THE INTERNATIONAL SMALL GROUP AND TREE PLANTING PROGRAM, INDIA, VCS-001 VALIDATION REPORT

ENVIRONMENTAL SERVICES, INC.

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Summary:

Environmental Services, Inc., (ESI) was contracted by Clean Air Action Corporation (CAAC) on 07 September 2012 to conduct the project validation of *The International Small Group and Tree Planting Program (TIST), India, VCS-001* [Project Description (PD) dated 08 February 2013].

As stated in the PD, "TIST is a combined reforestation and sustainable development project in India 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. Carbon credit sales generate participant income and provide project funding to address agricultural, HIV/AIDS, and nutritional and fuel challenges.

TIST provides an administrative backbone that supplies training in building nurseries, tree planting, conservation farming, building fuel-efficient stoves and malaria and HIV/AIDS prevention. Part of the backbone is a two-way communications network that includes newsletters, weekly meetings at the Small Group level, monthly meetings where groups of Small Groups receive training, periodic seminars at the national level, and an award winning monitoring system based on hand-held computers and Global Positioning Systems (GPS). TIST is available to everyone, and all are considered equal. The rotating leadership and the Small Group rules empower women and the undereducated. Those who are the most successful, regardless of education levels or gender, become mentors and leaders."[1]

This PD is for a subset of the TIST project in India and initially applies to 452 of the Small Groups; 2,599 members; 924 project areas; and 671.8 hectares (ha). The main species planted are *Tectona grandis, Gmelina arborea, and Mangifera indica*.

The validation objective included an assessment of compliance with Verified Carbon Standard (VCS) (Version 3) and the likelihood that implementation of the planned Greenhouse Gas (GHG) project will result in the GHG emission removal enhancements as stated by the project developer (ISO 14064-3:2006). This validation assessed the GHG emission removals through Agriculture, Forestry and Other Land Use (AFOLU) Requirements (Version 3.3), specifically Afforestation, Reforestation and Revegetation (ARR).

The scope of the validation included the GHG project and baseline scenarios; physical infrastructure, activities, technologies and processes of the GHG project; GHG sources, sinks and/or reservoirs; types of GHGs; and time periods covered. The geographic validation scope was defined by the project boundary, which included multiple project areas (grouped), the carbon reservoir types, management activities, growth and yield models, inventory program, and contract periods.

The validation criteria followed the guidance documents provided by VCS and included the following: VCS Program Guide (04 October 2012, v3.4), VCS Standard (04 October 2012, v3.3), Program Definitions (04 October 2012, v3.4), Agriculture, Forestry and Other Land Use (AFOLU) Requirements (04 October 2012, v3.3), AFOLU Non-Permanence Risk Tool (04 October 2012, v3.2), the grouped project PD entitled *The International Small Group and Tree Planting Program, India, VCS-001* (dated 08 February 2013), and Clean Development Mechanism (CDM) Methodology AR-AMS0001 Version 06.

A summary of all findings is included in Appendix A. There are no restrictions of uncertainty.

ESI confirms all validation activities, including objectives, scope and criteria, level of assurance, and the PD are complete and in adherence to the VCS Version 3 and all associated updates as documented in this report. ESI concludes without any qualifications or limiting conditions that the PD *The International Small Group and Tree Planting Program, India, VCS-001* (dated 08 February 2013) meets the requirements of VCS Version 3 and all associated updates.

[1] Clean Air Action Corporation, *The International Small Group and Tree Planting Program, India, VCS-001*, Version 01, 08 February 2013.

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1 INTRODUCTION

1.1 Objective

The validation objective for this project included an assessment of compliance with the Verified Carbon Standard (VCS) (Version 3) and the likelihood that implementation of the planned Greenhouse Gas (GHG) project would result in the GHG emission removal enhancements as stated by the project developer (ISO 14064-3:2006). This validation assessed the GHG emission removals through an Agriculture, Forestry and Other Land Use (AFOLU) project – specifically, an Afforestation, Reforestation and Revegetation (ARR) grouped project.

1.2 Scope and Criteria

The scope of the validation included:

- the GHG project and baseline scenarios
- physical infrastructure, activities, technologies and processes of the GHG project
- GHG sources, sinks, and/or reservoirs
- types of GHGs
- time periods covered

The geographic validation scope was defined by the project boundary, which will include multiple project areas (grouped), the carbon reservoir types, management activities, growth and yield models, inventory program, and contract periods. The scope of *The International Small Group and Tree Planting Program, India, VCS-001* was outlined by the project developer prior to the validation initiation and is re-defined as follows:

Baseline Scenario	The baseline field observation as detailed in the "Grove Summary" worksheet indicates the project areas are grassland and cropland prior to implementation of the project activity
Activities/Technologies/Processes	ARR Grouped Project
Sources/Sinks/Reservoirs	Above- and below-ground living tree biomass
GHG Type	CO_2
Time Period	30 years, beginning on 01 January 2004 and ending on 31 December 2033
Project Boundary	Kancheepuram, Tiruvannamalai, Thiruvallur, Vellore and Villupuram Districts of Tamil Nadu State Small Groups: 452 Members: 2,599 Groves: 924 Hectares (ha): 671.8

1.3 Level of assurance

The level of assurance was used to determine the depth of detail that the validator placed in the Validation and Sampling Plan to determine if there are any errors, omissions, or misrepresentations (ISO 14064-3:2006). Environmental Services, Inc., (ESI) assessed the project (general principles, data, sampling descriptions, documentation, calculations, etc.) to provide *reasonable assurance* to meet the project level requirements of the VCS Program. The evidence used to achieve a *reasonable* level of assurance is specified in the following sections.

1.4 Summary Description of the Project

As stated in the Project Description (PD), "The International Small Group and Tree Planting Program (TIST) is a combined reforestation and sustainable development project in India 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.

TIST empowers Small Groups of 6-to-12 subsistence farmers in India, Kenya, Tanzania and Uganda to combat the devastating effects of deforestation, poverty and drought. Combining sustainable development with carbon sequestration, TIST already supports the reforestation and biodiversity efforts of over 64,000 subsistence farmers. Carbon credit sales generate participant income and provide project funding to address agricultural, HIV/AIDS, and nutritional and fuel challenges. As TIST expands to more groups and more areas, it ensures more trees, more biodiversity, more climate change benefit and more income for more people.

TIST provides an administrative backbone that supplies training in building nurseries, tree planting, conservation farming, building fuel-efficient stoves and malaria and HIV/AIDS prevention. Part of the backbone is a two-way communications network that includes newsletters, weekly meetings at the Small Group level, monthly meetings where groups of Small Groups receive training, periodic seminars at the national level, and an award winning monitoring system based on hand-held computers and Global Positioning Systems (GPS). TIST is available to everyone, and all are considered equal. The rotating leadership and the Small Group rules empower women and the undereducated. Those who are the most successful, regardless of education levels or gender, become mentors and leaders."[2]

This PD is for a subset of the TIST project in India and initially applies to 452 of the Small Groups; 2,599 members; 924 project areas; and 671.8 ha. The main species planted are *Tectona grandis, Gmelina arborea, and Mangifera indica*.

2 VALIDATION PROCESS

2.1 Method and Criteria

The validation process closely followed ESI's procedures for VCS validations outlined within our Management System Manual. In addition, the validation process was detailed in a separate Validation and Sampling Plan, which was approved by the Project Proponent on 08 November 2012.

For this validation, the sample size for the desktop portion of the validation included a complete review of the PD and supporting documents.

The field validation included an onsite review of a sample of initial groves[3], or initial instances, within the Grouped Project geographic boundary. A risk-based approach was used to select the groves in order to review multiple small groups and TIST members across a wide geographic range of sites sufficient to provide the necessary sample size to meet a *reasonable* level of assurance, as directed by the professional judgment of the Lead Validator.

[2] Clean Air Action Corporation, *The International Small Group and Tree Planting Program, India, VCS-001*, Version 01, 08 February 2013.
[3] Note that groves can be either plantations or shambas.

Thirty-two (32) groves were selected for field validation during the site visit[4]. These groves contained a total of 57,658 trees, which is an 8.8% sample. This exceeded our established minimum field validation sampling threshold of 5% of the stated number of trees planted by the project developer in the PD. Each grove was visited and photographed to ensure tree planting activities occurred as stated in the PD.

The validation criteria followed ISO 14064-3, the guidance documents provided by VCS, and included the following:

- VCS Program Guide (04 October 2012, v3.4)
- VCS Requirements Document (04 October 2012, v3.3)
- Program Definitions (04 October 2012, v3.4)
- AFOLU Requirements (04 October 2012, v3.3)
- AFOLU Non-Permanence Risk Tool (04 October 2012, v3.2)
- Grouped Project Description (PD) entitled *The International Small Group and Tree Planting Program (TIST), India, VCS-001* (dated 08 February 2013)
- Clean Development Mechanism (CDM) Methodology AR-AMS0001 Version 06 (17 September 2010)

2.2 Document Review

A detailed review of all project documentation was conducted to ensure consistency with, and identify any deviation from, VCS program requirements (VCS Version 3 and associated updates) and the CDM methodology (AR-AMS0001, v6). Initial review focused on the PD and included an examination of the project details, data and parameters, quantification of GHG emission reductions and removals, and supporting documents.

Please see Appendix C for a complete list of documents and files provided by the client during validation, including any items associated with the risk analysis.

2.3 Interviews

Interviews were conducted at multiple levels of the TIST program to assess understanding of program requirements and to determine if monitoring conducted in the field was implemented in accordance with the PD. Interviews included discussions with CAAC senior management, TIST field managers, trainers, auditors, quantifiers, Information Technology (IT) staff and program members, as well as local stakeholders affected by the project. During all interviews, generally positive comments were received and the information provided in the PD was supported. The following is a list of the main interviewees:

Name	Title
Charlie Williams	CAAC vice president and project developer
Christine Yankel	TIST field manager
Joseph Rexon	TIST India Director

[4] See Appendix B for a list of groves sampled during the field validation.

A.V. Venkatachalam	Tamil Nadu, Conservator of Forests
R. Rajendran	Tiruvannamalai, District Forest Officer
M. Thiyagarajan	Vellore, Forestry Extension Officer
Ravajel	TIST Quantifier
Dhanasekar	TIST Quantifier
Janakairaman	TIST Assistant Program Coordinator
Johnson	TIST Quantifier
S. Raj	TIST Coordinator
Senthalkumar	TIST Quantifier
Ramkumar	TIST Quantifier
A. Jananikumar	TIST Coordinator
K. Palani	TIST Quantifier
M. Moharaj	TIST Quantifier
M. Elumelon	TIST Quantifier
P. Thangapandi	TIST Quantifier
Angamuthu	TIST Member
Kumaresan	TIST Member
Arunachalam	TIST Member
Dhinakaraha	TIST Member
Imachalraj	TIST Member
Ravikumar	TIST Member
Chanthirasekar	TIST Member

Seshadri	TIST Member
Admuenda Diran	TIST Member
M. Manikandan	TIST Member
P. Saram	TIST Member
Thongvel	TIST Member
Arumugam	TIST Member
Sundaram	TIST Member

2.4 Site Inspections

Site inspections occurred on 13-17 November 2012. A total of 8.8% of the project trees were validated in the field and 3.5% of the initial groves were visited. During the field review, the following aspects of the project were assessed:

- pre-project conditions, as evidenced by condition of adjacent or nearby non-project areas, site-preparation activities, and related
- current project conditions, including reported tree species and reported planting density, appropriate application of SOP's and related

Direct field observation of tree density (tree spacing), species, and confirmation of application of SOP's was performed at each grove, sufficient to satisfy the professional discretion of the Lead Validator.

2.5 Resolution of Any Material Discrepancy

During the validation process, there was a risk that potential errors, omissions, and misrepresentations would be found. The actions taken when errors, omissions, and misrepresentations were found included: notifying the client of the issue(s) identified, and expanding our review to the extent that satisfied the Lead Validator's professional judgment.

During the course of the validation, thirty-two (32) Non-conformance Reports (NCRs) /Clarifications (CLs) were identified. All NCRs/CLs were satisfactorily addressed. The NCRs/CLs provided necessary clarity to ensure the project was in compliance with the requirements of the VCS for GHG projects. For a complete list of all NCRs/CLs and their resolutions, please refer to Appendix A.

