



**Verified Carbon
Standard**

VERIFICATION REPORT

GROUPED PROJECTS FOR VIET NAM COOKSTOVE PROGRAM



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Summary:

Brief description of the verification and the project:

Verification: Sustainability Investment Promotion and Development Joint Stock Company (SIPCO) has appointed EcoLance Private Limited (hereafter referred as EPL), to carry out the fourth (4th) verification of the VCS project “Grouped Projects for Viet Nam Cookstove Program” in Viet Nam, VCS ID: 2923 which falls under the sectoral scope 03. The verification is based on the desk review of the Monitoring report /01/, registered VCS PD /24/ and the corresponding validation report /24/, previous MR and corresponding verification reports /24/ supporting emission reduction calculation spread sheets /02/ and other relevant supporting documents made available to the verification team by the project proponent accompanied by onsite audit and also onsite interviews. This verification involves the period from **01-January-2024 to 30-June-2024** (including both the days).

Project: The project “Grouped Projects for Viet Nam Cookstove Program” is a grouped project which employs VCS methodology VMR0006 “Methodology for installation of High efficiency firewood cookstoves”, version 1.1 /B02/. The grouped project activity (“hereafter “proposed project activity”) involves distribution/installation of energy efficient Improved Cooking Stove (ICS) in the households (hereafter referred as “users”) of Viet Nam. The proposed project activity aims at reducing the wood fuel consumption of traditional stove users by distributing/installation of energy efficient Improved Cooking Stove (ICS) to households. The geographical boundaries of the project activity “Grouped Projects for Viet Nam Cookstove Program” covers the whole country of Viet Nam.

So, the grouped project activity reduces the use and demand for non-renewable biomass that would have been used to cook food in the absence of this project activity. This directly leads to reduced greenhouse gas emissions. The project start date is **07-Jan-2022** which is the distribution, installation & operational date of the first ICS in the grouped project.

The purpose and scope of verification:

Purpose: The purpose of the verification is to review the monitoring results and verify that monitoring methodology was implemented according to monitoring plan and monitoring data, used to confirm the reductions in anthropogenic emissions by sources is sufficient, definitive and presented in a concise and transparent manner. In particular, monitoring plan, monitoring report and the project’s compliance with relevant VCS, UNFCCC and host party criteria are verified in order to confirm that the project has been implemented in accordance with previously registered design and conservative assumptions, as documented.

The grouped project activity reduces the use and demand for non-renewable biomass that would have been used for cooking in the absence of this project activity. This directly leads to reduced greenhouse gas emissions.

The scope of the verification is:

- To verify the project implementation and operation with respect to the registered VCS PD
- To verify the implemented monitoring plan with the registered VCS PD and applied baseline and monitoring methodology.

- To verify that the actual monitoring systems and procedures are in compliance with the monitoring systems and procedures described in the monitoring plan.
- To evaluate the GHG emission reduction data and express a conclusion with a reasonable level of assurance about whether the reported GHG emission reduction data is free from material misstatement.
- To verify that reported GHG emission data is sufficiently supported by evidence.

The verification shall ensure that the reported emission reductions are complete and accurate in order to be certified.

The method and criteria used for verification.

(a) Desk review, involving:

- (i) Review of the data and information presented to verify their completeness;
- (ii) Review of the monitoring plan and monitoring methodology, paying particular attention to the frequency of measurements, the quality of metering equipment including calibration requirements, and the quality assurance and quality control procedures;
- (iii) Evaluation of data management and the quality assurance and quality control system in the context of their influence on the generation and reporting of emission reductions;

(b) Onsite assessment involving:

- (i) Assessment of the implementation and operation of the proposed VCS grouped project activity as per the registered VCS PD;
- (ii) Review of information flows for generating, aggregating and reporting the monitoring parameters;
- (iii) Interview with relevant personnel to confirm that the operational and data collection procedures are implemented in accordance with the monitoring plan in the registered VCS PD;
- (iv) A cross-check between information provided in the monitoring report and data from other sources such as inventories, purchase records, or similar data sources;
- (v) A check of the monitoring equipment including calibration performance and observations of monitoring practices against the requirements of the registered VCS PD and the selected methodology;
- (vi) Review of calculations and assumptions made in determining the GHG data and emission reductions;
- (vii) Identification of quality control and quality assurance procedures in place to prevent or identify and correct any errors or omissions in the reported monitoring parameters.

The number of findings raised during verification:

A risk-based approach has been followed to perform this verification. During the course of verification, a total of 07 findings were raised, which includes:

02 Corrective Action Requests (CARs); 05 Clarification Request (CL).

All the raised findings were successfully resolved by the PP.

Any uncertainties associated with the verification:

The VCS MR /01/, emissions reduction calculations /02/ along with the supporting documents provided are considered to be in line with all the VCS requirements /B01/. The verification team has detected no further uncertainties or quality restriction.

Summary of the verification conclusion:

In the opinion of EPL, the emission reductions reported for the “Grouped Projects for Viet Nam Cookstove Program” VCS 2923 in the monitoring report are fairly and correctly stated. EPL is therefore able to certify that the emission reductions from the “Grouped Projects for Viet Nam Cookstove Program” during the period **from 01-January-2024 to 30-June-2024**, is amount **1,556,062 tCO₂** equivalent.

Request for issuance of VCU shall be made by the project proponent to an approved VCS Program Registry based on the requirements set out under the most recent version of the VCS Program Guidelines clause on VCS Registration. The verification of reported emission reductions is based on the information made available to EPL and the engagement conditions detailed in this report.

CONTENTS

1	INTRODUCTION	8
1.1	Objective	8
1.2	Scope and Criteria	8
1.3	Level of Assurance.....	9
1.4	Summary Description of the Project	10
2	VERIFICATION PROCESS	11
2.1	Method and Criteria.....	11
2.2	Document Review	12
2.3	Interviews	13
2.4	Site Visits	16
2.5	Resolution of Findings	17
2.6	Eligibility for Validation Activities	17
3	VALIDATION FINDINGS	17
3.1	Methodology Deviations.....	17
3.2	Project Description Deviations.....	19
3.3	New Project Activity Instances in Grouped Projects.....	23
3.4	Baseline Reassessment	23
4	VERIFICATION FINDINGS.....	24
4.1	Project Details	24
4.2	Safeguards and Stakeholder Engagement	28
4.3	Accuracy of Reduction and Removal Calculations.....	37
4.4	Quality of Evidence to Determine Reductions and Removals.....	61
4.5	Non-Permanence Risk Analysis.....	61
5	VERIFICATION OPINION.....	62
5.1	Verification Summary	62
5.2	Verification Conclusion	62
5.3	Ex-ante vs Ex-post ERR Comparison	63
	APPENDIX 1: COMMERCIALLY SENSITIVE INFORMATION	64
	APPENDIX 2: ABBREVIATIONS.....	65

APPENDIX 3: REFERENCE DOCUMENTS.....	66
APPENDIX 4: CERTIFICATES OF COMPETENCE	69
APPENDIX 5: FINDING LOGS.....	72

1 INTRODUCTION

1.1 Objective

Sustainability Investment Promotion and Development Joint Stock Company has appointed the VVB, EcoLance Private Limited (EPL) to perform a verification of the VCS Grouped Project “Grouped Projects for Viet Nam Cookstove Program”. This report summarizes the findings of verification of the project, performed on the basis of the VCS Program Guide (v4.4, updated 29-August-2023) /B01-b/, VCS Standard (v4.7, updated 16-April-2024) /B01-a/, Program Definitions (v4.5, updated 16-April-2024) /B01-e/, Registration & Issuance Process (v4.5, updated 16-April-2024) /B01-d/, VCS Validation and Verification Manual (v 3.2, dated 19-October-2016) /B01-c/. Verification is required for all VCS project activities intending to register a grouped project under the VCS program. This report contains the findings and resolutions from the verification of the grouped project. The purpose of a verification is to have a thorough and independent assessment of the proposed grouped project against the applicable VCS requirements, in particular, the project's baseline, monitoring plan and the project's compliance with relevant VCS and host Party criteria. These are verified in order to confirm that the monitoring report, as documented, is sound and reasonable and meets the identified criteria. Verification is a requirement for all VCS projects and is seen as necessary to provide assurance to stakeholders of the quality of the project and its intended generation of emission reductions, VCU's. The monitoring system is implemented and fully functional to generate emission reductions without any double counting, and the data reported are accurate, complete, consistent, transparent and free of material error or omission by checking the monitoring records and the emissions reductions calculation.

1.2 Scope and Criteria

The verification of this project is based on the registered VCS Project Description /24/, the Monitoring Report of this monitoring period /01/, emission reduction calculation spreadsheet /02/, supporting documents made available to the verifier and information collected through performing interviews and during the on-site assessment. Furthermore, publicly available information was considered as far as available and required.

EPL has employed a risk-based approach in the verification, focusing on the identification of significant risks and reliability of project monitoring and generation of emission reductions.

The verification is carried out on the basis of the following requirements (latest available on VCS website at the time of verification), applicable for this project activity:

- VCS Program Guide version 4.4, updated 29-August-2023
- VCS Standard version 4.7, updated 16-April-2024
- Program Definitions version 4.5, updated 16-April-2024
- Registration & Issuance Process version 4.5 updated 16-April-2024

- VCS validation and verification manual version 3.2, dated 19-October-2016
- VCS Methodology: VMR0006 Methodology for installation of High efficiency firewood cookstoves, version 1.1 /B02/
- Other relevant rules, including the host country legislation.

The scope of this verification, by independent checking of objective evidence, is as follows:

- To verify that the project is implemented as described in the project description.
- To assess the project's compliance with other relevant rules including the host country legislation.
- To assess the implementation of the monitoring plan content as mentioned in the registered VCS-PD /24/.
- To confirm that the monitoring system is implemented and fully functional to generate voluntary emission reductions VCUs without any double counting.
- To establish that the data reported are accurate, complete, consistent, transparent, and free of material error or omission by checking the monitoring records and the emissions reduction calculation /02/.
- To evaluate the GHG emissions reduction data and express a conclusion with a reasonable level of assurance about whether the reported GHG emissions reduction data is free from material misstatement.
- To verify that reported GHG emissions data is sufficiently supported by evidence.
- The verification shall ensure that the reported emission reductions are complete and accurate to be certified.

The method and criteria used for verification consisted of the following phases:

- 1) Completeness check and desk review
- 2) On Site Visit
- 3) Resolution of outstanding issues and issuance of final verification report and applicable VCS Validation and Verification Deeds of Representation.

EPL conducts all its work under strict rules to safeguard impartiality and ensure the independence of the verification team. The verification does not provide any consulting or recommendations for the client. However, stated requests for clarifications and/or corrective actions may provide input for improvement of the monitoring activities.

1.3 Level of Assurance

The verification report is based on the Monitoring report /01/, registered VCS PD and corresponding validation report /24/, supporting documents /03/-/28/ made available to the verifier and information collected through performing interviews.

The verification has been planned and organised to achieve a:

- ☒ Reasonable level of assurance

☐ Limited level of assurance

1.4 Summary Description of the Project

The project “Grouped Projects for Viet Nam Cookstove Program” is a grouped project which employs of the CDM methodology; VMR0006 “Methodology for installation of High efficiency firewood cookstoves”, version 1.1 /B02/. The grouped project involves distribution of fuel-efficient improved cook stoves (ICS) in Viet Nam. The proposed project activity aims at reducing the wood fuel consumption of traditional stove users by distributing/installation of energy efficient Improved Cooking Stove (ICS) to households. The geographical boundary is the whole country of Viet Nam. ICSs are distributed free of cost to users as per registered VCS PD /23/ and also verified during onsite interviews and review of the beneficiary agreement /19/.

