2017, then the spreadsheet would show it as 11 years while the website showed it as 10 year. As for the difference between 11 years and 7, this is usually cause by the quantifier making a mistake. If the quantifier use his notebook and he last visited the grove in, say, 2013, he may have been giving you the age from his note book. I have seen this confusion before which is why we use the planting date from the database to determine age.	The reply by the PP is considered justified. CL 03 Resolved

CL 04	Clarify on the statement as indicated in the risk assessment that During the second verification it was determined that 0 PAs were lost to fire, well below the 5% threshold in the context of the previous statement as it was observed from the Appendix 11 a/b that there were few instances indicated as Pending- fire	In App11a, we previously identified 3 PAs that were affected by _fire_ and addressed them in the Fire section of the risk report. The loss was below any threshold to affect the grading. No PAs were lost for the new instances added (App 11 b)	The revised risk report addresses the clarification raised satisfactorily. CL 04 Resolved
CL 05	Clarify on the statement as indicated in the risk assessment that During the second verification it was determined that there was harvest activity at 0 PAs, in violation of the contract as it was observed that some PAs have been removed due to logging.	In App11a, we previously identified 50 PAs that were affected by _harvest_ and addressed them in the section B of the Longevity section of the risk report. Because of mitigation points, the loss was below any threshold to affect the overall risk grading. No PAs were lost for the new instances added (App 11 b)	The revised risk report addresses the clarification raised satisfactorily. CL 05 Resolved

APPENDIX II: 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 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	Document review: Monitoring report and the spreadsheet Appendix 11 World Agroforestry Center, AgroForestryTree Database, Uganda National Forestry Authority website

			located	
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 promoted by means of cash incentives which minimise encroachments.	Onsite inspection
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	-2	CAAC, the project proponent, founded the TIST program in 1999 and has been expanding TIST to Kenya, Uganda, India	CAAC and TIST website

	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.		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.	
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	NA	NA	NA

	years from the current risk assessment.			
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 cover the total cash out required before the project reaches breakeven.	NA	NA	NA
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	0	It is verified from the project financial plan that Project cash flow breakeven point is less than 4 years.	Exhibit 7

	breakeven.			
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	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 . 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 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 stocks over the length of the project crediting period.	-1.9	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 which was assessed to be around 1%.	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)]	-1.9	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.	2	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 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 second verification it was determined that there was harvest activity at 5% of the original PAs, in violation of the contract which have been dropped from the program and the carbon zeroed out. The percentage dropped to under 2% when the new instances were added in which no such incidents were observed. As a result, 95% of the PAs are in compliance covering 99% of the carbon	site visit inspection
c)	Total Internal Risk (PM + FV +	0	Risk rating perceived is appropriate in this	Applicable as above

	OC + PL)		section considering all applicable criteria	
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. 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..	Constitution of the Republic of Uganda, 1995, Section 237. Land 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 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.	-1.9	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. During this verification some contracts (1%) have been removed.	Exhibits 03 and 04 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)]	-1.9	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 (2011-2015) is -	Exhibit 16 and 17.

			0.59. See 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	Uganda is receiving REDD+ Readiness funding from the World Bank Forest Carbon Partnership Facility.	Forest Carbon Partnership Facility website
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	Site visit inspection

			than 5% loss of carbon stocks). During the second verification it was determined that 3 PAs representing 0.02% of the carbon were lost to fire, which are however well below the 5% threshold and hence there is no effect on the overall risk rating.	
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 to justify the score. During the second verification it was determined that 0 PAs were lost to pest, well below the 5% threshold	• World Agroforestry Center, AgroForestryTree Database, • Ibid FAO 2007 • Exhibit 15 and 16
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	Site visit inspection

			acceptable.	
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)	1.5	
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	515,685	
Emission reductions buffer	51,569	
Net emission reductions	464,116	