3 VALIDATION FINDINGS

3.1 Project Design

The scope of *The International Small Group and Tree Planting Program, India, VCS-001* was outlined in Section 1.2 of this report. This grouped project is seeking registration under the VCS Version 3 as an ARR grouped project and has been developed in compliance with the AFOLU

Requirements (04 October 2012, v3.3). Additionally, the project is in compliance with the CDM Methodology AR-AMS0001 V 6.

3.1.1 Project Proponent and Other Entities

This grouped project will be implemented by CAAC. Information regarding the project proponent is included below:

Project Proponent	Point of contact	Roles/ Responsibility	Contact Details
Clean Air Action Corporation (CAAC)	Charles E. Williams, Vice President	Project developer, implementer, manager	Clean Air Action Corporation 7134 South Yale Ave, Suite 310 Tulsa, Oklahoma 74136 United States of America (USA) Phone: +1-918-747-8770

In addition to the project proponents, there are other individuals and organizations that will play an operative role in the project. These parties are presented below:

Other Entities	Point of contact	Roles/ Responsibility	Contact Details
TIST Tree Planting India Private Limited (TIST India)	Joseph Rexon	Manages TIST India operations	TIST Tree Planting India Flat A, Plot No.69, 26th Street, Sankar Nagar, Pammal, Chennai 600075
Environmental Services, Inc. (ESI)	Shawn McMahon	Validator/Verifier	Environmental Services, Inc. 3800 Clermont St., NW North Lawrence, OH 44666 United States of America Phone: +1-330-833-9941

3.1.2 Project Start Date

The project start date is 01 January 2004.

3.1.3 Project Crediting Period

The project crediting period for this grouped project is 30 years, beginning on 01 January 2004 and ending on 31 December 2033.

3.1.4 Project Scale and Estimated Net GHG Emission Reductions or Removals

Project	Yes
Large Project	No

Estimated net GHG emission reductions for *The International Small Group and Tree Planting Program, India, VCS-001* are listed below (includes 924 groves or project areas):

Years	Estimated GHG Emission Reductions or Removals (tCO_2e)
Year 2004	0
Year 2005	58
Year 2006	360
Year 2007	2,341
Year 2008	4,927
Year 2009	8,734
Year 2010	11,538
Year 2011	13,185
Year 2012	13,174
Year 2013	13,193
Year 2014	13,195
Year 2015	13,195
Year 2016	13,195
Year 2017	13,195
Year 2018	13,195
Year 2019	13,195
Year 2020	13,195
Year 2021	13,195
Year 2022	13,195
Year 2023	13,195
Year 2024	13,195
Year 2025	13,195

Year 2026	13,195
Year 2027	13,195
Year 2028	13,195
Year 2029	13,195
Year 2030	13,195
Year 2031	13,195
Year 2032	13,195
Year 2033	13,195
Total Estimated ERs	331,410
Total Number of Crediting Years	30
Average Annual Emissions Reductions	11,047

3.1.5 Project Activities

The validation affirmed the following project activity assertions of the PD. "The TIST India project will achieve GHG removals through reforestation/revegetation and sequester atmospheric CO_2 in live aboveground and belowground biomass." The initial project instances include 671.8 ha comprised of multiple project areas (or groves) in the Kancheepuram, Tiruvannamalai, Thiruvallur, Vellore and Villupuram Districts of Tamil Nadu State.

TIST project areas are located on lands that have been used for cropland and grassland and are owned and controlled by subsistence farmers. The species to be planted are selected by the Small Groups based on their needs and the benefits. A list of suitable species is prepared based on input from local experts, the Tamil Nadu Forestry Department (TNFD) and TIST members, and the benefits of suitable species are discussed at TIST training meetings prior to planting implementation. As a result, numerous species and varieties have been selected (see PD Table 1.8). Additional species may be added over the 30-year life of the project as additional plantings take place.

The technologies associated with the tree planting activities have been developed with input from TNFD and through the use of existing literature. TIST also works with the Small Groups and local experts to develop best practices that are recommended to the members for adoption. The technologies employed by the project are described below:

"Nurseries: TIST best practices call for Small Groups to acquire seeds and develop their own nurseries using either seedbeds or pots made from plastic bags. Some Small Groups acquire seedlings from other groups, other individuals and local forest services.

Tree Planting: Tree planting is accomplished by manual methods using hand tools. TIST best practices call for farmers to dig individual holes that are 45 cm wide, 45 cm deep, spaced 2.5 m to 3.5 m apart for each seedling and fertilized using natural fertilizers. TIST does not own any fossil fuel vehicles or equipment to be used for tree planting.

Monitoring: TIST has deployed an innovative and award-winning data collection system that consists of battery-operated palm computers, GPS receivers, data and image uploads through laptops or internet access points to monitor project activities. The data collection is conducted by trained local representatives, called Quantifiers, who are often Small Group members. They travel to each specific project area by walking, bikes, and local buses. TIST does not own any vehicles.

Internet: TIST uses Internet technology to make program results available transparently to a worldwide audience. It is also used to transfer field data collected with the palm computers to the TIST database server located in the USA.

Pest Management: Small Groups are trained to use local natural techniques to manage pests. For example:

- Neem seeds are ground and added to boiling water. The mixture is left overnight and then applied to seedlings when cool.
- Neem leaves, washing soap, salt and red pepper (chili) are mixed together, then added to water and covered with the pan (this is a dangerous mixture!) and then boiled. The cooled mixture is applied to the seedlings.
- Ash is added to the area with seedlings.
- The area is well weeded to avoid encouraging pests.
- Neem leaves are boiled in water to make 'bitter water' and then applied to the seedlings.

Ongoing management: Long-term management of the trees rests with the Small Groups. However, due to the ongoing tree payment based on live tree counts and the long-term profit sharing arrangement with the Small Groups, there are ample incentives for the groups to maintain healthy long-term stands. All species will be maintained for the 30-year life of the project. Small Groups have contracted to replant trees that die in the first 20 years.

Management of the trees is dependent on the species. For example:

- *Tectona grandis*: Initial spacing can be 2x2 meters, planted in rows and in strong light (75% to 100% light). Thinning should take place at 5, 8, 18 and 28 years bringing stem density down to where there is no canopy friction.

- *Gmelina arborea*: Planting should take place at the beginning of the rainy season. Spacing should be 2x2 meters for plantations and 4.5x4.5 for agroforestry. It needs sun and is sensitive to competition so 3–4 weedings are required during the first two years of growth.

- *Mangifera indica*: Initial spacing should be over 34 x 34 feet. Irrigation is recommended for the early years. Pruning can be done after the first fruiting (usually after year four) to improve the form. After that pruning should be restricted to removing dead limbs."[5]

3.1.6 Project Location

The initial project activity instances include 671.8 ha comprised of multiple project areas (or groves) in the Kancheepuram, Tiruvannamalai, Thiruvallur, Vellore and Villupuram Districts of Tamil Nadu State (see PD Figure 1.9). As required by the VCS, both the project area boundaries and the grouped project geographic boundary were presented to the validator in Google Earth KML files. Boundaries were confirmed during the site visit for the project areas, or groves, that

[5]Clean Air Action Corporation, *The International Small Group and Tree Planting Program, India, VCS-001*, Version 01, 08 February 2013.

were sampled. Additionally, the grouped project geographic area boundary was confirmed and is consistent with the requirements for VCS grouped projects. All future project activity instances will be implemented in the geographic region represented by the districts listed above (the grouped project geographic boundary). The general location of the project areas, as well as the grouped project geographic boundary, is shown in the PD (see Section 1.9).

3.1.7 Project Compliance with Applicable Laws, Statutes, and other Regulatory Frameworks

All relevant information on CAAC and TIST's compliance with laws, statutes, and other regulatory frameworks can be found in the PD (Section 1.11) and referenced supporting documents. CAAC declares that all of the laws, rules, and decrees mentioned in PD Section 1.11 are applicable to the entire geographic region (districts listed above) considered for the initial project activities, as well as future project instances.

Compliance with these laws was confirmed (with *reasonable* assurance) during validation for the initial instances.

3.1.8 Ownership and other Programs

3.1.8.1 Right of Use

As stated in the PD, "Each project area is a tree grove planted by a Small Group. It is named using a unique combination of the TIST number for that Small Group and the grove name.

- The landowner is a small hold farmer who is one of the TIST Small Group members. Ownership is through the land registry.
- The Project Participants do not own any of the land. TIST is a project name, not a legal entity, and does not own, control or have any rights to any of the land.
- The landowner covenants together with other farmers to form a Small Group. The Small Groups own the trees that they plant and determine how tree products and carbon revenues are divided among themselves.
- Host Country land law is silent as to the ownership of carbon and carbon pools. However, the Small Groups own the trees that they plant together and grant the rights to all carbon associated with TIST to TIST India under a "Carbon Credit Sale Agreement."
- TIST India is a legally registered limited liability private corporation in India.
- TIST India Limited does not own, control or have any rights to any of the land.
- TIST India is a subsidiary of CAAC with CAAC owning 99% of its shares.
- TIST India has transferred and assigned the "Carbon Credit Sale Agreements" to CAAC.
- Under this PD, VERs shall be issued to CAAC and sold by CAAC.
- The current land use is agricultural.

The status of the contractual relationship between the land owner and TIST will be monitored. This will include changes in ownership of the land and changes in Small Group membership."[6]

Validators have reviewed sample contracts and found them to be adequate and accurate. Further, site visits have confirmed the right of use for the project areas visited. This occurred through discussions with project participants and local chiefs and authorities.

3.1.8.2 Emission Trading Programs and other Binding Limits

No emission reductions generated by the project are part of an emissions trading program.

3.1.8.3 Participation under other GHG Programs

As stated in the PD, "The Project Proponent declares that several of the project areas were registered and validated under CDM on 15 January 2010. However it was never verified and no credits were issued. The Project proponent has withdrawn the project[7] and has not or will not claim GHG reductions under CDM nor any other GHG programs."

3.1.8.4 Other Forms of Environmental Credit Sought or Received

The project has not created wetland mitigation, water quality, air pollution, other non-VCS GHG emission reduction, or any another form of environmental credit.

3.1.8.5 Rejection by other GHG Programs

The project has not been rejected by any other GHG program.

3.1.9 Additional Information Relevant to the Project

3.1.9.1 Eligibility Criteria for Grouped Projects

As stated in the PD, "Eligibility of this project is assessed at two levels. The first is based on the CDM methodology used and the second as a VCS grouped project.

CDM Methodology Eligibility Requirements: Regarding the former, the eligibility for a small-scale A/R CDM reforestation project is assessed using CDM Executive Board Report 35, Annex 18, "Procedures to define the eligibility of lands for afforestation and reforestation project activities." To qualify as a CDM reforestation project, the project must meet the host country definition of a forest. India defines the minimum area of a "forest" as 0.05 hectares with a minimum tree crown cover of 15%, with trees having the potential to reach a minimum height of two meters at maturity *in situ*. As a VCS project, however, this aspect of eligibility does not apply. VCS allows the use of smaller project areas and captures them as Afforestation, Reforestation and Revegetation projects. This PD includes discrete project areas that are less than the minimum area to allow the inclusion of even the smallest small-hold farmer. VCS ARR also allows deviation from the 15% crown cover requirement to allow continued subsistence farming in the project areas.

The additional demonstrations required by Annex 18 are based on the results of TIST's baseline monitoring of each project area and are presented on the "Grove Summary" worksheet. The

[6] Clean Air Action Corporation, *The International Small Group and Tree Planting Program, India, VCS-001*, Version 01, 08 February 2013.
[7] See TIST IN PD-VCS-Ex 05 CDM Withdrawal.pdf.

information is collected on-site, through direct observation and measurement and through direct discussion with the landowner and members of his/her Small Group. Additional evidence is based on information discussed below and demonstrates adherence to these requirements.

a) Demonstrate that the land at the moment the project starts does not contain forest by providing transparent information that:

(i) *Vegetation on the land is below the forest thresholds (tree crown cover or equivalent stocking level, tree height at maturity in situ, minimum land area).*

The physical survey of each parcel taken during the baseline monitoring indicates the lands were barren, cropland and/or covered with grass, shrub or litter and therefore did not meet the requirements for crown cover or height. Existing trees were identified by species and counted. As shown in the Section 3.1, the average stem density is well below the forest threshold.

(ii) All young natural stands and all plantations on the land are not expected to reach the minimum crown cover and minimum height chosen by the host country to define forest.