The grouped project activity reduces the use and demand for non-renewable biomass that would have been used to cook food in the absence of this project activity. This directly leads to reduced greenhouse gas emissions.

As per the registered VCS PD /23/, the Project activity promotes the dissemination of improved cookstove model Ecozen and TK90, which are manufactured by Viet Charcoal Production Company Limited. The lifespan of the Ecozen and TK 90 cookstove model is 10 years.

As per the registered VCS PD /23/, and interviews with the representative of project proponent, each ICS under project is uniquely identifiable /10/ and would be assured that it is not part of any other VCS project. Each project activity instance is uniquely identifiable /10/ by unique system to avoid the double counting. The unique numbering system to be used in this grouped project is “ICS – YYYY – XXXXX” (where, ICS = Grouped project for Improved cookstove / YYYY = Project Instance number starting from 001 / XXXXX = continuous number of User starting from 00001).

The measures to avoid double counting is deemed acceptable to the verification team. Project proponent has also submitted declaration /15/ and /16/ to confirm the following:

- That the project is not creating any other form of environmental credit under any specific program.
- That the project has not or shall not claim carbon credits on any other scheme after Registration of the project under VCS.

The project proponent for the project activity is Sustainability Investment Promotion and Development Joint Stock Company, owns the rights to VCU's under VCS /05/.

The scale of the “Grouped Projects for Viet Nam Cookstove Program” is under project category and the total estimated volume of GHG emission reductions from project activity 1 is 60,426 tCO₂/year as per the registered VCS PD /23/ and its corresponding validation report /23/.

A total of 850,000 ICS¹ units was distributed under 94 project instances within the grouped project until the end of this monitoring period with proportion of operation of 0.9629 as result of monitoring survey in this monitoring period. All 94 project instances had been included in the grouped project in previous monitoring periods. The implementation timeline for each project instance was specified in Section 3.1 of the PSF. The verification team conducted a thorough review of all details, including the inclusion date, and cross-checked the information by examining the registered VCS PD /23/, previous VCS MR, and corresponding VRs /24/. This process confirmed the current implementation status of the entire grouped project as documented in the MR /1/.

The net emission reductions or removals for 94 project instances is 1,556,062 tCO₂e for this fourth monitoring period (from 01-January-2024 to 30-June-2024).

The crediting period for the project activity is fixed type (10 years 00 months) is the life span of the ICS model Ecozen and TK90. The start date of the crediting period is 07-Jan-2022 and the end date is 06-Jan-2032

2 VERIFICATION PROCESS

2.1 Method and Criteria

The verification consists of the following three phases:

1. Completeness check and desk review of the validation report, monitoring plan, monitoring report, monitoring methodology, VCS PD, applicable tools in particular attention to the frequency of measurements, quality of metering equipment including calibration requirements, QA/QC procedures and other relevant documents.
2. Onsite interviews (including follow-up interviews with project stakeholders, when deemed necessary). The onsite interviews include the following:
 - An assignment of implementation and operation of project activity with respect to validated VCS PD
 - Review of information flows for generating, aggregating, and reporting the monitoring parameters.
 - Interview with relevant personals to determine whether the operational and data collection procedures are implemented and in accordance with the monitoring plan of the validated VCS PD,
 - Cross check of information and data provided in the monitoring report with purchase records or

¹ Please also noted that during the last monitoring survey, ICS -N015-06544 has been identified as non-operational and thus removed from the database. So the population in the database was 849,999 ICS.

similar data sources.

- Review of assumptions made in calculating the emission reductions (if any).
- Implementation of QA/QC procedure in-line with the VCS PD and methodology requirements.

3. Resolution of outstanding issues and the issuance of the final Verification report and as applicable the VCS Verification Deed of Representation

Sustainability Investment Promotion and Development Joint Stock Company has appointed the VVB, EcoLance Private Limited to carry out the verification of the project “Grouped Projects for Viet Nam Cookstove Program”, with regards to the relevant requirements of VCS Standard Version 4.7 (updated 16-April-2024) /B01-a/.

The verification through the EPL includes a thorough and independent assessment of the proposed grouped project against the applicable VCS requirements, the project's used methodology VMR0006, version 1.1, sampling and survey standard v09.0, Implementation of project status, Data and Parameters monitored, monitoring plan and the project's compliance with relevant VCS and host party criteria. The verification involves assessment of the project and to confirm that the project meets the applicability conditions of the selected methodology, VMR0006 “Methodology for installation of High efficiency firewood cookstoves”, version 1.1 /B02/ and assess the claims and compliance made in the MR /01/ without limitation on the information provided by the project participants.

The verification team of the EPL has applied a sampling approach, acceptance sampling for the onsite interviews as part of verification in accordance with the paragraph 26 of the Standard: Sampling and surveys for CDM project activities and programmes of activities, (Version 09.0). In accordance with the paragraph 28 of the sampling standard /B03a/, acceptance sampling has been chosen by the verification team and accordingly steps listed in paragraph 29 and 39 of the sampling standards shall be followed.

Verification team has opted for AQL of 0.5 % and UQL of 20 %; producer risk of 10 % and consumer risk of 10 % in determining the VVB's sample size. Accordingly, the sample size to be interviewed for the above-mentioned parameters are 11, with acceptance number (c) as 0. The overall verification was conducted using EPL's internal procedures.

2.2 Document Review

During the document review, EPL has applied standard auditing techniques including but not limited to document reviews and onsite interviews, review of the applicable/applied methodology and its underlying formulae and calculations to assess the quality of information provided.

This report contains the findings and resolutions from the verification and a verification opinion on the proposed grouped project (new inclusion) thus confirming the project design as document is sound and reasonable and meets the stated requirements and identified criteria.

The VCS monitoring report /01/, emission reduction calculation spread sheet “VCS_ER_ID2923_01JAN2024_30JUN2024” /02/, sampling size calculation, survey summary, N_{y,l,j}

(Number of commissioned project devices of type I and batch j operating during year y), and supporting documents related to the project monitoring report for this verification and net emission reduction/removal were reviewed as per VCS standard version 4.7 /B01-a/ requirements. The desk review included:

- A review of the data and information presented to verify completeness and consistency in accordance with VCS Standard version 4.7 requirements.
- A review of the Monitoring report /01/, data monitored and monitoring methodology, paying particular attention to the applicability conditions of the methodology, sampling plan and size, survey summary and net emission reduction for the considered monitoring period by the distribution of ICS in Viet Nam.
- A review of the monitoring plan and the project's compliance with relevant VCS criteria.
- An evaluation of data management and the QA/QC system in the context of their influence on the generation and reporting of ERs.

The monitoring report /01/ was initially reviewed, and EPL requested the PP to present the supporting information and documents /03/-/28/. The documents were reviewed by EPL. Through the process of the verification, the revised monitoring report and the supporting documents were evaluated to confirm the actions taken by the PP to the CARs and CLs issued by the verification team.

The list of documents referred during the course of this verification has been provided in Appendix 03.

2.3 Interviews

The table below describes the on-site interview process and further identifies personnel, including their roles, who were interviewed and/or provided information additional to that provided in the monitoring report /01/ and any supporting documents.

No	Interviewee			Date	Subject	Team member
	Last name	First name	Affiliation			
1.	Hoang	Anh Dung	SIPCO (PP)	From 30-July to 03-August-2024	Project implementation and operation, monitoring procedure, data and information flow, Roles and responsibility, Quality Assurance – Management and operating system, Distribution records, Survey records, Training Qualification	Nguyen H.N. Trang & Eswar Murty
2.	Ngo	Thị Viet Anh	SIPCO (PP)	From 30-July to 03-August-2024		

3.	Nguyen	Doan Thinh	SIPCO (PP)	From 30-July to 03-August-2024	and Training, ER calculation and completeness of monitoring report, compliance of monitoring plan with monitoring methodology and latest VCS PD.	
4.	Thao	Thi Ca	End-user	From 30-July to 03-August-2024	Cross-check of a sample of project participants' samples	Nguyen H.N. Trang & Eswar Murty
5.	Cheng	Su Min	End-user	From 30-July to 03-August-2024	(Questionnaire, operation surveys/interviews) for quantity of woody biomass consumption during baseline survey, that would have been used in the household in the absence of the project activity to generate useful thermal energy equivalent to that provided by the project devices).	
6.	Giang	A Phong	End-user	From 30-July to 03-August-2024	The value of the woody consumption has been cross checked by the acceptance sampling of the survey done by the PP.	
7.	Thao	Thi Nu	End-user	From 30-July to 03-August-2024	Discussion with the end users on the additionality part specifically end users were questioned about the cost of project stove paid by them (if any).	
8.	Nguyen	Thi Sen	End-user	From 30-July to 03-August-2024		
9.	Le	Thi Tuat	End-user	From 30-July to 03-August-2024		
10.	Tran	Thi Ha	End-user	From 30-July to 03-August-2024		

11.	Ung	Thi Vo	End-user	From 30-July to 03-August-2024		
12.	Nguyen	Thi Hoa	End-user	From 30-July to 03-August-2024		
13.	Tran	Thi Truyen	End-user	From 30-July to 03-August-2024		
14.	Ho	Thi Hoi	End-user	From 30-July to 03-August-2024		
15.	Nguyen	Thi Lien	Vice chairwoman of Women Union of Quang Nam Province	From 30-July to 03-August-2024	Project Design, Monitoring Plan, Local Stakeholder Consultation and Baseline Scenario	Nguyen H.N. Trang Nguyen
16.	Nguyen	Thi Thanh Hoa	Women Union of Quang Nam Province	From 30-July to 03-August-2024		Nguyen H.N. Trang Nguyen
17.	Tran	Thi Thuy Ha	Women Union of Quang Nam Province	From 30-July to 03-August-2024		Nguyen H.N. Trang Nguyen

18.	Ngo	Thi Thanh Huyen	Women Union of Quang Nam Province	From 30-July to 03-August-2024		Nguyen H.N. Trang Nguyen
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2.4 Site Visits

A site visit to the project activity was undertaken by team leader from 30-July to 03-August-2024 to assess the implementation and operation of the project activity and to review evidence, and interview key personnel to confirm evidence associated with the data generation, aggregation, and calculation and reporting of the monitoring parameters.

The site visit addressed:

- An assessment of the project implementation and operation as per the registered VCS PD /24/ (including physical inspection to confirm physical existence and operation of project components).
- Review of information flows for generating, aggregating, and reporting the monitoring parameters/data.
- Interviews with relevant personnel to confirm that the operational and data collection procedures are implemented in accordance with the monitoring plan in the monitoring report /01/.

In line with paragraph 26 of the Sampling Standard, the verification team has applied acceptance sampling approach through on-site interviews on the sampling survey as part of verification. The project participant had applied sampling approach. A representative Monitoring survey /06/ /07/ was conducted by the representatives of Project participant. The verification team has chosen acceptance sampling in accordance with paragraph 28 of the sampling standard /B03a/.

Applying steps listed in paragraph 29 - 38 of the sampling standard, version 09 /B03a/, a sample size of 11 households was chosen with acceptance number (c) as 0. A sample size of 11 was determined, based on an AQL of 0.5% and UQL of 20%, producer risk 10% and consumer risk 10%. Acceptance number thus determined for the sample is 0.

The information provided in the sampling survey data /06//07/, has been cross checked during the onsite interviews conducted. As a part of acceptance sampling, the verification team could confirm the User habit survey data with no discrepant records. Thus, PP's set of records has been accepted in line with § 33 of the sampling standard, version 09 /B03a/.

The verification team carried out site interviews with representatives of PP in order to assess the information included in the project documentation and to gain additional information regarding the compliance of the project with the relevant criteria applicable for the VCS.

2.5 Resolution of Findings

This section summarizes the findings from the verification of the project activity. In this section the findings from the document review, assessments and onsite interviews are provided.

Material discrepancies identified in the course of the verification are addressed either as CARs, CLs or FARs.

Corrective action requests (CAR) are issued, where:

- i. Mistakes have been made with a direct influence on project results requiring adjustments of the VCU monitoring report.
- ii. Applicable methodological specific requirements have not been met.

A Clarification request (CL) may be used where additional information is needed to fully clarify an issue or where the information is not transparent enough to establish whether a requirement is met.

The verification team identified 02 CARs and 05 CL. All CARs and CLs raised by EPL during this verification have been resolved. If this was not completed, the ERs cannot be certified and recommended for issuance to the VCS Registry.

2.5.1 Forward Action Requests

Forward Action Request (FAR) is to be raised when the monitoring and reporting require attention and/or adjustment for the next verification period. FARs does not relate to VCS requirements for issuance of ERs achieved during subject monitoring.

No Forward action request has been raised during validation which are applicable for the current monitoring period.

2.6 Eligibility for Validation Activities

Validation/Verification body (VVB), EcoLance Private Limited holds accreditation for verification for the relevant sectoral scope 03 and is eligible for validation/verification for the project activity.

Please refer to the link below.

<https://verra.org/validation-verification/ecolance-private-limited/>

3 VALIDATION FINDINGS

3.1 Methodology Deviations

During the 2nd verification period, there was a methodology deviation described as below:

The VCS methodology of VMR0006 “Methodology for installation of High efficiency firewood cookstoves”, version 1.1 /B02/ and its related tools are applied as they are without any deviation from methodology, except a change in the quantification of the f_{NRB} .

The value of f_{NRB} was calculated by third Party C4Ecosolutions using TOOL30, version 4.0 as verified by reviewing the f_{NRB} report of C4 EcoSolutions (Pty) Ltd. /12/. Please refer to section 3.2 for the full assessment of the NRB calculation. The f_{NRB} report of C4EcoSolutions & the f_{NRB} calculation spreadsheet has been submitted to VERRA in the 2nd crediting verification.

Although the value of f_{NRB} was calculated by third Party C4Ecosolutions using TOOL30, version 4.0 are completely aligned with VMR0006 “Methodology for installation of High efficiency firewood cookstoves”, version 1.1 & AMS-II.G: “Energy Efficiency Measures in Thermal Applications of Non-Renewable Biomass” (version 12.0)/B02/ and its related tools.

The PP still wants to have a more conservative approach, therefore, the uncertainty deduction for f_{nrB} of 0.26 is applied as per the latest version of methodology VMR 0006 “Energy efficiency and fuel switch measures in thermal applications”, version 1.2.

The verification team of EPL assessed the application of methodology VMR 006 “Energy efficiency and fuel switch measures in thermal applications”. Version 1.2 in conjunction with the AMS-II.G, version 12.0 to calculate the f_{NRB} .

In accordance with Section 8.4 of methodology VMR 006 “Energy efficiency and fuel switch measures in thermal applications”, version 1.2, project activities that are replacing baseline devices using non-renewable biomass must apply the equations of AMS-II.G. (except Equations 1, 2 and 3) to determine net GHG emission reductions.

After reviewing the revised equation, the verification team found that the methodology has introduced an uncertainty reduction U_d . And as per VMR 006, version 1.2, following uncertainty deduction must be applied, depending on the procedure for f_{NRB} used from AMS-II.G.:

- 1) If the default value for f_{NRB} from TOOL33 is applied: $U_d = 0$
- 2) If f_{NRB} is calculated as per TOOL30: $U_d = 26\%$
- 3) If f_{NRB} from an approved standardized baseline is applied: $U_d = 26\%$

Since the f_{nrB} which was used in the MR /01/ was calculated by third Party C4Ecosolutions using TOOL30, v4.0 as verified by reviewing the f_{NRB} report of C4 EcoSolutions (Pty) Ltd. /12/ (please refer to section 3.2 of this VR for comprehensive assessment). The application of $U_d = 26\%$ would make the value of f_{NRB} more conservative.

This deviation has been verified and accepted by the VVB, EPIC Sustainability Services Private Limited, in their verification report No. SSPL/VCS/2023/136, dated 21/02/2024 for the 2nd monitoring period and was approved by VERRA on 02/04/2024.

This deviation which was identified in the 2nd monitoring report was re-evaluated by EPL's verification team. According to Section 3.20 of VCS Standard v4.7, the verification team assessed the deviations. The team concluded that the deviation mentioned by the CME is considered appropriate since it pertains to data and parameters available at validation, and these deviations do not have a negative impact on the conservative estimation of reductions or removals. The new value of f_{NRB} even enhances the conservatism of the emission reduction calculation, preventing over crediting. Therefore, the deviation is compliant with VCS rules and is deemed acceptable by the verification team and continues to be applied in this monitoring period.

3.2 Project Description Deviations

During the 2nd verification period, there was a project description deviation described as below:

There has been a change in the value of f_{NRB} "Fraction of woody biomass saved by the project activity in year y that can be established as non-renewable biomass". The f_{NRB} in the registered VCS PD is 0.9403 as verified by the independent report of third Party C4Ecosolutions /12/. The registered VCS PD /23/ & its validation report /23/ was approved on 25 November 2022.

Since the value is quite high, and PP wants to have a conservative approach, PP has contracted third party C4Ecosolutions for a study and calculation of f_{NRB} again as per CDM Methodological Tool: "Calculation of fraction of non- renewable biomass" (v04.0). The verification team confirms that it has checked updated f_{NRB} calculation report/spread sheet /27/ prepared by C4Ecosolutions.

A review of updated f_{NRB} report /27/ prepared by C4Ecolution revealed that all the data used for the recalculation is latest available data at the time of 2nd verification period (the time submitted the deviation).

Review of updated f_{NRB} calculation report/spread sheet /27/ prepared by C4Ecosolutions reveals that the estimation of non-domestic fuel consumption was derived from the UN Statistics Division wood consumption data and World bank population statistics, in combination with the national average per capita woody biomass consumption. The reported volumes of fuelwood consumed in cubic meters are converted to metric tonnes using the FAO default conversion factor. Finally, consumed volumes of commercial forest products — including manufacturing, construction and non-fuel industry — are converted to metric tonnes using a biomass conversion and expansion factor provided for the region. The total woody biomass consumption for Vietnam is as per the updated f_{NRB} report /27/ prepared by C4Ecolution is estimated to be 37,026,218 t/yr, which is deemed appropriate to the VVB.

In Viet Nam seven ecological zone has been found i.e., subtropical humid forest, subtropical mountain system, tropical dry forest, tropical moist forest, tropical mountain system, tropical rainforest, topical shrubland and the same was verified by referring the FAO data through web-research. VVB has noted that in the report /27/ geospatial data products for Viet Nam were analysed in R13-17 to estimate Vietnam renewable biomass. The woody cover from all areas defined as "forest" (>10%) cover "other wooded land" (5-10% cover) as well as "other land" (<5% cover), according to the FAO definitions for 2000 and 2020 was estimated using Hansen/UMD/Google/USGS/NASA spatial data, which is derived from Hansen et al.

As no woody cover was excluded from the analysis based on a threshold of minimum cover, disaggregation into the FAO forest categories would have been superfluous. The woody cover was disaggregated according to the FAO global ecological zones and the total woody cover extent was calculated for each ecological zone, within the protected areas and within areas that are either accessible or geographically remote. The woody cover is estimated as a percentage for the whole country within 30 x 30 m resolution grid cells. The woody cover extent for each cell is therefore calculated as the woody cover percentage multiplied its area (0.9 ha).

The default age-weighted mean annual increment (MAI) estimates of each ecological zone, as reported by the IPCC, were used for the study, checked, and confirmed by the VVB. The proportion of forest stand ages above and below 20 years old were estimated for each ecological zone by extrapolating the observed forest gain extents between 2000 and 2012 to a 20-year period. Where primary forest growth rates are available, they were applied based on the primary forest extent data published by Turubanova et al. The resulting average MAI estimates for Vietnam are 1.05, 0.52, 1.71, 0.87, 0.37, 1.41, 1.78 t/ha/year for the subtropical humid forest, subtropical mountain system, tropical dry forest, tropical moist forest, tropical mountain system, tropical rainforest, tropical shrubland respectively.

As per paragraph 6(b) of the Tool 30, version 04.0:

Since there are no other publicly available literature outlining the value of f_{NRB} for the Viet Nam except the report of C4Ecosolutions, a comparison has been done only between the calculated values against the values for f_{NRB} reported in the study by Bailis, R.; Drigo, R.; Ghilardi, A. & Masera, O. (2015) "Titled "The carbon footprint of traditional wood fuels" published in Nature Climate Change (5(3), pp. 266–272).

The resulting f_{NRB} value is higher than the expected f_{NRB} values determined using the WISDOM method, as reported by Bailis et al., 2015 for the same region. While direct comparisons between the WISDOM and CDM methodologies are only sometimes appropriate, given the different approaches of the methodologies, the following factors can contribute to variations in the f_{NRB} estimates between the two methods:

- More recent population statistics (2021) for Viet Nam were used in the present study. The more recent data represents an increase in population numbers since the 2009 data utilized by Bailis et al., 2015.
- Updated 2019 FAO forest products statistics were used in the present study, whereas the study conducted by Bailis et al., 2015 used 2013 FAO forest products statistics.
- Different methods are used to determine accessibility which can result in significant differences in the estimated renewable biomass and consequently the f_{NRB} value.

- Mean annual increments (MAI) were calculated using a weighted average based on the forest area of three categories (i.e. primary forests, above 20-year secondary forest, below 20-year secondary forest). Data from the 2019 Refinement of the 2006 IPCC Guidelines for National Greenhouse Gas Inventories for 'Above-ground biomass growth rates for different ecological zones' was utilized. As per the Bailis et al., 2015 study, MAI values were derived from a combination of field observations and IPCC values, followed by an estimation of growth rates as a percentage of standing stock. This approach often yields higher MAIs compared to using only IPCC values and may lead to lower estimations of non-renewable biomass (NRB).

The verification team based on review of updated f_{NRB} report prepared by C4 Eco Solutions (Pty) Ltd /27/ confirms that the above requirement of tool 30 has been followed and the justification has been provided, which is deemed acceptable to the verification team.

As per paragraph 13 of the Tool 30 version 04.0,

"If the f_{NRB} value is estimated at the national level, as a cross check, project proponent shall compare the value of estimated NRB with the product of: i) total average above ground biomass tonnage of the area of forest areas deforested in recent past (tonnes/ha), and ii) most recent available observed annual rate of deforestation (ha/yr). If the estimated NRB value is more than 10% above the value calculated as per the product of biomass and deforestation rate, justification shall be provided for the higher value for NRB."