As shown in Section 3.1, there were relatively few existing trees when project activities began and most were found as isolated trees along the border of individual parcels. Given the history of continued deforestation, as indicated by the maps and satellite images and described in Section 2.4, and continued use of the land by the project members, it is not expected that this area will revert to natural forest without intervention.

(iii) The land is not temporarily unstocked, as a result of human intervention such as harvesting or natural causes.

The baseline monitoring indicates these areas have a history of cultivation ("Grove Summary" worksheet).

b) Demonstrate that the activity is a reforestation or afforestation project activity:

(i) *For reforestation project activities, demonstrate that the land was not forest by demonstrating that the conditions outlined under (a) above also applied to the land on 31 December 1989.*

The project areas did not contain a forest on 31 December 1989. This is demonstrated by the "Grove Summary" worksheet. As part of collecting the baseline information, the landowners are questioned about whether their project area was forested in 1990. 100% of them responded that it was not forested. In addition, baseline monitoring was conducted on each individual project area to confirm that there had not been deforestation of a parcel since that time. This generally included looking for stumps or evidence of recent harvest activity and looking at the surrounding lands to see if there were indications that the project areas were cleared of native ecosystems within the ten-year period prior to the proposed Project Start Date. Nothing was observed to indicate there had been deforestation activity.

Historical imagery from 1990 and 2000was also looked at. Because the discrete project areas tend to be very small, the resolution is too coarse on both images to conduct a detailed analysis of each project area. However, both images confirm that the project areas are situated on lands that have a history of human occupancy and farming. The protected forests can be seen on both images, to contrast with the areas where the project areas are located. These observations support the statements by the landowners and field observations by TIST personnel that the project areas were not deforested since 31 December 1989, or that project areas were cleared of native ecosystems within the ten-year period prior to the proposed Project Start Date.

Grouped Project Eligibility Criteria: Each instance, present and future, will meet the CDM requirements. This includes eligibility (PD Section 1.13.1), applicability (PD Section 2.2), additionality thresholds (PD Section 2.5), the technologies and measures used (PD Section 1.8), baseline scenario and determination (PD Section 2.4), boundary determination (PD Section 2.3) and monitoring (PD Section 4.0), all as described, herein.

In addition to the above, there are two other eligibility criteria for inclusion of new instances of each project activity. The first is that it must be in the geographic area defined in PD Section 1.9.

The second is that the *ex ante* carbon estimates for each project area (i.e. instance) must be below the pertinent capacity limits. In this case, the CDM small scale AR methodology has a 16,000 tonne per year average limit on a project. This equates to 480,000 tonnes CO_2e for a 30-year project life. VCS places a one percent limit on each instance and requires instances that exceed this limit to be divided into clusters. To be eligible for this PD, each project area shall either be at or below the one percent level (4,800 tonnes CO_2e) or will meet the requirements for inclusion as a cluster.

For the subset of TIST project areas that are in this PD, all of the instances are less than the one percent threshold. This is documented in the "Proj Life Ex ante CO2e" column of the "Grove Summary" worksheet. The calculations are based on the *ex ante* estimates for each stratum in the "Strata" worksheet. The results were further modified to adjust for project areas that because of the area (ha) exceeded the *ex ante* estimates, but because of the stem density does not. All of the documentation is presented in a transparent and verifiable manner in the worksheets."[8]

For the sites visited, all eligibility criteria were reviewed and found to be in conformance. Eligibility is confirmed for the instances included in the grouped project PD.

3.1.9.2 Leakage Management for AFOLU Projects

As stated in the PD, "Leakage will be minimized as follows:

Fossil fuel emission: TIST owns no fossil fuel vehicles or equipment. Quantifiers and staff use public transport, walking and bicycles to go to various project areas. Use of palm computers and the Internet allows Quantifiers to upload their data at local Internet cafés or by using mobile phone technology, reducing travel and use of public transportation back to TIST offices.

Displacement of people: TIST member's plant trees, on their own lands. The Greenhouse Gas Agreement among the Small Group members and the Project Participant does not give the Project Participant any right to the Small Group's land or require that they leave. TIST does not displace any people.

Displacement of farming activities: TIST small hold farmers only plant trees to the extent that they can afford to, given their reliance on the remainder of their land for subsistence agriculture. The value of their crops far exceeds the GhG revenues that are available. In addition, where Small Groups have adopted improved farming practices, crop yields have improved.

Displacement of primary fuel supply: TIST tree growing activities do not cause leakage in the form of harvesting wood outside the project area. First, a large numbers of the residents in the subject districts already use wood as their primary source of fuel, an activity that has resulted in regional deforestation. Second, TIST best practices call for the planting and management of

[8] Clean Air Action Corporation, *The International Small Group and Tree Planting Program, India, VCS-001*, Version 01, 08 February 2013.

sustainable woodlots that allows for the continuing growth of carbon stocks and the use of deadfall, or tree wood, available through managed thinning. TIST will not cause leakage from this activity; it helps mitigate it."[9]

Leakage was evaluated by the validation team at every opportunity during the site visit and through interviews with project participants and local authorities. Leakage was determined to not be an issue and can be considered to be negligible.

3.1.9.3 Commercially Sensitive Information

The following documents were reviewed by ESI during the validation. These documents are considered by CAAC to be confidential and commercially sensitive and will be excluded from the publicly issued PD:

- "The International Small Group and Tree Planting Program, Carbon Credit Sale Agreement, Exhibit 03: TIST IN PD-VCS-Ex 03 TIST SG CO2 Contract IN Nila.pdf"
- "Agreement between TIST India and CAAC, Exhibit 04: TIST IN PD-VCS-Ex xx CAAC TIST India Contract 090309.pdf"
- "CAAC's proprietary financial model, Exhibit 07: TIST IN PD-VCS-Ex 07 Financial Plan.xls (referenced in Non-Permanence Risk Report)"

3.1.9.4 Further Information

There is no further additional information, which would have a bearing on the eligibility of the project relating to net GHG emissions reductions or removals, or quantification of net GHG emissions reductions or removals, that has not been included in the PD and its supporting documentation.

3.2 Application of Methodology

3.2.1 Title and Reference

The project is applying the CDM Methodology AR-AMS0001: "Simplified baseline and monitoring methodologies for small-scale A/R CDM project activities implemented on grasslands or croplands with limited displacement of pre-project activities" v06 (17 September 2010). The project is also using the following tools:

- "Procedures for the demonstration of land eligibility, AR-AMS0001, Appendix A."
- "Procedures for the assessment of additionality, AR-AMS0001, Appendix B."

3.2.2 Applicability

The validation confirmed the project met the following applicability conditions of AR-AMS0001:

"1. Project activities are implemented on grasslands or croplands."

Survey information and baseline field observations contained within PD Appendix 04: "Excel spreadsheet of data with referenced worksheets, TIST IN PD-VCS-001e App04

[9]Clean Air Action Corporation, *The International Small Group and Tree Planting Program, India, VCS-001*, Version 01, 08 February 2013.

Data 130208.xlsx" demonstrates that all instances can be classified as either croplands or grasslands. The validation team confirmed this during the site visit.

"2. Project activities are implemented on lands where the area of the cropland within the project boundary displaced due to the project activity is less than 50 per cent of the total project area."

Survey information and baseline field observations contained within PD Appendix 04 demonstrates that project activities will result in displacement of cropland on 0% of the total project area. The validation team confirmed this during the site visit.

"3. Project activities are implemented on lands where the number of displaced grazing animals is less than 50 per cent of the average grazing capacity of the project area."

Survey information and baseline field observations contained within PD Appendix 04 demonstrates that only 4.2% of the average grazing capacity was utilized prior to the project. Additionally, Appendix 04 indicates project activities will result in displacement of grazing activities on 0% of the total project area. During the site visit, the validation team confirmed that grazing is not significant in either the individual project areas or the project as a whole. As stated in the PD, "Some farmers do keep a few head of cattle, but the overall impact on grazing capacity is minor."

"4. Project activities are implemented on lands where ≤ 10% of the total surface project area is disturbed as result of soil preparation for planting."

This project does not employ site preparation practices. This was confirmed by the validation team during the site visit. The only project activity that results in soil disturbance is the act of planting itself. As recommended by TIST training curriculum, the minimum planting spacing should be two meters x two meters, or four square meters with a planting hole size of 0.3 meters in diameter, or 0.07 square meters. Based on these recommendations, the total area of soil disturbance equates to approximately 1.8% of the total project area (approximately 12 ha). As stated in the PD, "plowing does take place for intercropping, as part of the baseline activity and is not considered by the CDM AR Working Group to be part of the project activity."

Additionally, the validation confirmed that the project areas included in the PD are eligible for the A/R project activity based on the procedures contained in Appendix A of AR-AMS0001.

3.2.3 Project Boundary

The appropriate carbon pools and GHG emission sources (as specified by AR-AMS0001) are accounted for and included in the project boundary. As shown in the PD, the project and baseline GHG sources included in or excluded from the project boundary, and justification, are shown below:

Source		Gas	Included?	Justification/Explanation
Baseline	Baseline tree growth	CO_2	n/a	Not required by methodology, see PD Section 3.1
		CH_4	n/a	Not required by methodology

		N_2O	n/a	Not required by methodology
		Other	n/a	
Baseline	Baseline non-woody growth	CO_2	n/a	Not required by methodology, see PD Section 3.1
		CH_4	n/a	Not required by methodology
		N_2O	n/a	Not required by methodology
		Other	n/a	
Project	Trees	CO_2	Yes	Above and below ground biomass, see PD Section 3.2
		CH_4	n/a	Not required by methodology
		N_2O	n/a	Not required by methodology
		Other	n/a	

While no test or analysis of project GHG emission sources are required under AR-AMS0001, the following comments are provided in the PD:

- "**Fertilizers**: The policy of TIST is for the farmers to refrain from using chemical fertilizers and instead to rely on dung and plant material. Neither of these is the result of project activity and need not be considered. However, if considered, the nitrogen emissions from natural fertilizers are estimated to be less than 0.1% of the actual net greenhouse gas removal by sink and may be considered de minimis. See "Misc Calc" worksheet (in Appendix 04).

- **Nitrogen-fixing species**: Emissions from nitrogen fixing species are also insignificant. Though present, the nitrogen-fixing trees are a minor component of the overall tree inventory. Because any deadwood will be used for domestic fuel, the trees will not be left to rot or decay. The lands where the trees are being planted are degraded and likely have a nitrogen deficit.

- **Fossils Fuels**: There will be no burning of fossil fuels or biomass for site preparation, monitoring, tree harvesting, or wood transportation; nor does TIST involve any industrial processes, as all labor is manual. Thus, no other GHGs are expected to be emitted as a result of the implementation of the proposed project."[10]

  Thus, project emissions are considered insignificant and therefore neglected. Research and the findings of validation site visit support this information.

[10] Clean Air Action Corporation, *The International Small Group and Tree Planting Program, India, VCS-001*, Version 01, 08 February 2013.

3.2.4 Baseline Scenario

Based on validator research, review of project documents, and site visits conducted, the findings support the justification that the baseline land use scenario without the project will be continuation of pre-project land-use, including grasslands and croplands. The lands are owned by subsistence farmers and have undergone historic forest clearing to allow land uses that are more financially attractive than natural forest cover or long-term forestry (i.e. farming). Wood use, agriculture and increasing population have been key factors in historical deforestation (see PD Section 2.4, Literature Regarding Changes in Baseline Carbon Stocks). As stated in the PD, "there is little reason to believe that the project areas will revert to forest without intervention and there are no alternative uses of this land that can be reasonably expected."

3.2.5 Additionality

The validator confirmed that the project activity is additional based on the procedures contained in Appendix B of AR-AMS0001. The PD (Section 2.4.1) explains several barriers that have, and will continue to, inhibit reforestation on project areas and similar lands:

"Investment Barrier: Tree plantations require investment to obtain seedlings and, in the case of TIST farmers, to take land out of current revenue production activities, such as cropland, for long-term gain. Investment requires access to credit. However, due to their low income, the farmers participating in TIST have little opportunity for investment loans or capital.

Barriers due to Social Conditions, Lack of organization: Planting large plantations requires more than a single individual. The local communities lack the organizational structure to put together a volunteer effort to plant trees.

Laws and Regulations Requiring Tree Planting: The trees are planted on private lands and there are no laws or regulations that require the TIST farmers to plant them.