EPL based on review of updated f_{NRB} report prepared by C4 Eco Solutions (Pty) Ltd /27/ confirms that the above requirement of tool 30 has been followed and the justification has been provided, which is deemed acceptable to the validation team. The excerpt of f_{NRB} report /27/ is as below:

"The resulting non-renewable biomass (NRB) was compared to the top-down product of average above-ground biomass (62.71 t/ha) and the most recent annual deforestation data (207,461 ha/yr). NRB, as calculated in this report according to the CDM Tool 30 v4.0, was found to be 32,630,986 t/yr, which is greater than the cross-check results based on deforestation (13,009,879 t/yr). It is expected that the cross-check estimate of biomass loss from deforestation could underestimate the extent of non-renewable biomass consumption as it only considers the average biomass stocks from completely deforested areas. The cross-check considers unsustainable wood harvesting resulting in forest degradation and substantial reductions in biomass stocks, but not complete deforestation. Consequently, the estimate of NRB is considered applicable for this study given that the guidance provided by CDM Tool 30 v4.0 was followed.

Table below provides the validated total, protected and remote forest cover extent, mean annual increment and renewable biomass by ecological zone for the Vietnam.

The difference between woody biomass consumption and renewable biomass is non-renewable.

Ecological Zone	Total forest cover (ha)	Protected cover (ha)	Remote cover (ha)	MAI (t/ha/yr)	Renewable biomass (t/yr)

Subtropical humid forest	449,647	13,536	112,574	0.85	274,021
Subtropical mountain system	74,563	327	16,967	0.52	29,494
Tropical dry forest	428,482	61,861	131,524	1.29	304,114
Tropical moist forest	5,105,505	1,236,174	1,373,969	0.84	2,096,596
Tropical mountain system	1,807,758	224,585	786,494	0.27	211,188
Tropical rainforest	3,179,349	501,257	1,598,386	1.31	1,413,108
Tropical shrubland	172,131	28,234	84,494	1.12	66,711
Total	11,217,436	2,065,975	4,104,408		4,395,232

Non-renewable biomass utilisation in Viet Nam is, therefore, validated as 37,026,218 t/yr. The fraction of non-renewable biomass is the quotient of the non-renewable and the total biomass. The fraction of non-renewable biomass for Viet Nam is, therefore, validated as 0.8813.

From the review of updated report/spread sheet /27/ and interviews with the PP and C4 EcoSolutions (Pty) Ltd, the verification teams confirm the following:

- The report has been prepared by an independent party (i.e., C4 Eco Solutions (Pty) Ltd.), who is experienced in conducting such study.
- The detailed methodology (including the calculation) of conducting the study has been provided in the report /spread sheet /27/.
- The study has been done in accordance with the CDM Methodological Tool: “Calculation of fraction of non- renewable biomass” (v04.0) including the equation used and the data source as required by the tool.
- All the reference and data source used for the calculation/study as listed in the f_{NRB} report has been assessed by the VVB.

In addition, as per the methodology deviation (Refer to section 3.1 of this VR for the detail), uncertainty deduction of $u_d = 26\%$ applied for f_{NRB} is calculated as per TOOL30.

Since the f_{NRB} which was updated was calculated by third Party C4Ecosolutions using TOOL30, v4.0 as verified above by reviewing the updated f_{NRB} report of C4 EcoSolutions (Pty) Ltd/27/, The revised f_{NRB} is continuing to be deducted as below:

$$\text{The deducted } F_{NRB} = 0.8813 * (1-0.26) = 0.6522$$

The verification team of EPL assess the updated f_{NRB} and methodology deviation application of formula as per VMR006, version 1.2, and finds that the deviation mentioned by the CME is deemed appropriate as the updated f_{NRB} (with updated sources & methodology tool 30, v4.0) and uncertainty reduction of the

value of f_{NRB} make the calculation of Emission reduction more conservative, and in line with requirement of VMR006, version 1.2 so the deviation is in compliance with the VCS rules and therefore, the verification team accept it.

This deviation has been verified and accepted by the VVB, EPIC Sustainability Services Private Limited, in their verification report No. SSPL/VCS/2023/136, dated 21/02/2024 for the 2nd monitoring period and was approved by VERRA on 02/04/2024.

During this monitoring period, the project proponent has changed the sampling method from stratified random sampling across “model and age” as written in registered VCS PD to stratified random sampling across “model, age and province”:

The population within the project activity consists of several sub-populations that are known to vary. Therefore, it is better to conduct a stratified random sampling from each of these sub-populations separately. To increase accuracy when deciding sample for monitoring process, the target population was considered to be non-homogeneous across model age & province also.

Consequently, the verification team agreed to use the stratified random sampling procedure across “model, age & province” as the sampling method instead of stratified random sampling across “model and age” only, as this will improve the precision of the estimate. Stratification helps ensure that estimates of a population characteristic are accurate, especially when there are differences among the strata. This approach aligns with of the Section 5.2 of the Guidelines for sampling and surveys for CDM project activities and programmes of activities (version 04.0) & the para 15 Sampling standard (version 09.0). Furthermore, this deviation does not impact the applicability of the methodology, additionality, and the appropriateness of the baseline scenarios. Therefore, the verification team has accepted this deviation.

All deviations were identified in the previous monitoring period & this monitoring period were re-evaluated by EPL's verification team. According to Section 3.21.2 of VCS Standard v4.7, the verification team assessed the deviations. The team concluded that the deviations mentioned by the CME were acceptable as they do not affect the methodology's validity, additionality, or the baseline scenario's appropriateness. Therefore, the project remains compliant with the applied methodology, and the deviations have been adequately described and justified in the monitoring report. These deviations are continuing to be applied in the current monitoring period.

3.3 New Project Activity Instances in Grouped Projects

N/A

No new project activity instances included under this grouped project during this monitoring period.

3.4 Baseline Reassessment

Did the project undergo baseline reassessment during the monitoring period?

☐ Yes

☒ No

4 VERIFICATION FINDINGS

4.1 Project Details

Item	Evidence gathering activities, evidence checked, and assessment conclusion:				
Audit history	Audit type	Period	Program	Validation/verification body name	Number of years
	Validation	06-June-2022 (date of onsite visit for validation)	VCS	Carbon Check (India) Private Ltd.	N/A
	1st Verification	07-January-2022 to 30-November-2022	VCS	Carbon Check (India) Private Ltd.	0.9
	2nd Verification	01-December-2022 to 30-June-2023	VCS	EPIC Sustainability Services Pvt. Ltd	0.58
	3rd Verification	01-July-2023 to 31-December-2023	VCS	Ecolance Pvt. Ltd.	0.5
	4th verification	01-January-2024 to 30-June-2024	VCS	Ecolance Pvt. Ltd.	0.5

	On the basis of reviewing the registered VCS Project Description /24/, the MR of this verification period /01/, VERRA registry, and supporting documents made available to the verifier and information collected through performing interviews during the on-site assessment to confirm the audit history and project's compliance to the requirement of Rotation of validation/verification bodies as per 4.1.27 of VCS Standard, version 4.7.
Double counting and participation under other GHG programs	On the basis of reviewing the registered VCS PD /24/ & corresponding validation report /24/, MR /01/, distribution database /09/ & beneficiary agreement /16/ and interviews with the representative of project proponent, each ICS under project is uniquely identifiable /10/ and would be assured that it is not part of any other VCS project. Each project activity instance is uniquely identifiable /10/ by unique system to avoid the double counting. The measures to avoid double counting are deemed acceptable to the verification team. Through interviews with PP during onsite assessment, the verification team can confirm that all the project instances have not participated or been rejected under any other GHG Programs and emission allowance trading program including renewable energy certificates (RECs) since validation. All the project instances have applied only under VCS for registration and the same has been cross verified by the verification team by exploring /checking/visiting other GHG programs like, GS, CDM, GCC etc or non-GHG program like REC, iRECs, etc.
No double claiming with emissions trading programs or binding emission limits	All the project instances have applied only under VCS for registration. It has been cross verified by the verification team by exploring /checking/visiting other GHG programs like, GS, CDM, GCC etc or non-GHG program like REC, iRECs, etc. So, there would be no double claiming with other emissions trading programs. The Project proponent has also submitted declaration /21/ to confirm that all the project instances have not or shall not claim carbon credits on any other scheme after Registration of the project under VCS. In addition, the verification team also reviewed the local regulation and confirmed that there is no system that creates binding limits on the total GHG emissions or emissions per unit of output or activity from a site, company, sector, or region of this project activity but does not include emissions trading.

No double claiming with other forms of environmental credit	All the project instances have applied only under VCS for registration. It has been cross verified by the verification team by exploring /checking/visiting other GHG programs like, GS, CDM, GCC etc or non-GHG program like REC, iRECs, etc. So, there would be no double claiming with other forms of environmental credit. The Project proponent has also submitted declaration /20/ to confirm that all the project instances have not or shall not double claiming with any other form of environmental credit under any specific program.
Supply chain (scope 3) emissions double claiming	The project is in supply chain involved Viet Charcoal as the producer & SIPCO as the sponsor and distributor & household as the end-users. Thus: • The SIPCO (as the distributor) has an agreement in place with end-users who use ICSs in the project instances in which the owner transfers the rights to the emissions reductions exclusively to the SIPCO as part of the Carbon Rights Waiver within the Beneficiary agreement /16/. The verification team during onsite assessment also interview with different end-users and confirmed that they have agreed to transfer all the carbon rights to SIPCO. • As the sponsor and distributor of ICSs for end-users, SIPCO also official informed Viet Charcoal via email that VCU can be issued for the ICSs usage associated with Ecozen & TK90 manufactured by Viet Charcoal, distributed by SIPCO under this project which have SIPCO as a sole project participant. This statement also was publicly announce on their website (https://intracocarbon.com/public-announcement-on-grouped-projects-for-viet-nam-cookstove-program-project-id-2923). • In conclusion, the PP has implemented all possible measure to avoid potential risk of Scope 3 emissions double claiming. Therefore, the verification team accept it.

Sustainable development contributions

The project activity has distributed 850,000 ICS² to households from Jan-2022 until Jan-2023 to replace traditional stoves. This has provided families with greater access to basic services in the form of clean cooking technology, supporting SDG 7.1. This activity helps reduce the total fuel wood usage in the project area and therefore save woody biomass and generated 1,556,062 tCO₂ of emission reduction (SDG13) as verified during onsite interview with stakeholders, distribution database /09/, MR /01/ & ER calculation sheet /02/. The project activity also contributes to SDG target 8.3 by creating additional employment opportunities. This was confirmed by examining the payrolls, receipt confirmation and employment contracts of 12 people /30/, which provided clear details on employees' ages and genders. As a result, the verification team confirms that the project activity has contributed to at least 3 SDG targets (SDG 13, SDG 8 & SDG 7) by the end of this monitoring period, in line with the requirement of 3.17.1 of VCS standard 4.7.

During the onsite interview with different stakeholders & end-users, the verification team also conducted interview to confirm with end-users if project activity has contributed to the income increases through money and time saving. All the female in the household said that the ICS helps them reduce cooking time and therefore, more time to engage in other employment opportunities. The replacement of traditional cookstove with the ICS also leads to the reduction of smoke, dust which creates indoor air pollution. The project also generated employment opportunities for assembling of ICSs, distribution of ICSs and post-sale operation & maintenance of ICSs. This is confirmed by the on-site interview with different stakeholders and registered VCS PD /24/, MR /01/ & ER calculation sheet /02/. The PP has listed this project for SD vista validation & verification and all the contributions to SDG goal will be validated & verified in detail in the respective SD Vista validation & verification reports.

On the basis of that, the verification team can confirm that the project has implemented the activities that result in the contribution to at least 3 SDG targets by the end of this monitoring period/01/.

² Please also noted that during the last monitoring survey, ICS -N015-06544 has been identified as non-operational and thus removed from the database. So the population in the database was 849,999 ICS.

Additional information relevant to the project

On the basis of reviewing registered VCS PD & validation report /24/, MR /01/, the verification team can confirm no sensitive information has been excluded from the public versions of project documents.

4.2 Safeguards and Stakeholder Engagement

4.2.1 Stakeholder Identification

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Stakeholder identification	On the basis of reviewing registered VCS PD /23/ and MR /01/, the verification team found that the stakeholder identification process is in place to distinguish which parties/ entities/ individuals are classified as stakeholders in this project activity. All the stakeholders who can influence or directly/ indirectly affected by the implementation of this project activity have been correctly identified. The verification team has cross-checked with the local stakeholder participant list, consultation meeting records /08/ and finds all the identified stakeholders has been involved by the project activity in the consultation process and therefore accepts this.
Legal or customary tenure/access rights	N/A. The project activity only involves distribution of ICSs to households free of charge /07/ and the households can decide to receive them or not as per beneficiary agreement /19/. It will not involve any legal or customary tenure/access rights to territories and resources. This has been verified during onsite interview with different stakeholder.
Stakeholder diversity and changes over time	On the basis of reviewing registered VCD PD & validation report/23/, MR /01/, local stakeholder consultation supportive document /08/ and ongoing communication report /22/, onsite observation and interview with different stakeholders, the verification team found insignificant change in stakeholder diversity.

	There is no change in entities involved in this project activity includes Women Union, local government authority, local manufacturers, local vendor, etc. Their structure, functionality and activity are still the same. There might be changes in the personnel, but it doesn't impact their opinion & comments for the project activity on behalf of their organization as confirmed onsite. For the end-user, during onsite visits, the verification team has observed that it is still the same group. They confirmed that there was a slight improvement in terms of income & livelihood and well-being, but this did not bring any significant change in their social status and their opinions.
Expected changes in well-being	The project activity is contributing to the reduction in GHG emission due to reduction in use of non-renewable biomass as verified by onsite observation, reviewing of supportive documents include registered VCS PD /23/, MR /01/, excel calculation sheet /02/. The health of local end-users is improved due to less indoor air pollution, less time needed for cooking & collecting wood. The end-users have confirmed during the onsite interview that the project activity allowed them to have more time to work and earn additional income. Overall, the verification team found the project activity has contributed to the increase of local well-being.
Location of stakeholders	All the stakeholders (e.g., Women Union, local government authority, NGO, end-users, etc) are operating and living in the area of project activity which is in the geographical boundary of Vietnam country. This was verified and confirmed during onsite observation and interview with different stakeholder.
Location of resources	The location of resources (woody biomass, ICS, etc.) is also in the area of project activity which is in the geographical boundary of Vietnam country. This was verified and confirmed during onsite observation and interview with different stakeholder.

4.2.2 Stakeholder Consultation and Ongoing Communication

Item	Evidence gathering activities, evidence checked, and assessment conclusion
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Ongoing consultation	On the basis of reviewing the registered VCD PD & validation report/23/, MR /01/, local stakeholder consultation supportive document /08/, ongoing communication report /22/, and interviews with the PP and stakeholders during the audit, it confirms that the project has a stepwise mechanism for the ongoing communication. SIPCO engages with stakeholders (Women's Union, end-users, etc.) through annual reports, inspection visit, group discussion & also SIPCO's social media communication. The details of ongoing communication activity are mentioned in the MR /01/ & annually ongoing communication reports /22/. The verification team reviewed and verified those during onsite interview and cross-checked with registered VCS PD /23/ & MR /01/ and confirms the procedure and method for engagement.
Date(s) of stakeholder consultation	1/ 18-April-2021, the date of initial stakeholder consultation meeting for the grouped project activity as verified by reviewing the stakeholder consultation document. 2/ 10 to 18-June-2024. The ongoing stakeholder consultation was also carried out simultaneously with the monitoring survey to gather additional feedback from local stakeholders. This was confirmed by reviewing the ongoing communication reports dated 22-July-2024 /22/, which summarize all discussions from the onsite consultations during that period. Additionally, the verification team during onsite visit reaffirmed this information by interviewing representatives from the Women Union and various local stakeholders.
Communication of monitored results	The monitored results have been properly documented in the communication report /22/ sent to Women Union. It was cross-checked by interviewing with Women Union onsite.
Consultation records	The verification team confirmed the method for documenting the outcomes of local stakeholders' ongoing consultation and account of all inputs received through reviewing of communication reports /22/, consultation records /08/ & onsite interview.
Stakeholder input	There is several feedback was seen in the annual ongoing communication reports & records /22/ sent to donors; however, those were all positive feedbacks, no negative comment were received. Some local end-users would like to receive bigger or more ICS. All has been addressed by SIPCO in their answer forms /25/ sent back to Woman Union so they can feedback to local stakeholder properly. This

has been verified by reviewing all the form and confirmed this has been reported correctly in the MR /01/.

4.2.3 Free, Prior, and Informed Consent

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Consent	On the basis of onsite interview, reviewing of registered VCS PD & validation report /24/, MR /01/ & local stakeholder consultation documents /13/ and ongoing communication report /22/ the verification team confirmed that local governmental authority includes Chiefs of villages are well-informed about this project activity in a series of consultation meetings and totally support it as verified by local stakeholders' consultation meeting records /13/ and ongoing communication report /22/ & onsite interview. In addition, ICS distribution is a completely voluntary activity and households in participating villages are free to choose whether they take part or not as per beneficiary agreement /16/. Free, prior, and informed consent takes place before installation.
Outcome of FPIC discussion	As verified through local stakeholders' consultation meeting records /13/ and ongoing communication report /22/ & onsite interview, the project activity has consent from stakeholders.

4.2.4 Grievance Redress Procedure

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Grievance received and steps taken to resolve the grievance including the outcomes of the resolution	There is no grievance received during this verification period.
Grievance redress procedure	On the basis of onsite interview, reviewing of registered VCS PD /24/, MR /01/ the verification team confirms on the grievance redress procedure /17/ and method for documenting, acknowledge, investigate and address the grievance /19/ and account of all grievance received reported in the MR /01/.

	During onsite visit, the verification team confirms that they end-users and stakeholders know how to raise and send their grievance, but no grievance was made during this monitoring period. Hence the verification team deemed the grievance redress procedure including the grievance record as appropriate.
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4.2.5 Public Comments

Not applicable. No public comments were received for this project activity during this monitoring period.

4.2.6 Risks to Local Stakeholders and the Environment

4.2.6.1 Management Experience

On the basis of review of the registered VCS PD /24/ and MR /01/, onsite interview and observation, they verification team confirmed that SIPCO has been involved in many similar carbon projects and have experience in community engagement. Their management team have more than 10 years' experience in this topic as verified by their historical projects /26/.

4.2.6.2 Risk Assessment

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Natural and human induced risks to stakeholders' wellbeing	No risk was identified to stakeholder wellbeing as verified during onsite visit & interviewed with stakeholder, review of the registered VCS PD /24/ and MR /01/. There is negative impact or risk of increasing natural disasters, climate change, pollution, of safety issue when receiving the ICS.
Risks to stakeholder participation	No risk was identified to stakeholder participation as verified during onsite visit & interviewed with stakeholder, review of the registered VCS PD /24/ and MR /01/. There is no trade-off or any negative impact to their livelihood, land, food, etc. when receiving the ICS.
Working conditions	No risk was identified in working condition as verified during onsite visit & interviewed with stakeholder, review of the registered VCS PD /24/ and MR /01/. The PP has employed all their staff in compliance with host country's Labor Law.
Safety of women and girls	No risk was identified in safety of women and girls as verified during onsite visit & interviewed with stakeholder, review of the registered VCS PD /23/ and MR /01/.

	The implementation of this project activity is also in partnership with Women Union, a socio-political organization that represents and defends the legal and legitimate rights and interests of Women in Vietnam. Therefore, they would ensure there is no risk of safety for women and girls during project implementation as per confirmed during onsite interview.
Safety of minority and marginalized groups, including children	No risk was identified in safety of minority and marginalized groups, including children as verified during onsite visit & interviewed with stakeholder and review of the registered VCS PD /23/ and MR /01/. The implementation of this project activity is also in partnership with Women Union, a socio-political organization that represents and defends the legal and legitimate rights and interests of Women in Vietnam. Their policies also include childcare, education, community services, to health education. They would ensure there is no risk of Safety of minority and marginalized groups, including children as per confirmed during onsite interview.
Pollutants (air, noise, discharges to water, generation and release of hazardous materials and chemical pesticides and fertilizers	No risk was identified in any additional pollutants in comparison with the baseline scenario. On the basis of review of the registered VCS PD /24/ and MR /01/, onsite observation and interview with local stakeholder, the project activity has a positive impact in this aspect as it helps reduce air pollutants from wood smoke and improve the air quality indoor.

4.2.7 Respect for Human Rights and Equity

4.2.7.1 Labor and Work

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Discrimination	On the basis of review of the registered VCS PD /24/ and MR /01/, onsite interview and observation, the verification team found no discrimination in the project activity. The PP also have company code of conduct /25/ which indicated clearly that they have no tolerance for any discrimination and sexual harassment.
Sexual harassment	On the basis of review of the registered VCS PD /24/ and MR /01/, onsite interview and observation, the verification team found no sexual harassment in the project activity. The PP also have company code of conduct /25/ which indicated clearly that they have no tolerance for any discrimination and sexual harassment.

Gender equity in labor and work	On the basis of review of the registered VCS PD /24/ and MR /01/, onsite interview and observation, the verification team found that PP is continuing to promote gender equality in labor and work. The PP have company code of conduct /25/ which indicated clearly that they have no tolerance for any discrimination especially in gender. The project will also encourage women in the local communities to take up employment as per their skills and will provide training to all staff regardless of gender. The company as per its human resource policy ensures fair opportunity and equal pay for equal work done to both men and women. Furthermore, the project activity will provide more opportunities to women through self-help groups, thus helping in overall women empowerment as per confirmed during onsite interview.
Forced labor	On the basis of the registered VCS PD /24/ and MR /01/, onsite interview and observation, the verification team found no sign of forced labor. This is also prohibited as per host country's Labor Law and the PP has employed all their staff in compliance with host country's Labor Law as verified by company code of conduct /25/ & interview with PP during onsite visit.
Child labor	On the basis of the registered VCS PD /24/ and MR /01/, onsite interview and observation, the verification team found no sign of child labor. This is also prohibited as per host country's Labor Law and the PP has employed all their staff in compliance with host country's Labor Law as verified by company code of conduct /25/ & interview with PP during onsite visit.
Human trafficking	On the basis of the registered VCS PD /24/ and MR /01/, onsite interview and observation, the verification team found no sign of human trafficking. This is also prohibited as per host country's Labor Law and the PP has employed all their staff in compliance with host country's Labor Law as verified by company code of conduct /25/ & interview with PP during onsite visit.

4.2.7.2 Human Rights

Risks identified	Evidence gathering activities, evidence checked, and assessment conclusion
No risk has been identified	On the basis of the registered VCS PD /24/ and MR /01/, onsite interview and observation, the verification team found that project always respects and promotes the human rights in line with applicable international human right. All the stakeholders can voluntarily

	participate in the project activity. All the information was shared transparently for all stakeholder and end-users through local stakeholder consultation /13/ and ongoing communication report /22/. The contractors/ workers who participated in this project activity also need to follow & comply the PP code of conduct /25/ which also have a rule related to this matter.
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4.2.7.3 Indigenous Peoples and Cultural Heritage

Risks identified	Evidence gathering activities, evidence checked, and assessment conclusion
No risk has been identified	On the basis of the registered VCS PD & validation report /24/, MR /01/, onsite interview and observation, the verification team confirmed that the project activity does not have any activity which bring any negative impact to the indigenous peoples and cultural heritage.