Common Practice: There are cases in the area where farmers have planted fast rotation trees without the carbon incentive. These farmers have no incentive to maintain the trees; indeed, their incentive is to harvest them as soon as possible to get the revenue."[11]

The project activities implemented by TIST will allow the project participants to overcome these barriers. In addition, implementation of the project activities that allow the barriers to be overcome would not be possible without revenues from carbon finance. TIST's operational budget for the project is funded through an investment from CAAC, which is contingent on returns of future GHG revenues. Moreover, incentive payment from CAAC to the project participants is also depended on carbon finance. Ultimately, the TIST project, or any other proposed tree planting project by subsistence farmers in India, without the implementation of a VCS ARR project is neither viable nor sustainable.

3.2.6 Quantification of GHG Emission Reductions and Removals

3.2.6.1 Quantification of Baseline Emission Reductions and Removals

The validator confirmed that baseline GHG removals by sinks have been estimated in accordance with AR-AMS0001. The procedure for quantifying baseline emission reductions or removals entails sampling woody biomass within the project boundary to estimate total carbon stocking and then estimating change over the crediting period following the procedure detailed in Section II. As per AR-AMS0001 Section II.6.a, the changes in carbon stocks shall be assumed to

[11] Ibid.

be zero in the absence of the project activity if changes in the carbon stocks in the living biomass of woody perennials and the belowground biomass of grasslands are expected not to exceed 10% of *ex ante* actual (with project) GHG removals by sinks.

As shown in the PD (see Section 3.1.3), the Project Proponent conducted an analysis showing that if the project areas were to continue as croplands and grassland under active human intervention, the carbon stock in the living biomass pool of woody perennials and below-ground biomass of grassland is not expected to exceed 10% of the *ex ante* actual GHG removals by sinks. The validator confirmed this analysis to be appropriate, and it adequately demonstrates that the project meets the requirements of AR-AMS0001 Section II.6.a that allow the net change in carbon stocks in the baseline be equal to zero. Thus, the baseline GHG removals for the project equal zero throughout the life of the project.

3.2.6.2 Quantification of Project Emission Reductions and Removals

The validator confirmed that project emission reductions have been estimated in accordance with the AR-AMS0001 Section III. Similar to the baseline, the procedure for quantifying project emission reductions or removals entails estimating the change in carbon stocking of woody biomass over the project crediting period. Because the baseline GHG removals for the project equal zero (see Section 3.2.6.1 above), project emissions are insignificant/neglected (see Section 3.2.3 above), and an *ex ante* leakage estimate is not required (see Section 3.2.6.3 below), project emission reductions are equal to the net GHG emission reductions. Project emission reductions for the 30-year project crediting period (totaling 331,410 tCO_2e) are presented in Section 3.1.4 above.

3.2.6.3 Quantification of Leakage

As per AR-AMS0001 Section IV, quantification of leakage is not required, or can be considered to be equal to zero, if:

- "Project participants demonstrate that the small-scale afforestation or reforestation project activity under the CDM does not result in the displacement of activities or people, or does not trigger activities outside the project boundary, that would be attributable to the small-scale afforestation or reforestation project activity under the CDM, such that an increase in greenhouse gas emissions by sources occurs"[12] and

- "Evidence can be provided that there is no displacement, or the displacement of pre-project activities will not cause deforestation attributable to the project activity, or the lands surrounding the project activity contain no significant biomass (i.e. degraded land with no or only a few trees or shrubs per hectare) and if evidence can be provided that these lands are likely to receive the shifted activities. Such evidence can be provided by scientific literature or by experts' judgment."[13]

As discussed in Section 3.1.9.2 above, the *The International Small Group and Tree Planting Program, India, VCS-001* does not cause fossil fuel emissions and does not result in the displacement of people. Further, as discussed in Section 3.2.3 above, project emissions that could cause leakage are considered insignificant and therefore neglected.

Finally, "TIST farmers are small hold farmers that rely on their land for subsistence agriculture. Since they need most of their land to grow foods and because the value of their crops and livestock far exceeds the GHG revenues that are available, displacement of farming activities is

[12] AR-AMS0001, Section IV. Leakage (ex-ante)
[13] AR-AMS0001, Section IV. Leakage (ex-ante).

limited. As part of the data collection for the baseline activity, Small Groups are asked, "Will any activities be displaced?" This question is asked in the context of the CDM Executive Board's interpretation that if moving to one's own existing farm plots "does not trigger activities outside the project boundary that would be attributed to the small-scale afforestation or reforestation project activity under the CDM, such that the increase in greenhouse gas emissions by a source occurs, a leakage estimation is not required." A survey of TIST members controlling the project areas indicated that activities were displaced on zero (0) hectares."[14]

These assertions were confirmed during the validation event. Thus, an *ex ante* leakage calculation is not necessary.

3.2.6.4 Summary of Net GHG Emission Reductions or Removals

The validator confirmed that net GHG emission reductions and removals have been estimated in accordance with AR-AMS0001 Section V. As described in Section 3.2.6.2 above, the net GHG emission reductions are equal to the calculated project emission reductions. The net GHG emission reductions for the 30-year project crediting period (totaling 331,410 tCO_2e) are presented in Section 3.1.4 above.

3.2.6.5 Uncertainties Associated with the Calculation of Emission Reductions or Removals

The validator confirmed there are no deductions associated with uncertainty. CAAC used appropriately conservative data, factors, assumptions, and equations in the estimation of net GHG removals by sinks.

3.2.7 Methodology Deviations

The validation confirmed that there are no deviations from the methodology. As noted in Section 3.1.9.1 above, several of the TIST project areas do not meet India's definition of a forest as required by the CDM. However, this requirement does not apply to VCS ARR projects.

3.2.8 Monitoring Plan

The following are the primary data and parameters that were monitored prior to, and made available and assessed during validation:

- Location of project area
- Boundary of project area
- Area of project area
- Ownership of project area
- Baseline trees
- Baseline tree circumference
- Baseline strata
- Project trees
- Number of trees
- DBH
- Total CO_2e

[14] Clean Air Action Corporation, *The International Small Group and Tree Planting Program, India, VCS-001*, Version 01, 08 February 2013.

The monitoring plan procedures and equipment were comprehensive and were found to be applicable to the parameters monitored. They were appropriately designed and provided reasonable assurance that the sequestration occurring from GHG sources, sinks, and reservoirs was (baseline) and will be (project scenario) accurately assessed. In accordance with the conditions of AR-AMS0001, project emissions were considered insignificant and therefore neglected.

The monitoring plan includes a Quality Assurance/Quality Control (QA/QC) plan to control for errors in measurement and data analysis. Application of the QA/QC plan will provide documentation and consistency in data archiving to permit efficient third-party auditing and evaluation against measurement and quantification standards over the life of monitoring.

CAAC is responsible for the registration, monitoring, measurement, and reporting of sequestration within the timeframe required by VCS-AFOLU-ARR requirements.

3.3 Environmental Impact

In addition to the sequestration of carbon, *The International Small Group and Tree Planting Program, India, VCS-001* creates several environmental co-benefits.

As mentioned in Section 3.1.8.3 above, a subset of TIST India was validated and registered under the CDM (see "TIST IN PD-VCS-Ex 21 CDM Approval 080204.pdf"). Part of the CDM approval process includes:

- "Environmental wellbeing: This should include a discussion of impact of the project activity on resource sustainability and resource degradation, if any, due to proposed activity; biodiversity friendliness; impact on human health; reduction of levels of pollution in general (see "TIST IN PD-VCS-Ex 22 IN CDM Approval Process.pdf").

CDM approval indicates India's Designated National Authority (Ministry of Environment and Forests, Government of India) believes the TIST program meets the necessary environmental threshold.

In addition, TIST India has been recognized by the Tamil Nadu Forest Department for its work, and was awarded "Best Planting in Private Lands" under Institutional Category for "The International Year of Forests 2011" (see "TIST IN PD-VCS-Ex 23 Award for Best Tree Planting.pdf"). TIST India farmers in Thiruvallur District received three additional awards for forestry outreach and awareness creation."[15]

Finally, a third party consulting firm (NAREDA Consultants of Nanyuki, Kenya), was contracted by CAAC to investigate the TIST program's environmental impact in Kenya (very similar operations to those in India). The report produced by NAREDA Consultants[16] outlines several existing positive impacts (e.g. increased tree cover, improved soil fertility, reduced erosion and sedimentation), potential positive impacts (e.g., enhanced biodiversity, heightened populations of native species, improved farm productivity), as well as existing and potential negative impacts (e.g., high expectations from farmers, inadequate information dissemination, farmer's dissatisfaction due to delayed payment) and their mitigation measures.

[15] Clean Air Action Corporation, *The International Small Group and Tree Planting Program, India, VCS-001*, Version 01, 08 February 2013.

[16] TIST KE PD-VCS-Spt 06 EIA Report NAREDAR 100506.doc. Available at TIST.org.

It is clear that the positive environmental impacts produced by the TIST program are much more numerous than the negative impacts. In their report, NAREDA concluded, "drawing from the positive and negative impacts as highlighted above, the former outweighs the latter by far, an observation clearly pinpointed by community, especially during the focused group discussions."

Validators and TIST program managers have reviewed the mitigation measures for addressing negative impacts and found that they are part of the existing program in both India and Kenya. As stated in the PD, "Most refer to constant outreach to the member to increase awareness. TIST provides regular training in the abovementioned activities through seminars, cluster meetings, Small Group meetings and the newsletter. In addition, TIST Quantifiers are trained in most aspects of the program and they try to visit each Small Group once a year. While their primary purpose is quantification, they can also provide answers to some questions while on site."[17]

This information was confirmed during the validation event through documentation review, interviews and site visits.

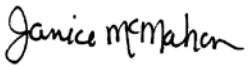
3.4 Comments by stakeholders

Comments from stakeholders were appropriately documented and were found to be overwhelmingly positive. The few exceptions included requests for higher payments on a per tree basis and more timely delivery of payments. Where concerns have been identified, CAAC has made tangible efforts to resolve any issues or concerns. The stakeholder input was confirmed through interviews with a sample of stakeholders conducted during validation.

[17] Clean Air Action Corporation, *The International Small Group and Tree Planting Program, India, VCS-001*, Version 01, 08 February 2013.

4 VALIDATION CONCLUSION

ESI confirms all validation activities including objectives, scope and criteria, level of assurance and the PD are complete and in adherence to the VCS Version 3 and all associated updates as documented in this report. ESI concludes without any qualifications or limiting conditions that the PD *The International Small Group and Tree Planting Program, India, VCS-001* (dated 08 February 2013) meets the requirements of VCS Version 3 and all associated updates.

Report Submitted to:	Voluntary Carbon Standard Association 1730 Rhode Island Ave. NW, Suite 803 Washington, D.C. 20036 Clean Air Action Corporation (CAAC) 7134 South Yale Avenue, Suite 310 Tulsa OK, USA 74136
Report Submitted by:	Environmental Services, Inc. Corporate Office 7220 Financial Way, Suite 100 Jacksonville, FL 32256
ESI Lead Validator Name and Signature:	 Shawn McMahon Lead Validator
ESI Division Regional Technical Manager Name and Signature:	 Janice McMahon Vice President and Forestry, Carbon and GHG Division Regional Technical Manager
Date:	07 March 2013

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APPENDIX A – NCR/CL/OFI SUMMARY

Summary - Project Validation/Verification - Non-Conformity Reports (NCR) / Clarification (CL) Requests

1. Clarification

VCS Criteria: 3.7.1 The project start date is the date on which the project began generating GHG emission reductions or removals (see VCS document AFOLU Requirements for further specification for AFOLU projects). The rules and requirements on project start date, as well as validation and verification dates, are set out in the sections below. For projects registered under both the VCS Program and an approved GHG program, further specification with respect to the validation deadline is set out in Section 3.11	
Evidence Used to Assess Conformance: Section 1.5 of PDD; TIST IN PD-VCS-001e App04 Data 121027.xlsx	
Clarification (CL): CL: Please ensure consistency between the project start date in PD text, tables, and Appendix 04	
Date issued:	4 January 2013
Project proponent response/actions and date: The project start date is 01-January-2004. The referenced documents have been corrected to reflect this date.	
Evidence used to close NCR: TIST IN PD-VCS-001a PD Text 130208.doc: Confirmed that PD Section 1.5 has been corrected to indicate the appropriate project start date (01 January 2004). This correlates with Appendix 04. This item has been satisfactorily addressed.	
Date closed:	26 February 2013

2. Non-Conformity Report

VCS Criteria: 3.8.3 Projects registered under other GHG programs are not eligible for VCU issuance beyond the end of the total project crediting period under those programs. For example, a CDM project with a seven year twice renewable project crediting period is not eligible for VCU issuance beyond the end of those 21 years. Where projects have been registered under more than one other GHG program, they are not eligible for VCU issuance after the date that is the earliest end date of all applicable project crediting periods.	
Evidence Used to Assess Conformance: Section 1.12.3 and Exhibit 05	
Non-conformity report (NCR): NCR: Exhibit 05 is BLANK. Please provide evidence of the withdrawal and that no credits were claimed previously.	
Date issued:	4 January 2013
Project proponent response/actions and date: Although the TIST India CDM project (#3000) was verified, it was never verified and no credits have been claimed. See TIST IN PD-VCS-001 NCR Round 1 Ap 130208.docx. The section "Requests for Issuance and related documentation" is blank indicating no verification or issuance. We have requested that the India CDM office withdraw the TIST CDM project 3000. See TIST IN PD-VCS-Ex 05 CDM Withdrawal.pdf	
Evidence used to close NCR: Http://cdm.unfccc.int/Projects/DB/TUEV-SUED1253867373.9/view: Confirmed through CDM Registry that Project was registered (and validated) but there was no request for issuance and no credits have been issued TIST IN PD-VCS-Ex 05 CDM Withdrawal.pdf: Document serves as sufficient evidence that TIST/CAAC has requested this project to be withdrawn from the CDM Registry. Project proponent is awaiting response from the CDM National Authority regarding withdrawal request. This item has been satisfactorily addressed.	