4.2.7.4 Property Rights

Risks identified	Evidence gathering activities, evidence checked, and assessment conclusion
No risk has been identified	On the basis of the registered VCS PD & validation report /24/ and MR /01/, onsite interview and observation, the verification team confirmed that the project activity does not involve any property right removal/relocation of property rights holders and thus no disputes over rights to territories and resources

4.2.7.5 Benefit Sharing

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Summary of the benefit sharing plan	Not applicable as the project activity does not involve any property right.
Benefit sharing during the monitoring period	Not applicable as the project activity does not involve any property right.

4.2.8 Ecosystem Health

On the basis of reviewing the registered VCS PD & validation report /24/, MR /01/, observation & interview onsite with different stakeholder, the verification team confirmed that the implementation of the grouped project does not impose any severe impacts on the ecological system in the surrounding areas. In contrast, this project activity will help in reducing the consumption of fuel wood by efficient fuel combustion thereby reducing deforestation and reducing indoor air pollution. Therefore, it has no impact to ecosystem health, so this section is not applicable.

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Impacts on biodiversity and ecosystems	No risk identified at validation
Soil degradation and soil erosion	No risk identified at validation
Water consumption and stress	No risk identified at validation

4.2.8.1 Rare, Threatened, and Endangered species

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Species or habitat	On the basis of reviewing the registered VCS PD & validation report /24/, MR /01/, observation & interview onsite with different stakeholders, the verification team confirmed that the implementation of the grouped project does not have any adversely impact habitats for rare, threatened, or endangered species.
Areas needed for habitat connectivity	On the basis of reviewing the registered VCS PD & validation report /24/, MR /01/, observation & interview onsite with different stakeholders, the verification team confirmed that the implementation of the grouped project does not have any adversely impact the areas needed for habitat connectivity

4.2.8.2 Introduction of Species

Not applicable.

On the basis of reviewing the registered VCS PD & validation report /24/, MR /01/, observation & interview onsite with different stakeholders, the verification team confirmed that the implementation of the grouped project does not impose any severe impacts on the ecological system in the surrounding areas. In contrast, this project activity will help in reducing the consumption of fuel wood by reducing fuel combustion for boiling water thereby reducing deforestation and reducing indoor air pollution. Therefore, it has no impact to ecosystem health, so this section is not applicable.

4.2.8.3 Ecosystem conversion

Not applicable.

On the basis of reviewing the registered VCS PD & validation report /24/, MR /01/, observation & interview onsite with different stakeholders, the verification team confirmed that the implementation of the grouped project does not involve any ecosystem conversion

4.3 Accuracy of Reduction and Removal Calculations

The equations and choices provided in the methodology and all other methodological tools are correctly quoted in the MR /01/. The emission reductions of the project instances of the grouped project and project activity instance are calculated using the formulae mentioned in the applied methodologies; VMR0006 version 1.1 /B02/. The verification team has reviewed the emission reduction spread sheets (ER sheets) and checked all the formulae and found they are correct and are in accordance with the monitoring plan of the registered PD /24/ and the applied monitoring methodology.

According to applied methodology VMR0006 (version 1.1) & AMS-II.G (version 11) /B02/the emissions are calculated as below:

Baseline Emission:

$$ER_y = \sum_i \sum_j ER_{y,i,j} \quad \text{Equation (1)}$$

Where;

I : Indices for the situation where more than one type/model of improved cookstove is introduced to replace three-stone fire.

j : Indices for the situation where there is more than one batch of improved cookstove of type i

ER_y : Emission reductions during year y in t CO₂e

$ER_{y,i,j}$: Emission reductions by improved cookstove of type I and batch j during year y in t CO₂e

$$ER_{y,i,j} = B_{y,savings,i,j} \times NCV_{wood\ fuel} \times f_{NRB,y} \times (EF_{wf,CO_2} + EF_{wf,non\ CO_2}) \times N_{y,i,j} \times 0.95$$

(Equation 2)

Where:

- $B_{y,savings,i,j}$: Quantity of woody biomass that is saved in tonnes per improved cookstove of type I and batch j during year y
- $NCV_{wood\ fuel}$: Net calorific value of the non-renewable woody biomass that is substituted or reduced (IPCC default for wood fuel, 0.0156 TJ/tonne)
- $f_{NRB,y}$: Fraction of woody biomass that can be established as non-renewable biomass (fNRB)
- $EF_{wf,CO2}$: CO2 emission factor for the use of wood fuel in baseline scenario (IPCC default for wood fuel, 112 tCO2/TJ)
- $EF_{wf,non\ CO2}$: Non-CO2 emission factor for the use of wood fuel in baseline scenario (IPCC default for wood fuel, 26.23 tCO2/TJ)
- $N_{y,I,j}$: Number of improved cookstoves of type I and batch j operating during year y
- 0.95 : Discount factor to account for leakage

The quantify of woody biomass saved due to implementation of improved cookstoves to be calculated using equation below:

$$B_{y,savings,i,j} = B_{y=1,new,i,survey} \times \left(\frac{\eta_{new,y,i,j}}{\eta_{old}} - 1 \right) \quad \text{Equation (3)}$$

Where:

- $\eta_{new,y,i,j}$: Efficiency of baseline cookstove
- η_{old} : Efficiency of the improved cookstove type I and batch j determined through water boiling test (WBT) during year y. Alternatively, efficiency may be determined using Equation 4.
- $B_{y=1,new,i,survey}$: Annual quantity of woody biomass used by improved cookstoves in tonnes per device of type I and batch j, determined in the first year of the implementation of the project through a sample survey.

$$\eta_{new,y,i,j} = \eta_p \times (DF_n)^{y-1} \times 0.94 \quad \text{Equation (4)}$$

Where:

- η_p : Efficiency of project stove (fraction) at the start of project activity.
- $(DF_n)^{y-1}$: Discount factor to account for efficiency loss of project cookstove per year of operation (fraction). This value may be based on actual monitoring or based on manufacturer's declaration on expected loss in efficiency or through publicly available

literature on relevant industry standards. Alternatively default value of 0.99 efficiency loss per year can be considered.

0.94 : Adjustment factor to account for uncertainty related to project cookstove efficiency test.

Leakage Emissions: In accordance with methodology VMR0006 version 1.1 /B02/ & section 5.4 of AMS-II.G, leakage is considered as default 0.95.

Sampling approach: The sampling plan implemented by the PP is in accordance with the applied approved monitoring methodology /B02/ and the registered VCS PD /24/. As assessed in this section, emission reductions for the project “Grouped Projects for Viet Nam Cookstove Program” have been claimed for this monitoring period and the total population of the stoves in the database for this monitoring period (01-January-2024 to 30-June-2024) is 849,999 ICS³.

The PP has performed stratified random sampling procedure across stove model, age and province, reliability levels were set at 95% confidence and 10% precision in line with the applied methodology VMR0006 version 1.1 /B02/. The stratified random sampling procedure across stove model age and province was accepted by the verification team. As the registered VCS PD /24/ mentions the option for stratified random sampling procedure, it is acceptable to the verification team. The sampling surveys have been carried out by the well-trained personnel /12/.

The monitoring parameter required to be monitored through the sampling plan in this verification period is: Number of project devices operating during year y ($N_{y,j,j}$)

The sample size calculations for the monitoring parameter monitored through the sampling have been provided in the table below. The calculated sample size for the parameter $N_{y,i,j}$ is 43. While taking in view for the outliers and nonresponse PP calculated an additional 20% of the sample to be surveyed, a total of 54 samples were selected.

The detailed calculation of sample size for the monitoring parameters $N_{y,i,j}$ apply the formulae below:

$$n \geq \frac{1.96^2 N \times p \times (1 - p)}{(N - 1) \times 0.1^2 \times p^2 \times 1.96^2 p \times (1 - p)}$$

Where

n = sample size

N = population size (total number of ICS)

P = expected proportion

³ PP has distributed total 850,000 ICS, however during the last monitoring survey, ICS -N015-06544 has been identified as non-operational and thus removed from the database. So the population in the database was 849,999 ICS. This information in the database was used to sample size calculation.

1.96 = represent 95% confidence required

0.1 = represent 10% relative precision

Definition	Value	Justification
The population size N is	10,000	Number of TK90 stoves (age 3) in Lao Cai province registered in database /19/
	5,000	Number of TK90 stoves (age 2) in Lao Cai province registered database /19/
	18,500	Number of TK90 stoves (age 2) in Nam Dinh Province registered in database /19/
	1,500	Number of TK90 stoves (age 3) in Nam Dinh province registered in database /19/
	7,772	Number of TK90 stoves (age 2) in Dien Bien Province registered in database /19/
	26,228	Number of TK90 stoves (age 3) in Dien Bien province registered in database /19/
	2,820	Number of TK90 stoves (age 2) in Lai Chau Province registered in database /19/
	12,180	Number of TK90 stoves (age 3) in Lai Chau province registered in database /19/
	5,036	Number of TK90 stoves (age 3) in Son La Province registered in database /19/
	2,860	Number of TK90 stoves (age 2) in Quang Ninh province registered in database /19/
	13,514	Number of TK90 stoves (age 2) in Bac Ninh Province registered in database /19/
	10,000	Number of TK90 stoves (age 3) in Bac Ninh province registered in database /19/
	5,000	Number of TK90 stoves (age 2) in Ha Nam Province registered in database /19/
	17,581	Number of TK90 stoves (age 2) in Vinh Phuc Province registered in database /19/
	24,000	Number of Ecozen stoves (age 2) in Quang Binh Province registered in database /19/
	6,000	Number of Ecozen stoves (age 3) in Quang Binh province registered in database /19/
	26,420	Number of Ecozen stoves (age 2) in Phu Yen Province registered in database /19/
	3,580	Number of Ecozen stoves (age 3) in Phu Yen province registered in database /19/

	25,000	Number of Ecozen stoves (age 2) in Dak Lak Province registered in database /19/
	20,000	Number of Ecozen stoves (age 3) in Dak Lak province registered in database /19/
	3,298	Number of Ecozen stoves (age 2) in Kon Tum Province registered in database /19/
	10,020	Number of Ecozen stoves (age 3) in Kon Tum province registered in database /19/
	23,200	Number of Ecozen stoves (age 2) in Lam Dong Province registered in database /19/
	6,800	Number of Ecozen stoves (age 3) in Lam Dong province registered in database /19/
	108,563	Number of Ecozen stoves (age 2) in Ha Tinh Province registered in database /19/
	4,589	Number of Ecozen stoves (age 3) in Ha Tinh province registered in database /19/
	24,900	Number of Ecozen stoves (age 2) in Quang Tri Province registered in database /19/
	5,100	Number of Ecozen stoves (age 3) in Quang Tri province registered in database /19/
	19,980	Number of TK90 stoves (age 2) in Tuyen Quang Province registered in database /19/
	1,020	Number of TK90 stoves (age 3) in Tuyen Quang province registered in database /19/
	17,000	Number of TK90 stoves (age 2) in Bac Kan province registered in database /19/
	17,860	Number of TK90 stoves (age 2) in Ha Giang province registered in database /19/
	16,150	Number of TK90 stoves (age 3) in Ha Giang province registered in database /19/
	50,000	Number of TK90 stoves (age 2) in Hai Duong province registered in database /19/
	10,000	Number of TK90 stoves (age 2) in Lang Son province registered in database /19/
	30,000	Number of TK90 stoves (age 2) in Hung Yen province registered in database /19/
	40,000	Number of Ecozen stoves (age 2) in Thua Thien Hue province registered in database /19/
	67,520	Number of Ecozen stoves (age 2) in Quang Nam province registered in database /19/