Date closed:	26 February 2013

3. Non-Conformity Report

VCS Criteria: 3.16.6 The monitoring report shall include all the data and information as set out in the monitoring requirements of the project description and the applied methodology. It shall be prepared using the VCS Monitoring Report Template and shall include the following:	
Evidence Used to Assess Conformance: NA	
Non-conformity report (NCR): NCR: Please provide a monitoring report meeting the requirements of the VCS Standard Section 3.16.6	
Date issued:	4 January 2013
Project proponent response/actions and date: To be determined The monitoring report and monitoring data sheet has been provided.	
Evidence used to close NCR: TIST IN PD-VCS-001h App07 Monitoring Rpt 130208.doc and TIST IN PD-VCS-001i App08 Monitoring Data 130208.xlsx: The monitoring report has been prepared using the VCS Monitoring Report Template and meets the requirements of the VCS Standard Section 3.16.6. Further, the monitoring data is accurate and in conformance with AR-AMS0001 and the VCS Standard. Upon review of the monitoring report, a discrepancy was found between the Monitoring report and the PD: Section 3.3.2 of monitoring report included calculation assumptions that were not included in the Monitoring Plan of the PD (the circumference of all one-year-old trees was set at zero). The project proponent was informed of this via email on 27 February 2013. The project proponent immediately revised Section 3.3.2 of the monitoring report to indicate that this assumption my change in subsequent monitoring reports if any one year old trees are over breast height. This item has been adequately addressed.	
Date closed:	28 February 2013

4. Clarification

VCS Criteria: 3.1.1 As set out in the VCS Standard, standards and factors used to derive GHG emissions data as well as any supporting data for establishing baseline scenarios and demonstrating additionality shall be publicly available and derived from a reputable and recognized source, such as IPCC 2006 Guidelines for National GHG Inventories or the IPCC Good Practice Guidance for Land Use, Land-Use Change and Forestry.	
Evidence Used to Assess Conformance: TIST IN PD 001 and supporting documents	
Clarification (CL): CL: Please indicate the source of the baseline increment growth factor of .5 cm per year as stated in the assumptions on page 31, section 3.1.3 Assumptions.	
Date issued:	4 January 2013
Project proponent response/actions and date: The following footnote has been added to the PD: “David Shoch, TerraCarbon LLC, personal communication, 2009.”	
Evidence used to close NCR: TIST IN PD-VCS-001a PD Text 130208.doc (Section 3.1.3): Confirmed the footnote was added to PD Section 3.1.3 as indicated. This reference is consistent with previously verified projects and Mr. Shoch is a reputable source. Item is addressed.	
Date closed:	26 February 2013

5. Clarification

VCS Criteria: 3.1.2 Where projects are located within a jurisdiction covered by a jurisdictional REDD+ program,

project proponents shall follow the requirements in this document and the requirements related to nested projects set out in VCS document Jurisdictional and Nested REDD+ Requirements.	
Evidence Used to Assess Conformance: This is not addressed in the PDD	
Clarification (CL): CL: Please indicate if India is implementing a jurisdictional REDD + program	
Date issued:	4 January 2013
Project proponent response/actions and date: India is not currently implementing a jurisdictional REDD+ program. At present there are only 3 pilot areas: Costa Rica, Chile and Acre State of Brazil. http://v-c-s.org/news-events/news/costa-rica-joins-growing-list-nations-pilot-jnr-program.	
Evidence used to close NCR: http://v-c-s.org/news-events/news/costa-rica-joins-growing-list-nations-pilot-jnr-program: Confirmed that India is not currently implementing a jurisdictional REDD+ program. VCS Jurisdictional and Nested REDD+ Requirements are not applicable to this project. Item is addressed.	
Date closed:	26 February 2013

6. Clarification

VCS Criteria: 4) Total size of the project area.	
Evidence Used to Assess Conformance: TIST IN PD 001 Section 1.1 and 1.9, also see TIST website	
Clarification (CL): CL: Please explain the discrepancies in small group and member numbers reported in PD and those found on the TIST website	
Date issued:	4 January 2013
Project proponent response/actions and date: The TIST website shows all TIST Small Groups and their activities in India. Only a subset of these were included in this PD.	
Evidence used to close NCR: TIST.org; communication with project managers; PD Section 4.3.2: Client and PD sufficiently described how the TIST Data System is dynamic and real time. Data collected in the field by quantifiers are transferred to TIST's main database server via the Internet and a synchronization process, where it is incorporated with historical project data. Small group and member numbers reported on the website will not match those in any given PD. The PD only contains a subset of small groups and their project areas. This item was addressed in satisfactory detail that allows this issue to be closed.	
Date closed:	26 February 2013

7. Non-Conformity Report

VCS Criteria: 3.4.2 The project proponent shall demonstrate control over the entire project area with proof of title with respect to one or more rights of use accorded to the project proponent as set out in the VCS Standard, noting the following:
Evidence Used to Assess Conformance: TIST IN PD 001 Section 1.12
Non-conformity report (NCR): NCR: Information Request: Please provide individual completed contract samples for the following small groups as demonstration of control over right to use project areas for carbon sequestration: Hari Mukeshkanna The Woods Ganga Amman

Date issued:	4 January 2013
Project proponent response/actions and date: Hari (2009IN134, Thani): http://www.tist.org/i2/blobs/bin_contract/1F/1F37.PDF Mukeshkanna (2008IN616, Vellor): http://www.tist.org/i2/blobs/bin_contract/1D/1DED.PDF The Woods (2009IN175, Gingee): http://www.tist.org/i2/blobs/bin_contract/1E/1E88.PDF Ganga (2009IN161, Chepet): http://www.tist.org/i2/blobs/bin_contract/1E/1E65.PDF Amman (2010IN97, Vellor): http://www.tist.org/i2/blobs/bin_contract/1D/1DF4.PDF	
Evidence used to close NCR: Completed contract samples were reviewed and found to be adequate and satisfactory. The documents grant the rights to all carbon associated with the project trees from Small Groups to TIST. TIST IN PD-VCS-Ex 04 CAAC TIST India Contract 090309.pdf grants the rights to all carbon associated with the project trees from TIST to CAAC. The documents adequately demonstrate control over right to use project areas for carbon sequestration. Item is addressed.	
Date closed:	26 February 2013

8. Non-Conformity Report

VCS Criteria: 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).	
Evidence Used to Assess Conformance: Appendix 05	
Non-conformity report (NCR): NCR: Please provide additional documentation (referred to in Risk Report) demonstrating that all areas of required experience is covered by at least one individual with at least 5 years' experience in the project area	
Date issued:	4 January 2013
Project proponent response/actions and date: The project proponent is TIST Tree Planting India Private Limited (TIST India) a subsidiary of Clean Air Action Corporation (CAAC). As such, TIST India is managed by CAAC. The management resumes are found in TIST IN PD-VCS-Ex 25 Mgt Resumes 110215.doc. The management experience is presented in TIST IN PD-VCS-Ex 26 Mgt Experience 110215.doc. Said documents are referenced in the risk report.	
Evidence used to close NCR: TIST IN PD-VCS-Ex 25 Mgt Resumes 110215.doc and TIST IN PD-VCS-Ex 26 Mgt Experience 110215.doc: Both documents confirm that the management team includes individuals with at least five years' experience in all skills necessary to successfully undertake the project activities. Item is addressed.	
Date closed:	26 February 2013

9. Clarification

VCS Criteria: Project cash flow breakeven point is less than 4 years from the current risk assessment	
Evidence Used to Assess Conformance: Appendix 05; TIST IN PD-VCS-Ex 07 Financial Plan.xls	
Clarification (CL): CL: Please indicate what is included in project management costs	
Date issued:	4 January 2013
Project proponent response/actions and date: These are costs not incurred in the host country and include the US staff, rent, international travel, hosting and maintaining the TIST website, programming and technical support for the monitoring system, purchase of the monitoring system equipment, phone, internet, legal, accounting, rent, cost of validation and verification (both internal and external), development to training curricula.	
Evidence used to close NCR: Response above and TIST IN PD-VCS-Ex 07 Financial Plan.xls: The items identified as project	

management cost appear to be reasonable. Further, their values, as shown in the TIST Financial Plan, also appear to be reasonable. Issue addressed.	
Date closed:	26 February 2013

10. Non-Conformity Report

VCS Criteria: Project has secured 80% or more of funding needed to cover the total cash out before the project reaches breakeven	
Evidence Used to Assess Conformance: Appendix 05; TIST IN PD-VCS-Ex 07 Financial Plan.xls	
Non-conformity report (NCR): NCR: Please provide evidence that the funding is secured as per VCS AFOLU Risk tool Section 2.2.2.4. Also, please document carbon credit pricing assumptions.	
Date issued:	4 January 2013
Project proponent response/actions and date: Note: The project financial plan is for the entire TIST program, all countries, all PDs and all project areas whether in a PD or not. Revenues are shared to operate the program. Funding: Confidential. (text removed for publication of PD) Attached is the Modification 4 from USAID indicating an aggregate award of $7.4 million under the current award (Mar 2009 to Mar 2014). Pricing Assumptions: See row 15, Finance worksheet.	
Evidence used to close NCR: USAID KE Award 2009-2014 Mod 04 120109.pdf: This document was reviewed and suffices as appropriate evidence showing that the project has secured 80% or more of funding needed to cover the total cash out before the project reaches breakeven. TIST IN PD-VCS-Ex 07 Financial Plan.xls: The TIST financial plan was revisited and it is confirmed that carbon credit pricing assumptions are documented in row 15 of the "Finance Worksheet." Further, they are conservative considering projected market conditions.	
Date closed:	26 February 2013

11. Non-Conformity Report

VCS Criteria: Mitigation: Project has available as callable financial resources at least 50% of total cash out before project reaches breakeven	
Evidence Used to Assess Conformance: Appendix 05	
Non-conformity report (NCR): NCR: Please identify callable financial resources and provide evidence of access to such resources as per VCS AFOLU Risk Tool Section 2.2.2.5.	
Date issued:	4 January 2013
Project proponent response/actions and date: Note: The project financial plan is for the entire TIST program, all countries, all PDs and all project areas whether in a PD or not. Revenues are shared to operate the program. Confidential: See NCR 10. The most recent $1,460,000 shown in 13.A (Funding History) exceeds the 50% level.	
Evidence used to close NCR: USAID KE Award 2009-2014 Mod 04 120109.pdf: This document was reviewed and suffices as appropriate evidence showing that the project has available as callable financial resources at least 50% of total cash out before project reaches breakeven as identified in TIST IN PD-VCS-Ex 07 Financial Plan.xls. The project has already reached breakeven (2009) and the funding award from USAID exhibits callable financial resources available to expand the TIST program. Item is addressed.	
Date closed:	26 February 2013