	12,480	Number of Ecozen stoves (age 3) in Quang Nam province registered in database /19/
	20,000	Number of Ecozen stoves (age 2) in Quang Ngai province registered in database /19/
	528	Number of Ecozen stoves (age 3) in Binh Thuan province registered in database /19/
	24,540	Number of Ecozen stoves (age 2) in Khanh Hoa province registered in database /19/
	5,460	Number of Ecozen stoves (age 3) in Khanh Hoa province registered in database /19/
	21,456	Number of Ecozen stoves (age 2) in Ninh Thuan province registered in database /19/
	8,200	Number of Ecozen stoves (age 3) in Ninh Thuan province registered in database /19/
	20,094	Number of Ecozen stoves (age 2) in Dak Nong province registered in database /19/
	8,250	Number of Ecozen stoves (age 3) in Dak Nong province registered in database /19/
	20,000	Number of Ecozen stoves (age 2) in Gia Lai province registered in database /19/
	10,000	Number of Ecozen stoves (age 3) in Gia Lai province registered in database /19/
The expected proportion p for $N_{y,i}$ is	0.9	90% is applied for sample size calculation

Based on the above assumptions, the resulting sampling size is calculated as:

$$= \frac{1.96^2 \times 849,999 \times 0.9 \times (1 - 0.9)}{(849,999 - 1) \times 0.1^2 \times 0.9^2 + 1.96^2 \times 0.9 \times (1 - 0.9)} = 43 \text{ (rounded up)}$$

Therefore, in this case, the sample size for the parameter $N_{y,i,j}$ is 43 (rounded value). While taking in view for the outliers and nonresponse PP calculated an additional 20% of the sample to be surveyed, a total of 54 samples were selected as per below calculated.

Description	Calculated sample size	Actual monitored sample size (inclusive of 20% non-response)
Total sample size required	43	Roundup (43/0.8) = 54
Sample size for TK90 stoves (age 3) in Lao Cai province registered in database /19/	0	0
Sample size for TK90 stoves (age 2) in Lao Cai province registered database /19/	1	2
Sample size for TK90 stoves (age 2) in Nam Dinh Province registered in database /19/	1	1

Sample size for TK90 stoves (age 3) in Nam Dinh province registered in database /19/	0	0
Sample size for TK90 stoves (age 2) in Dien Bien Province registered in database /19/	0	0
Sample size for TK90 stoves (age 3) in Dien Bien province registered in database /19/	2	2
Sample size for TK90 stoves (age 2) in Lai Chau Province registered in database /19/	1	2
Sample size for TK90 stoves (age 3) in Lai Chau province registered in database /19/	0	0
Sample size for TK90 stoves (age 3) in Son La Province registered in database /19/	0	0
Sample size for TK90 stoves (age 2) in Quang Ninh province registered in database /19/	0	0
Sample size for TK90 stoves (age 2) in Bac Ninh Province registered in database /19/	0	0
Sample size for TK90 stoves (age 3) in Bac Ninh province registered in database /19/	1	1
Sample size for TK90 stoves (age 2) in Ha Nam Province registered in database /19/	0	0
Sample size for TK90 stoves (age 2) in Vinh Phuc Province registered in database /19/	1	1
Sample size for Ecozen stoves (age 2) in Quang Binh Province registered in database /19/	1	1
Sample size for Ecozen stoves (age 3) in Quang Binh province registered in database /19/	1	1
Sample size for Ecozen stoves (age 2) in Phu Yen Province registered in database /19/	1	2
Sample size for Ecozen stoves (age 3) in Phu Yen province registered in database /19/	0	0
Sample size for Ecozen stoves (age 2) in Dak Lak Province registered in database /19/	1	1
Sample size for Ecozen stoves (age 3) in Dak Lak province registered in database /19/	1	2
Sample size for Ecozen stoves (age 2) in Kon Tum Province registered in database /19/	0	0
Sample size for Ecozen stoves (age 3) in Kon Tum province registered in database /19/	0	0
Sample size for Ecozen stoves (age 2) in Lam Dong Province registered in database /19/	1	2
Sample size for Ecozen stoves (age 3) in Lam Dong province registered in database /19/	0	0
Sample size for Ecozen stoves (age 2) in Ha Tinh Province registered in database /19/	6	7
Sample size for Ecozen stoves (age 3) in Ha Tinh province registered in database /19/	0	0
Sample size for Ecozen stoves (age 2) in Quang Tri Province registered in database /19/	1	1
Sample size for Ecozen stoves (age 3) in Quang Tri province registered in database /19/	1	1
Sample size for TK90 stoves (age 2) in Tuyen Quang Province registered in database /19/	1	1

Sample size for TK90 stoves (age 3) in Tuyen Quang province registered in database /19/	0	0
Sample size for TK90 stoves (age 2) in Bac Kan province registered in database /19/	1	1
Sample size for TK90 stoves (age 2) in Ha Giang province registered in database /19/	0	0
Sample size for TK90 stoves (age 3) in Ha Giang province registered in database /19/	1	2
Sample size for TK90 stoves (age 2) in Hai Duong province registered in database /19/	2	3
Sample size for TK90 stoves (age 2) in Lang Son province registered in database /19/	1	1
Sample size for TK90 stoves (age 2) in Hung Yen province registered in database /19/	2	2
Sample size for Ecozen stoves (age 2) in Thua Thien Hue province registered in database /19/	2	2
Sample size for Ecozen stoves (age 2) in Quang Nam province registered in database /19/	5	6
Sample size for Ecozen stoves (age 3) in Quang Nam province registered in database /19/	0	0
Sample size for Ecozen stoves (age 2) in Quang Ngai province registered in database /19/	1	2
Sample size for Ecozen stoves (age 3) in Binh Thuan province registered in database /19/	0	0
Sample size for Ecozen stoves (age 2) in Khanh Hoa province registered in database /19/	2	2
Sample size for Ecozen stoves (age 3) in Khanh Hoa province registered in database /19/	0	0
Sample size for Ecozen stoves (age 2) in Ninh Thuan province registered in database /19/	1	1
Sample size for Ecozen stoves (age 3) in Ninh Thuan province registered in database /19/	1	1
Sample size for Ecozen stoves (age 2) in Dak Nong province registered in database /19/	0	0
Sample size for Ecozen stoves (age 3) in Dak Nong province registered in database /19/	1	1
Sample size for Ecozen stoves (age 2) in Gia Lai province registered in database /19/	1	2
Sample size for Ecozen stoves (age 3) in Gia Lai province registered in database /19/	0	0

The resultant applied sample size by the PP is summarized below:

Parameters	$N_{y,jj}$
Total sample size	54
Survey result	0.9629
Precision achieved	5.24%

The sampling was done by PP by selecting randomly ICS after arranging them in chronological order of date of distribution and assigning a sampling number to each ICS in each stratum (stove age & type). This has been verified by reviewing sampling plan /20/, the random generator screenshots /21/, and interview with samplers, end-users and PP during onsite visit.

VVB used sampling during verification for checking the operational status in the households. The sampling done by VVB reflects the population of the project activity, independent from the samples that the project proponent surveyed for monitoring. VVB applied paragraph 26 of the Standard, Sampling and surveys for CDM project activities and programmes of activities, version 09 /B04/. In accordance with the paragraph 28 of the sampling standard, acceptance sampling has been chosen by the verification team and accordingly steps listed in paragraph 29 of the sampling standard /B03a/ shall be followed. The verification team has opted for AQL of 0.5% and UQL of 20%; producer risk and consumer risk of 10% in determining the VVB's sample size.

A sample size of 11 households was chosen (with no discrepant records). A sample size of 11 was determined, based on an AQL of 0.5% and UQL of 20%, producer risk 10% and consumer risk 20%. Acceptance number (c) thus determined for the sample is 0. VVB utilized a random number generator website to select 11 samples from the PP's survey sample list. VVB visited/interviewed 11 samples (each, for monitoring survey) from PP's sample list. It was observed that out of the 11 samples, the operational status of 11 stoves were found to match with the PP's records and hence no discrepant records were observed with the MR /01-2/ and ER sheet /02/ and thus $c=0$. Thus, PP's set of records has been accepted in line with § 33 of the sampling standard, version 09 /B04/. Verification team has cross verified these sample documents.

The monitoring parameters to be monitored through the sampling plan are: Number of project devices operating during year y ($N_{y,j,j}$)

Onsite assessment of Monitoring parameter $N_{y,j,j}$ was conducted based on following methods:

- Confirmation with the household/end user whether or not the PP has performed survey on stove operation (for the parameter $N_{y,i,j}$).
- Assessment of Competence of personnel involved in conducting the survey: Verification team has reviewed the abilities, qualifications and recognition of involved personnel and institutions of survey team. The verification team based on onsite inspection interviews confirms that the team was qualified to carry out the survey in line with the methodology.
- The verification team also compared the results with those of similar cookstove projects approved by VERRA. We assessed the operational rates of these projects after 2-3 years and compared them to this project to determine whether they are aligned.

As per paragraph 25 of the Sampling Standard, version 09 /B04/, the verification team has to verify whether the project participants entity have implemented the sampling and surveys according to the sampling plan in the registered monitoring plan. The verification includes determining:

(a) Whether the required confidence/precision has been met.

(b) Whether the selected sample was representative of the population.

Parameter	How the PP conducted sampling surveys (to obtain the project participants' or the coordinating/managing entities' records)	How the VVB could obtain records for verification	Criteria for deciding what ultimately constitutes a discrepancy
Number of project devices operating during year y ($N_{y,j,i}$)	Sampling based survey (questionnaire survey/interviews) Visual inspection of the premises to see if ICS is operational and in use. Interview with end user if required to verify that ICS is still in use [Yes/No]	• Cross-check of a sample of project participants' samples (questionnaire operation surveys/interviews) including but not limited to following: • Consistency between the information as contained in Survey sheet and revealed from the onsite interviews • Baseline scenario of the household • Enquire/observe the pre-project/baseline stove/s and its operation during the project scenario.	VVB results, accounting for duly justified differences.

The sampling plan implemented by the PP is in accordance with the applied approved monitoring methodology /B02/ and the registered VCS PD /24/. The PP has appropriately performed stratified random sampling procedure across stove model, age and province which is in line with the applied methodology. As the registered VCS PD /24/ mentions the option for stratified random sampling procedure, it is acceptable to the verification team.

The necessary confidence / precision of 95/10 each of the parameters are met. This has been cross verified by the verification team from the supporting documents submitted.

Emission reductions have been calculated in accordance with the applied methodology VMR0006 version 1.1 /B01/, and registered VCS PD /24/. The PP has used monitored data and ex-ante fixed data including default values as mandated/permitted by the applied methodology. The values used for calculation of GHG emission reductions have been thoroughly checked by the verification team and was found appropriate and correct.