12. Non-Conformity Report

VCS Criteria: Ownership and resource access/use rights are held by same entity(s)	
Evidence Used to Assess Conformance: Appendix 05	
Non-conformity report (NCR): NCR: Information Request: Please provide individual deed/title samples for the following farms as demonstration of control over ownership and resource access/use: 2007IN456-Shamundisvari; 2007IN234-Santhi; 2010IN159-Vijayavarman; 2008IN482-Sambathkumar; 2010IN170- Dhandapani	
Date issued:	4 January 2013
Project proponent response/actions and date: As per VCS rules, this request can be fulfilled by demonstrating the "right to use." As with 10 previous PDs for TIST, the right to use is demonstrated by the Small Group GhG contract as per NCR number 78, above. The contracts are available at www.TIST.org. See Project Area, India, and the details as follows: 2007IN456-Shamundisvari (Tamil Nadu, Tindivanam, Ganabathi): http://www.tist.org/i2/blobs/bin_contract/05/05B4.PDF 2007IN234-Santhi (Tamil Nadu, Placepalayam, Prides Green): This group is no longer active with TIST and was inadvertently included with the PD. 2010IN159-Vijayavarman (Tamil Nadu, Chetpet, Kamarajar): http://www.tist.org/i2/blobs/bin_contract/1E/1E70.PDF 2008IN482-Sambathkumar (Tamil Nadu, Vellore, Rajuvganthi): This contract is available as "TIST IN PD-VCS-Ex 33 GhG Rajuvganthi 34.pdf" 2010IN170- Dhandapani (Tamil Nadu, Thirupathur, Ragavan): http://www.tist.org/i2/blobs/bin_contract/1E/1ED0.PDF	
Evidence used to close NCR: Completed contract samples were reviewed and found to be adequate and satisfactory. The documents adequately demonstrate control over right to use project areas for carbon sequestration and ownership. Further, it is confirmed that 2007IN234-Santhi has been removed from the PD, ex ante data (Appendix 04), the Monitoring Report, and ex post data (Appendix 08) Item is addressed.	
Date closed:	26 February 2013

13. Clarification

VCS Criteria: Fire Risk	
Evidence Used to Assess Conformance: Appendix 05	
Clarification (CL): CL: Please identify/provide the baseline data used to justify the likelihood category chosen for Risk of Fire	
Date issued:	4 January 2013
Project proponent response/actions and date: TIST collects baseline data going back to 1990. None indicate any issues relating to fire in the project areas, and consequently, we are conservatively using a likelihood category of "every 10 to less than 25 years. Reference has been made in the risk report to "Appendix 1, Land Sat 1990 imagery."	
Evidence used to close NCR: TIST IN PD-VCS-001f App05 Risk Analysis 130208.doc: Confirmed that reference to Appendix 01 (1990 Landsat Imagery) has been made as indicated. The Landsat imagery (dated 1990 and 2000) does not indicate that there have been issues related to fire and justifies the likelihood category chosen (every 10 to less than 25 years). Item is addressed.	
Date closed:	26 February 2013

14. Clarification

VCS Criteria: Pest/Disease Risk	
Evidence Used to Assess Conformance: Appendix 05	
Clarification (CL): CL: Please identify and include in Risk Report the source of pest/disease info for Tectona grandis. Also, please indicate where the references indicate documented pest/disease outbreaks in the last 10 years, or modify justification statement for selection of likelihood category.	
Date issued:	4 January 2013
Project proponent response/actions and date: Tectona grandis pests: Reference had been made to TIST IN PD-VCS-Ex 30 Mgt of Teak Stands.pdf. Outbreaks. The use of the "Less than every 10 years" bin in the risk tool is the most conservative. The new reference ("TIST IN PD-VCS-Ex 30 Mgt of Teak Stands.pdf) points out there can be outbreaks every year (page 2).	
Evidence used to close NCR: TIST IN PD-VCS-001f App05 Risk Analysis 130208.doc: Confirmed that reference to TIST IN PD-VCS-Ex 30 Mgt of Teak Stands.pdf has been made as indicated. It is confirmed that this is a reliable reference. Further, the reference indicates that "Teak defoliator outbreaks occur almost every year in India, over extensive areas." Lastly, the most conservative likelihood category was chosen for Pest/Disease Risk. Item is addressed.	
Date closed:	26 February 2013

15. Clarification

VCS Criteria: Geologic Risk	
Evidence Used to Assess Conformance: Appendix 05	
Clarification (CL): CL: Please identify and include in Risk Report the source of geologic risk information. Also, please include information supporting the claim that TIST trees are too far inland to be affected by tsunamis	
Date issued:	4 January 2013
Project proponent response/actions and date: Geologic Risk. Reference has been added to the risk report (TIST IN PD-VCS-Ex 32 TN Seismic Hazards.pdf) Tsunamis: The following has been added to the risk report. "The 2004 waves penetrated up to 900 meters from the coast,[18] but the nearest TIST project area is over 13 kilometers from the coast."[19]	
Evidence used to close NCR: TIST IN PD-VCS-001f App05 Risk Analysis 130208.doc: Confirmed that reference to TIST IN PD-VCS-Ex 30 Mgt of Teak Stands.pdf has been made as indicated. It is confirmed that this is a reliable reference that supports the information presented. Also confirmed the sentence regarding Tsunamis was added as indicated. This supplemental information adequately supports the claim that that TIST trees are too far inland to be affected by tsunamis.	

[18] TIST IN PD-VCS-Ex 31 Tsunami 2004.pdf

[19] TIST IN PD-VCS-001d App03 PA Plots 121109.kml

Item is addressed.	
Date closed:	26 February 2013

16. Non-Conformity Report

VCS Criteria: (a) Project activities are implemented on grasslands or croplands; (b) Project activities are implemented on lands where the area of the cropland within the project boundary displaced due to the project activity is less than 50 per cent of the total project area; (c) Project activities are implemented on lands where the number of displaced grazing animals is less than 50 per cent of the average grazing capacity1 of the project area; (d) Project activities are implemented on lands where ≤ 10% of the total surface project area is disturbed as result of soil preparation for planting.	
Evidence Used to Assess Conformance: PS Section 2.2; TIST IN PD-VCS-001e App04 Data 121027.xlsx	
Non-conformity report (NCR): NCR: Please provide evidence (Landsat Imagery and Surveys) supporting the statements and data indicating that the project meets the requirements of AR-AMS0001 Sections I.1.b and I.1.c.	
Date issued:	4 January 2013
Project proponent response/actions and date: The Landsat images are presented in the following appendices: TIST IN PD-VCS-001b App01 LSat1990 Map.jgw TIST IN PD-VCS-001b App01 LSat1990 Map.jpg TIST IN PD-VCS-001c App02 LSat2000 Map.jgw TIST IN PD-VCS-001c App02 LSat2000 Map.jpg There are no paper surveys. As noted in the PD, TIST uses an electronic monitoring system and the results of the surveys are uploaded to the TIST website. The results are displayed on the Grove Summary worksheet of Appendix 04.	
Evidence used to close NCR: TIST IN PD-VCS-001b App01 LSat1990 Map.jpg and TIST IN PD-VCS-001c App02 LSat2000 Map.jpg were reviewed and, together with the "Grove Summary Worksheet" of Appendix 04 and information collected during the site visit, adequately and appropriately demonstrate that the project meets the requirements of AR-AMS0001 Sections I.1.b and I.1.c. Item is addressed.	
Date closed:	26 February 2013

17. Clarification

VCS Criteria: (b) The project activity is additional, using the procedures for the assessment of additionality contained in Appendix B.	
Evidence Used to Assess Conformance: PD Section 2.4.1	
Clarification (CL): CL: Information Request: please provide the verifiers with the data used to construct Table 2.5.A	
Date issued:	4 January 2013
Project proponent response/actions and date: Table 2.5.A is based on community data supplied by Village Administrative Officers of TIST Program Area (Tamil Nadu State Government Officers) and indicates that most TIST members make less than US$1.00 per day. The survey data are presented in TIST IN PD-VCS-Ex 34 Income Survey.xls. An example of the low income certificates that are the source of the data in the survey is attached as "TIST IN PD-VCS-Ex 35 Tiruvannamalai Low Income Cert.pdf."	
Evidence used to close NCR: TIST IN PD-VCS-Ex 34 Income Survey.xls: Annual income data were provided (based on a sample of 312 groups) and correlates with TIST IN PD-VCS-001e App04 Data 130208.xlsx and PD Table 2.5A. TIST IN PD-VCS-Ex 35 Tiruvannamalai Low Income Cert.pdf. is a sample Village Administrator	

Officer Certificate that certifies the income level for the Vazhur Village, Tiruvannamalai District and correlates to the survey data. Further, interviews conducted during the site visit confirmed the difficulty in acquiring and maintaining seedlings in the absence of the TIST program. While the incomes may have changed in the last several years, observations and interviews indicate that the problem remains. This item has been adequately addressed.	
Date closed:	26 February 2013

18. Non-Conformity Report

VCS Criteria: 8. Baseline carbon stocks will be determined using Equation 1.	
Evidence Used to Assess Conformance: PD Section 3.1.1	
Non-conformity report (NCR): NCR: Please show the application of Equation 1 of AR-AMS0001 in PD	
Date issued:	4 January 2013
Project proponent response/actions and date: The following was added as a footnote: For application, see spreadsheet Appendix 04, worksheet "Table 3.3.B", columns D and E. The Area is pulled in from the Grove Summary worksheet and the carbon comes from "3.1 Baseline Trees" column D. Since the formula in column D is combined AG and BG biomass, the addition step was not necessary.	
Evidence used to close NCR: TIST IN PD-VCS-001a PD Text 130208.doc: Confirmed that the project proponent's response above was added as a footnote in Section 3.1.1 of the PD. Item is addressed.	
Date closed:	26 February 2013

19. Non-Conformity Report

VCS Criteria: 9. For above-ground biomass BA(t) is calculated per stratum I using Equation 2.	
Evidence Used to Assess Conformance: PD Section 3.1.1	
Non-conformity report (NCR): NCR: Please show the application of Equation 2 of AR-AMS0001 in PD	
Date issued:	4 January 2013
Project proponent response/actions and date: The following was added as a footnote: For application, see spreadsheet Appendix 04, worksheet "3.1 Baseline Trees," column E.	
Evidence used to close NCR: TIST IN PD-VCS-001a PD Text 130208.doc: Confirmed that the project proponent's response above was added as a footnote in Section 3.1.1 of the PD. Item is addressed.	
Date closed:	26 February 2013

20. Non-Conformity Report

VCS Criteria: If living biomass carbon pools are expected to be constant according to paragraph 6.a and 6.c, the average below-ground carbon stock is estimated as the below-ground carbon stock in grass and in biomass of woody perennials using Equation 6.	
Evidence Used to Assess Conformance: PD Section 3.1.1	
Non-conformity report (NCR): NCR: Please show the application of Equation 6 of AR-AMS0001 in PD	
Date issued:	4 January 2013
Project proponent response/actions and date: For application, see spreadsheet Appendix 04, worksheet "3.1 Baseline Trees," column D. It is the factor 1.48, where 0.48 is the belowground component. See seventh assumptions for PDD Table 3.1.A Baseline Strata.	

Evidence used to close NCR: TIST IN PD-VCS-001a PD Text 130208.doc: Confirmed that the project proponent's response above was added as a footnote in Section 3.1.1 of the PD. Item is addressed.	
Date closed:	26 February 2013

21. Clarification

VCS Criteria: 16. For the ex ante calculation of the project biomass, the project area should be stratified according to the project planting plan that is, at least by tree species (or groups of them if several tree species have similar growth habits), and age classes.	
Evidence Used to Assess Conformance: PD Section 3.2.2; TIST IN PD-VCS-001e App04 Data 121027.xlsx	
Clarification (CL): CL: Please indicate why the with project strata area total does not match the project area total	
Date issued:	4 January 2013
Project proponent response/actions and date: The spreadsheet data is correct but the table 3.2.A is incorrect. The error has been corrected in the final version of the PD.	
Evidence used to close NCR: PD, Ex Ante Data (Appendix 04), Monitoring Report, Ex Post Data (Appendix 08): Files were reviewed and ex ante and ex post strata area totals now correlate with the project area total. All area estimates now correlate between all project documents. Item is addressed.	
Date closed:	26 February 2013

22. Non-Conformity Report

VCS Criteria: 17. The carbon stocks for the project scenario at the starting date of the project activity4 (t=0) shall be the same as the baseline stocks of carbon at the starting date of the project (t=0).	
Evidence Used to Assess Conformance: PD Section 3.2.4; TIST IN PD-VCS-001e App04 Data 121027.xlsx	
Non-conformity report (NCR): NCR: As per AR-AMS0001 Section III.17, please include the estimated initial baseline carbon stocks as the carbon stocks for the project scenario at project start date	
Date issued:	4 January 2013
Project proponent response/actions and date: From PD "Table 3.1.B Change in Baseline Carbon Stocks" the baseline values for cropland and grassland have been added and the total shown. That number has been placed before the table.	
Evidence used to close NCR: TIST IN PD-VCS-001a PD Text 130208.doc: Confirmed that the total initial baseline carbon stocking was added to Section 3.1.3 of the PD, just before Table 3.1.B. As the net change in carbon stocks in the baseline are assumed to be zero, the total initial baseline carbon stocking does not affect the quantification of net GHG emission reductions and removals. This item has been adequately addressed.	
Date closed:	26 February 2013

23. Clarification

VCS Criteria: For all other years, the carbon stocks within the project boundary (N(t)) at time t shall be calculated using Equation 12.	
Evidence Used to Assess Conformance: PD Section 3.2.1; TIST IN PD-VCS-001e App04 Data 121027.xlsx - Ex Ante Strata Est Tab	
Clarification (CL): CL: Please clarify in the PD that Equation 3.2a provides estimates of total carbon stocks. Also, express the application of the equation in the PD.	
Date issued:	4 January 2013

Project proponent response/actions and date: Equation 3.2a: The text was changed to "The carbon stock within the project boundary is calculated using the following equation." The application of Equation 3.2a takes place in the worksheets "3.2 Ex-Ante Carbon Est" and "3.2 Ex-Ante Strata Est" of TIST IN PD-VCS-001e App04 Data 121109.xlsx. N_A and N_B are derived in 3.2 Ex-Ante Carbon Est (example see columns E, F and G). The area is applied in "3.2 Ex-Ante Strata Est". See footnote in PD.
Evidence used to close NCR: TIST IN PD-VCS-001a PD Text 130208.doc: Confirmed that the text was modified in PD Section 3.2.1 as indicated above. Also, the project proponent's response above regarding the application of Equation 3.2a was appropriately added as a footnote in Section 3.2.1 of the PD. Item is addressed.

Date closed:	26 February 2013

24. Clarification

VCS Criteria: 18. For above-ground biomass NA(t) is calculated per stratum i using Equation 13.
Evidence Used to Assess Conformance: PD Section 3.2.1; TIST IN PD-VCS-001e App04 Data 121027.xlsx - Ex Ante Carbon Est Tab
Clarification (CL): CL: Please express the application of Equation 3.2b in the PD

Date issued:	4 January 2013

Project proponent response/actions and date: See "3.2 Ex-Ante Carbon Est" worksheet, column E. See footnote in PD.
Evidence used to close NCR: TIST IN PD-VCS-001a PD Text 130208.doc: Confirmed that the project proponent's response above was added as a footnote in Section 3.2.1 of the PD. Item is addressed.

Date closed:	26 February 2013

25. Clarification

VCS Criteria: 19. If biomass tables or equations are available then these shall be used to estimate T(t)i per stratum i. If volume table or equations are used then Equation 14 is applied.
Evidence Used to Assess Conformance: PD Section 3.2.1; TIST IN PD-VCS-001e App04 Data 121027.xlsx - Ex Ante Carbon Est Tab
Clarification (CL): CL: Please express the application of Equation 3.2c in the PD

Date issued:	4 January 2013

Project proponent response/actions and date: See referenced Excel sheet, "3.2 Ex-Ante Carbon Est" worksheet. Different columns for different species groups. $T_{(t)i}$ = example column D $SV_{(t)i}$ = example column B *BEF* = example column C *WD* = example column D See footnote in PD.
Evidence used to close NCR: TIST IN PD-VCS-001a PD Text 130208.doc: Confirmed that the project proponent's response above regarding the application of Equation 3.2c was appropriately added as a footnote in Section 3.2.1 of the PD. Item is addressed.

Date closed:	26 February 2013

26. Clarification

VCS Criteria: 21. For below-ground biomass, NB(t) is calculated per stratum i using Equation 15.	
Evidence Used to Assess Conformance: PD Section 3.2.1; TIST IN PD-VCS-001e App04 Data 121027.xlsx - Ex Ante Carbon Est Tab	
Clarification (CL): CL: Please express the application of Equation 3.2d in the PD	
Date issued:	4 January 2013
Project proponent response/actions and date: See referenced Excel sheet, "3.2 Ex-Ante Carbon Est" worksheet. The factors are in different columns for different species groups. $T_{(t)}$ = example column F R = example column F 0.5 = example column E See footnote in PD.	
Evidence used to close NCR: TIST IN PD-VCS-001a PD Text 130208.doc: Confirmed that the project proponent's response above was added as a footnote in Section 3.2.1 of the PD. Item is addressed.	
Date closed:	26 February 2013

27. Clarification

VCS Criteria: 24. The removal component of actual net GHG removals by sinks can be calculated using Equation 17.	
Evidence Used to Assess Conformance: TIST IN PD-VCS-001e App04 Data 121027.xlsx - Ex Ante Strata Est Tab	
Clarification (CL): CL: Please indicate the use of AR-AMS0001 Equation 17 in PD and express its application	
Date issued:	4 January 2013
Project proponent response/actions and date: Equation 17 was added as Equation 3.2.e. To determine ΔC_{PROJ} see referenced Excel sheet. The value for N_t comes from column G of worksheet "3.2 Ex-Ante Carbon Est." It is transferred to the appropriate cell in the strata array set up in work sheet "3.2 Ex-Ante Strata Est." The values for similar age strata are summed in (example) column L. The values of the age strata of the species are summed in column AY. This is still N_t but now summed. N_t-1 is to symbolize time difference and is not needed because all this is done on an annual basis. (44/12) is multiplied in column AZ. Δt is done in column BA. The value for Δ CPROJ is cell BA35. See footnote in PD.	
Evidence used to close NCR: TIST IN PD-VCS-001a PD Text 130208.doc: Confirmed that Equation 17 of AR-AMS0001 was included in the PD in Section 3.2.1 as indicated. Also, the project proponent's response above regarding the application of this equation was appropriately added as a footnote. Item is addressed.	
Date closed:	26 February 2013

28. Clarification

VCS Criteria: 26. The ex ante actual net greenhouse gas removals by sinks in year t are calculated using Equation 18.
Evidence Used to Assess Conformance:

PD Section 3.2.5	
Clarification (CL): CL: Please include AR-AMS0001 Equation 18 in PD and express its application	
Date issued:	4 January 2013
Project proponent response/actions and date: As noted in PD Section 3.2.5, GHG_{PROJ} = zero. And therefore $C_{ACTUAL} = \Delta C_{PROJ}$ which is in cell BA35, "3.2 Ex-Ante Strata Est." See new section under Equation 3.2.f. and footnote.	
Evidence used to close NCR: TIST IN PD-VCS-001a PD Text 130208.doc: Confirmed that Equation 18 of AR-AMS0001 was included in the PD in Section 3.2.1 as indicated. Also, the project proponent's response above regarding the application of this equation was appropriately added as a footnote. Item is addressed.	
Date closed:	26 February 2013

29. Non-Conformity Report

VCS Criteria: 27. According to decision 6/CMP.1, annex, Appendix B, paragraph 9: "If project participants demonstrate that the small-scale afforestation or reforestation project activity under the CDM does not result in the displacement of activities or people, or does not trigger activities outside the project boundary, that would be attributable to the small-scale afforestation or reforestation project activity under the CDM, such that an increase in greenhouse gas emissions by sources occurs, a leakage estimation is not required. In all other cases leakage estimation is required."	
Evidence Used to Assess Conformance: PD Section 3.3	
Non-conformity report (NCR): NCR: Please provide evidence of surveys used to demonstrate the project meeting requirement IV.27 of AR-AMS0001. Note that the surveys are also requested under Item 16 above.	
Date issued:	4 January 2013
Project proponent response/actions and date: As noted, in response to NCR 16, the surveys were collected electronically and the data only exists in the TIST database. The results of the survey were provided in the Grove Summary worksheet of TIST UG PD-VCS-005e App04 Data 121112 Group.xlsx.	
Evidence used to close NCR: This issue was discussed in person with project developers during development of the NCRs. This NCR was issued but later addressed as indicated by the responses above.	
Date closed:	26 February 2013

30. Clarification

VCS Criteria: (i) For reforestation project activities, demonstrate that the land was not forest by demonstrating that the conditions outlined under (a) above also applied to the land on 31 December 1989.	
Evidence Used to Assess Conformance: PD Section 1.13.1; TIST IN PD-VCS-001e App04 Data 121027.xlsx	
Clarification (CL): CL: Please clarify what question landowners were asked in order to provide evidence of meeting the requirement of 1.b.i of this tool	
Date issued:	4 January 2013
Project proponent response/actions and date: The question asked are: Was this grove ever a forest? (Yes / Not to my knowledge) If "Yes" then: When were the trees cut down? (year) (free form numeric field) The answers in the Grove Summary sheets are derived as follows:	

If the answer to the first question is Not to my knowledge, a "No" is displayed. If the answer is yes, then the second question is asked. If the answer is before 1995 the project areas is eligible under the VCS ten year rule and a "No" is displayed. All other answers result in "Yes" and these project areas are deemed ineligible for the PD and not included.
Evidence used to close NCR: This answer is consistent with the interviews and discussions with project participants and project developers during the site visit. Item is addressed.

Date closed:	26 February 2013

31. Non-Conformity Report

VCS Criteria: 3.4.1 The project location shall be specified in the project description in terms of its project area. The spatial extent of the project shall be clearly specified to facilitate accurate monitoring, reporting and verification of GHG emission reductions and removals and to demonstrate that the project meets the eligibility criteria of the relevant project category. The project location description shall include the following information:
Evidence Used to Assess Conformance: Site visit, TIST IN PD-VCS-001e App04 Data 121027 121109.xlsx, GPX files
Non-conformity report (NCR): Please address the boundary issues identified in the document called "Field visit summary – TIST India 2012.xls" emailed from the verifier sent on 12/18/12.

Date issued:	4 January 2013

Project proponent response/actions and date: Response to the issues raised regarding the individual project areas listed in the Field Visit Summary are in TIST IN PD-VCS-001 NCR Round 1 Ap 130208.docx.
Evidence used to close NCR: See TIST IN PD-VCS-001 NCR Round 1 Ap 130208.docx. for comments related to individual project areas. In general, Re-tracked files were compared between initial submissions and subsequent submitted KML track files. The updated track files correlate with what was observed during the site visit. Updated area values were confirmed in both ex ante data (Appendix 04) and ex post data (Appendix 08).

Date closed:	26 February 2013

32. Non-Conformity Report

VCS Criteria: General quantification.
Evidence Used to Assess Conformance: Site visit, TIST IN PD-VCS-001e App04 Data 121027 121109.xlsx, GPX files.
Non-conformity report (NCR): Please address the apparent measurement errors identified in the document called "Field visit summary – TIST India 2012.xls" emailed from the verifier sent on 12/18/12.

Date issued:	January 4 2013

Project proponent response/actions and date: Response to the issues raised regarding the individual project areas listed in the Field Visit Summary are in TIST IN PD-VCS-001 NCR Round 1 Ap 130208.docx.
Evidence used to close NCR: See TIST IN PD-VCS-001 NCR Round 1 Ap 130208.docx. for comments related to individual project areas. In general, Re-tracked files were compared between initial submissions and subsequent submitted KML track files. The updated track files correlate with what was observed during the site visit. Updated area values were confirmed in both ex ante data (Appendix 04) and ex post data (Appendix 08). Re-quantified groves show higher correlation to the data collected by the verifier during field sampling.

Updated tree counts were confirmed in both ex ante data (Appendix 04) and ex post data (Appendix 08). Lastly, deleted groves/small groups were confirmed to be removed from both ex ante data (Appendix 04) and ex post data (Appendix 08).	
Date closed:	26 February 2013

APPENDIX B - GROVES SAMPLED DURING TIST INDIA VCS 001 VALIDATION

2009IN133Imachalraj
2009IN132Ravi Kumar1
2009IN135Rajantharvarma
2009IN135Rajantharvarma1
2009IN134Chanthirasekar
2008IN308Subranani
2011IN206Sechadri
2012IN29Sathiya Pama
2010IN97Panchasaram
2010IN97Velmurugan
2010IN97Selvasekar
2011IN9Aungamuthu
2011IN10Kumaresan
2008IN626Arunachalam
2008IN625Pachaiyappan
2008IN625Ealumali
2008IN584Dhinakaraha
2008IN584Poongavanam
2008IN584Veera
2008IN584Raj
2008IN542Seenu Teak
2008IN542Sankaran
2008IN542Ganapathi
2008IN540Kamaraj Home
2008IN540Loganathan
2009IN56Dhanam
2009IN56Arumugam
2009IN56Saravanan
2010IN153Sundaram
2010IN153Kamal
2012IN4Servaraj 2
2012IN04Selvaraj 3

APPENDIX C – DOCUMENTS REVIEWED

Documents Received 19 October 2012

- pdd_IN_vcs_01_121019_Velanthangal(Velant).kml
- pdd_IN_vcs_01_121019KML
- india test.an1
- PD Grove Status 121018 IN Shawn.xlsx
- PDD_IN_V.KML
- pdd_IN_vcs_01_121019_Anaikattu(Anaika).kml
- pdd_IN_vcs_01_121019_Arkot(Arkot).kml
- pdd_IN_vcs_01_121019_Arni(Arni).kml
- pdd_IN_vcs_01_121019_Arungaldurugam(Arunga).kml
- pdd_IN_vcs_01_121019_Chenal(Chenal).kml
- pdd_IN_vcs_01_121019_Chengam(Chenga).kml
- pdd_IN_vcs_01_121019_Chetpet(Chetpe).kml
- pdd_IN_vcs_01_121019_Gingee(Gingee).kml
- pdd_IN_vcs_01_121019_Gudiyatham(Gudiya).kml
- pdd_IN_vcs_01_121019_Kandhavarady(Kandha).kml
- pdd_IN_vcs_01_121019_Mambakkam(Mambak).kml
- pdd_IN_vcs_01_121019_Mel_Kodungalur(Melkod).kml
- pdd_IN_vcs_01_121019_Narmapallam(Narmap).kml
- pdd_IN_vcs_01_121019_Neepathurai(neepat).kml
- pdd_IN_vcs_01_121019_No_Node_Allocated_Tnadu(2EMPTY).kml
- pdd_IN_vcs_01_121019_Osur(Osur).kml
- pdd_IN_vcs_01_121019_Pallipattu(pallip).kml
- pdd_IN_vcs_01_121019_Placepalayam(Place).kml
- pdd_IN_vcs_01_121019_Poondi(Poondi).kml
- pdd_IN_vcs_01_121019_Sithanjeri(Sithan).kml
- pdd_IN_vcs_01_121019_Thellar(Thella).kml
- pdd_IN_vcs_01_121019_Thiruthani(thirut).kml
- pdd_IN_vcs_01_121019_Thiruvallur(Thiruv).kml
- pdd_IN_vcs_01_121019_Thurinjapuram(Thurin).kml
- pdd_IN_vcs_01_121019_TPathur(TPathu).kml
- pdd_IN_vcs_01_121019_Ulundurpettai(Ulundu).kml
- pdd_IN_vcs_01_121019_Vandhavasi(Vaasi).kml

Documents Received 4 November 2012

- TIST IN PD-VCS-001 PD Text Draft 121023.doc
- TIST IN PD-VCS-001 PD Text Draft 121023 with Stew comments.doc

Documents Received 5 November 2012

- TIST IN Initial Sample Selection 121105.xlsx
- TIST IN PD-VCS-Ex 24 KE EIA Report NAREDAR 100506.doc
- TIST IN PD-VCS-001d App03 PA Plots 121027.kml
- TIST IN PD-VCS-001e App04 Data 121027.xlsx
- TIST IN PD-VCS-001f App05 Risk Analysis 121105.doc
- TIST IN PD-VCS-Ex 01 ATree, Satya etal Dec 2005.doc
- TIST IN PD-VCS-Ex 02 Tamil Nadu Forest Dept .pdf
- TIST IN PD-VCS-Ex 03 TIST SG CO2 Contract IN Nila.pdf
- TIST IN PD-VCS-Ex 04 CAAC TIST India Contract 090309.pdf
- TIST IN PD-VCS-Ex 05 CDM Withdrawal BLANK.docx
- TIST IN PD-VCS-Ex 06 CDM Executive Board 35, Annex 18.pdf
- TIST IN PD-VCS-Ex 07 Financial Plan.xls
- TIST IN PD-VCS-Ex 08 CDM Methodology AR AMS0001 v6.pdf
- TIST IN PD-VCS-Ex 09 Fuelwood Studies, Devendra.pdf
- TIST IN PD-VCS-Ex 10 TNFD Policy Notes 2005.pdf
- TIST IN PD-VCS-Ex 11 Kanchipuram District Profile.pdf

- TIST IN PD-VCS-Ex 12 State of Environment,TN 2005.pdf
- TIST IN PD-VCS-Ex 13 Thiruvallur Environmental Profile.pdf
- TIST IN PD-VCS-Ex 14 IFAD Rural Poverty and Credit.pdf
- TIST IN PD-VCS-Ex 15 World Bank, Puthu Vazhvu Proj.pdf
- TIST IN PD-VCS-Ex 16 Programme for Small Farmers.pdf
- TIST IN PD-VCS-Ex 17 GPG Annex 3A 1 Tables.pdf
- TIST IN PD-VCS-Ex 18 GPG Table 4A-2 Allometric Eq.pdf
- TIST IN PD-VCS-Ex 19 Gmelina Allometric.pdf
- TIST IN PD-VCS-Ex 20 CDM EB-51, Annex 13.pdf
- TIST IN PD-VCS-Ex 21 CDM Approval 080204.pdf
- TIST IN PD-VCS-Ex 22 IN CDM Approval Process.pdf
- TIST IN PD-VCS-Ex 23 Award for Best Tree Planting.pdf

Documents Received 9 November 2012

- TIST IN PD-VCS-001e App04 Data 121027 121109.xlsx
- pdd_IN_vcs_001_121109GPX
  - pdd_IN_vcs_001_Velanthangal(Velant).gpx
  - pdd_IN_vcs_001_Anaikattu(Anaika).gpx
  - pdd_IN_vcs_001_Arkot(Arkot).gpx
  - pdd_IN_vcs_001_Arni(Arni).gpx
  - pdd_IN_vcs_001_Arungaldurugam(Arunga).gpx
  - pdd_IN_vcs_001_Chenal(Chenal).gpx
  - pdd_IN_vcs_001_Chengam(Chenga).gpx
  - pdd_IN_vcs_001_Chetpet(Chetpe).gpx
  - pdd_IN_vcs_001_Gingee(Gingee).gpx
  - pdd_IN_vcs_001_Gudiyatham(Gudiya).gpx
  - pdd_IN_vcs_001_Kandhavarady(Kandha).gpx
  - pdd_IN_vcs_001_Mambakkam(Mambak).gpx
  - pdd_IN_vcs_001_Mel_Kodungalur(Melkod).gpx
  - pdd_IN_vcs_001_Narmapallam(Narmap).gpx
  - pdd_IN_vcs_001_Neepathurai(neepat).gpx
  - pdd_IN_vcs_001_No_Node_Allocated_Tnadu(2EMPTY).gpx
  - pdd_IN_vcs_001_Osur(Osur).gpx
  - pdd_IN_vcs_001_Pallipattu(pallip).gp"
  - pdd_IN_vcs_001_Placepalayam(Place).gpx
  - pdd_IN_vcs_001_Sithanjeri(Sithan).gpx"pdd_IN_vcs_001_Thellar(Thella).gpx
  - pdd_IN_vcs_001_Thiruthani(thirut).gpx
  - pdd_IN_vcs_001_Thiruvallur(Thiruv).gpx
  - pdd_IN_vcs_001_Thurinjapuram(Thurin).gpx
  - pdd_IN_vcs_001_TPathur(TPathu).gpx
  - pdd_IN_vcs_001_Ulundurpettai(Ulundu).gpx
  - pdd_IN_vcs_001_Vandhavasi(Vaasi).gpx
- pdd_IN_vcs_001_121109KML
  - pdd_IN_vcs_001_Velanthangal(Velant).kml
  - pdd_IN_vcs_001_Anaikattu(Anaika).kml
  - pdd_IN_vcs_001_Arkot(Arkot).kml
  - pdd_IN_vcs_001_Arni(Arni).kml
  - pdd_IN_vcs_001_Arungaldurugam(Arunga).kml
  - pdd_IN_vcs_001_Chenal(Chenal).kml
  - pdd_IN_vcs_001_Chengam(Chenga).kml
  - pdd_IN_vcs_001_Chetpet(Chetpe).kml
  - pdd_IN_vcs_001_Gingee(Gingee).kml
  - pdd_IN_vcs_001_Gudiyatham(Gudiya).kml
  - pdd_IN_vcs_001_Kandhavarady(Kandha).kml
  - pdd_IN_vcs_001_Mambakkam(Mambak).kml
  - pdd_IN_vcs_001_Mel_Kodungalur(Melkod).kml
  - pdd_IN_vcs_001_Narmapallam(Narmap).kml

  - pdd_IN_vcs_001_Neepathurai(neepat).kml
  - pdd_IN_vcs_001_No_Node_Allocated_Tnadu(2EMPTY).kml
  - pdd_IN_vcs_001_Osur(Osur).km"
  - pdd_IN_vcs_001_Pallipattu(pallip).kml
  - pdd_IN_vcs_001_Placepalayam(Place).kml
  - pdd_IN_vcs_001_Sithanjeri(Sithan).kml
  - pdd_IN_vcs_001_Thellar(Thella).kml
  - pdd_IN_vcs_001_Thiruthani(thirut).kml
  - pdd_IN_vcs_001_Thiruvallur(Thiruv).kml
  - pdd_IN_vcs_001_Thurinjapuram(Thurin).kml
  - pdd_IN_vcs_001_TPathur(TPathu).kml
  - pdd_IN_vcs_001_Ulundurpettai(Ulundu).kml
  - pdd_IN_vcs_001_Vandhavasi(Vaasi).kml

Documents Received 14 February 2013

- TIST IN PD-VCS-001i App08 Monitoring Data 130208.xlsx
- TIST IN PD-VCS-001 NCR Round 1 130208.docx
- TIST IN PD-VCS-001 NCR Round 1 Ap 130208 .docx
- TIST IN PD-VCS-001a PD Text 130208.doc
- TIST IN PD-VCS-001b App01 LSat1990 Map.htm
- TIST IN PD-VCS-001b App01 LSat1990 Map.jpg
- TIST IN PD-VCS-001c App02 LSat2000 Map.htm
- TIST IN PD-VCS-001c App02 LSat2000 Map.jpg
- TIST IN PD-VCS-001d App03 PA Plots 130208.kml
- TIST IN PD-VCS-001e App04 Data 130208.xlsx
- TIST IN PD-VCS-001f App05 Risk Analysis 130208.doc
- TIST IN PD-VCS-001g App06 Geo Area of Groups.kml
- TIST IN PD-VCS-001h App07 Monitoring Rpt 130208.doc

Documents Received 26 February 2013

- TIST IN PD-VCS-Ex 35 Tiruvannamalai Low Income Cert.pdf
- TIST IN PD-VCS-Ex 05 CDM Withdrawal.pdf
- TIST IN PD-VCS-Ex 25 Mgt Resumes 110215.doc
- TIST IN PD-VCS-Ex 26 Mgt Experience 110215.doc
- TIST IN PD-VCS-Ex 27 Governance Indic.xlsx
- TIST IN PD-VCS-Ex 28 NDMA Cyclone Prone District.pdf
- TIST IN PD-VCS-Ex 30 Mgt of Teak Stands.pdf
- TIST IN PD-VCS-Ex 32 TN Seismic Hazards.pdf
- TIST IN PD-VCS-Ex 34 Income Survey.xls

Documents Received 27 February 2013

- TIST IN PD-VCS-001h App07 Monitoring Rpt 130227.doc