The details of monitoring parameters used for calculation of emission reductions are provided below:

Parameters Determined ex-ante:

Parameter	Unit	Value	Assessment
$f_{NRB,y}$	Fraction	65.22	- Fixed ex-ante -The value is calculated by third party C4Ecosolutions /27/ in line with the applicable methodological CDM Tool 30, version 4.0. The project description deviation was applied for this value which was verified and documented in section 3.2 of this verification report. An uncertainty reduction of 26% as per VMR006, version 1.2 was also applied. This found to be valid and correct. Thus, the verification team accept it.
$NCV_{wood\ fuel}$	TJ/tonne	0.0156	- Fixed ex-ante - Default values from the 2006 IPCC Guidelines have been used.
$EF_{wf,CO2}$	tCO2/TJ	112	- Fixed ex-ante - Default values from the 2006 IPCC Guidelines have been used.
$EF_{wf,non\ CO2}$	tCO2/TJ	26.23	- Fixed ex-ante - Default values from the 2006 IPCC Guidelines have been used.
η_p	Fraction	TK90: 0.3025 Ecozen: 0.3844	- Fixed ex-ante - Manufacturers specification /04/ & efficiency tests performed by third party /11/

The spread sheet submitted by the PP clearly and transparently mentions values of the data parameters used for calculation of emission reductions. The input values have been verified from the reliable and authentic sources including monitoring survey records /06//07/, distribution database /09/, MR /01/, and applied methodology /B01/. The emission reductions calculated were compared with the ER spread sheet /02/ and found to be correct. No significant reporting risks have been identified for the data reported.

The details of monitoring parameters used for calculation of emission reductions are provided below:

Monitoring Parameter Requirement	Assessment/ Observation by the VVB
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Data / Parameter: (as in monitoring plan of VCS PD):	Number of project devices of type I and batch j operating during year y ($N_{y,i,j}$)
Measuring frequency/Time Interval:	Once every two years
Reporting frequency:	Once every two years
Reported value:	$N_{y,i,j} = 96.29\% * 98.14\% * 850,000 = 803,242$ ICS (Proportion of operational stoves obtained from this monitoring survey is 96.29%, from previous survey is 98.14%). The PP applied the proportional of operation stoves obtained from this survey on top of the proportion of operation stoves obtained from last survey for conservative. To maintain a high operational rate for the cookstoves, PP coordinates with the Women's Union to communicate with end-users and promptly report any damages to SIPCO. SIPCO will then supply a replacement cookstove with the same serial number to the Women's Union, which will distribute it to affected households. Households must sign an acknowledgment of the replacement, and PP will record this in the database for monitoring. PP will track the time from reporting the defect to receiving the replacement, discarding any VCUs generated during this period in the next monitoring phase. If a household chooses not to receive a replacement stove, this will be reflected in the project's count of operational cookstoves. This process has been verified through interviews with end-users and the Women's Union during our onsite visit, ensuring effective operational rates for the distributed cookstoves.
Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	Yes
Details of monitoring equipment:	Value obtained from monitoring survey of samples /14/ and distribution database /19/.

If applicable, has the reported data been cross-checked with other available data?	Yes, the reported data in MR has been compared with monitoring survey records /14/ and the ER sheet /02/. The total number of ICS has been cross checked with the database /19/ and evidence to demonstrate ICS as free of cost to the user /07/ as provided by the PP. VVB confirms here that onsite assessment of Monitoring parameter $N_{y,i,j}$ was conducted based on following two methods: • Confirmation with the household/end user whether or not the PP has performed monitoring/measurement campaign, survey on stove operation (for the parameter $N_{y,i,j}$) • Assessment of Competence of personnel involved in conducting the survey /18/ • VVB used acceptance sampling during verification for checking the operational status in the households. VVB interviewed 11 samples for monitoring survey. It was observed that out of the 11 samples, all the operation status of 11 stoves were found to match with the PP's records and hence no discrepant records were observed with the MR /01/ and ER sheet /02/ and thus $c=0$. Thus, PP's set of records has been accepted in line with §33 of the sampling standard, version 09 /B04/.
How were the values in the monitoring report verified?	By the end of this monitoring period, a total of 850,000 project ICS units have been distributed. While local partners (Women Union) were involved in distributing the ICS units, detailed records of the distribution and installation of each unit, along with end user information (such as names and addresses), were stored in the stove database. Additionally, end users receiving the ICS units are required to sign a beneficiary agreement /19/. This helps to ensure that the units are ultimately distributed to and used by the intended end users. During the verification process, this number was also confirmed by cross-referencing data from the stove distribution database & beneficiary agreement records /19/, monitoring survey database /14/, and procurement evidence provided by the PP (e.g. contract,

	delivery confirmation) /28/. In addition, the verification team has randomly selected 11 end-users and interviewed them during the onsite visit to confirm that they have received and used the ICS as per database record /19/. In addition, for the parameter $N_{y,i,j}$, VVB used acceptance sampling during verification for checking the operational status in the households. VVB interviewed 11 samples for monitoring survey. It was observed that out of the 11 samples, all the operation status of 11 stoves were found to match with the PP's records and hence no discrepant records were observed with the MR /01/ and ER sheet /02/ and thus $c=0$. Thus, PP's set of records has been accepted in line with §33 of the sampling standard, version 09 /B04/. The operational value result was also cross-checked with similar projects in Vietnam (such as VCS 2594, 2491, and 2595) and in other countries (such as VCS 2340 and VCS 2351). We found that the operational values of this project are aligned more or less with those of the comparable projects, and therefore, we accept this result.
Does the data management (from data generation to emission reduction calculation) ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?	Yes, the data management ensures correct transfer of data and reporting of emission reductions and all necessary QA/QC processes are in place.
In case only partial data are available because activity levels or non-activity parameters have not been monitored in accordance with the registered monitoring plan, has the most conservative assumption theoretically possible been applied or has a request for deviation been approved?	NA

Monitoring Parameter Requirement	Assessment/ Observation by the VVB
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Data / Parameter: (as in monitoring plan of VCS PD):	Efficiency of the improved cookstove type i and batch j during year y ($\eta_{new,y,i,j}$)											
Measuring frequency/Time Interval:	Annual											
Reporting frequency:	Annual											
Reported value:	<table border="1"> <thead> <tr> <th>Year (y)</th><th>$\eta_{new,i,j}$, TK90</th><th>$\eta_{new,i,j}$, Ecozen</th></tr> </thead> <tbody> <tr> <td>2</td><td>0.2815</td><td>0.3577</td></tr> <tr> <td>3</td><td>0.2787</td><td>0.3541</td></tr> </tbody> </table>	Year (y)	$\eta_{new,i,j}$, TK90	$\eta_{new,i,j}$, Ecozen	2	0.2815	0.3577	3	0.2787	0.3541		
Year (y)	$\eta_{new,i,j}$, TK90	$\eta_{new,i,j}$, Ecozen										
2	0.2815	0.3577										
3	0.2787	0.3541										
Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	Yes											
Details of monitoring equipment:	Value is calculated using equation 5, VMRO006, version 1.1 $\eta_{new,y,i,j} = \eta_p \times (DF_n)^{y-1} \times 0.94$ For TK90 (age 2) $\eta_{new,y,i,j} = 0.3025 \times (0.99)^{2-1} \times 0.94 = 0.2815$ For TK90 (age 3) $\eta_{new,y,i,j} = 0.3025 \times (0.99)^{3-1} \times 0.94 = 0.2787$ For Ecozen (age 2) $\eta_{new,y,i,j} = 0.3844 \times (0.99)^{2-1} \times 0.94 = 0.3577$ For Ecozen (age 3) $\eta_{new,y,i,j} = 0.3844 \times (0.99)^{3-1} \times 0.94 = 0.3541$ The calculation is correctly done. Efficiency of TK90 & Ecozen stove (fraction) at the start of project activity has been verified by cross-check with the technical specification of the ICS /04/ & ICS efficiency tests performed by third party /04.c/.											
If applicable, has the reported data been cross-checked with other available data?	Yes, the reported data in MR has been compared with monitoring survey records /07/ and the ER sheet /02/. The total number of ICS has been cross checked with the database /09/, and evidence to demonstrate ICS as free /15/ as provided by the PP.											

How were the values in the monitoring report verified?	The value has been verified by checking the technical specification of the ICS /04/, ICS efficiency tests performed by third party /04.c/, the distribution database /09/ and the calculations from ER sheet /02/.
Does the data management (from data generation to emission reduction calculation) ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?	Yes, the data management ensures correct transfer of data and reporting of emission reductions and all necessary QA/QC processes are in place.
In case only partial data are available because activity levels or non-activity parameters have not been monitored in accordance with the registered monitoring plan, has the most conservative assumption theoretically possible been applied or has a request for deviation been approved?	NA

Monitoring Parameter Requirement	Assessment/ Observation by the VVB
Data / Parameter: (as in monitoring plan of VCS PD):	Annual quantity of woody biomass used by improved cookstoves in tonnes per device of type I and batch j ($B_{y=1,new,I,j,survey}$)
Measuring frequency/Time Interval:	In the first year of project implementation
Reporting frequency:	In the first year of project implementation
Reported value:	It was found during survey firewood usage was 3.403 kg/day which is for calculation of ER, 3.403 kg/device/day or equal to 1.242 tonnes/device/year.
Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	Yes
Details of monitoring equipment:	Value obtained from MR of 1st monitoring period & corresponding verification report /24/.

If applicable, has the reported data been cross-checked with other available data?	Yes, the value has been verified by checking the MR of 1st monitoring period & corresponding verification report /24/.
How were the values in the monitoring report verified?	The value has been verified by checking the MR of 1st monitoring period & corresponding verification report /24/. During the first monitoring period, sampling survey has been conducted across all batches available during the first monitoring period including 78 PAs within 30 provinces. The survey results, sampling method, sample size calculation, etc has been provided & approved in the first MR & the corresponding ER spreadsheet and verification report /24/. This is already the third year of project implementation so there is no requirement to conduct the monitoring survey again for this parameter as per applied methodology & registered VCS PD /23/. Therefore, the PPs just use the approved value of $B_{y=1,new,i,j,survey}$ in the 1st MR instead of conducting new monitoring survey. The verification team has reviewed and cross-check the 1st MR & corresponding verification report /24/ and confirmed its appropriateness. As per the 1st MR, if any users use multiple stoves, they were asked to extract and make the piles for the wood used for the project stove and other stoves separately and the field staff weigh both the piles before and after cooking day and recorded in the survey forms and in the spreadsheet. Therefore, firewood consumed for each project stove and baseline stove can be distinguished clearly. Those have been cross verified by reviewing the 1st MR & corresponding verification report and thus the verification team can confirm its appropriateness.
Does the data management (from data generation to emission reduction calculation) ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?	Yes, the data management ensures correct transfer of data and reporting of emission reductions and all necessary QA/QC processes are in place.

In case only partial data are available because activity levels or non-activity parameters have not been monitored in accordance with the registered monitoring plan, has the most conservative assumption theoretically possible been applied or has a request for deviation been approved?	NA
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Monitoring Parameter Requirement	Assessment/ Observation by the VVB
Data / Parameter: (as in monitoring plan of VCS PD):	Efficiency of baseline stove (η_{old})
Measuring frequency/Time Interval:	Default value as per applied methodology
Reporting frequency:	Default value as per applied methodology
Reported value:	0.1
Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	Yes
Details of monitoring equipment:	Default value as per applied methodology
If applicable, has the reported data been cross-checked with other available data?	As per applied methodology, a default value of 0.1 shall be used if baseline device is a three-stone fire using firewood (not charcoal), or a conventional device with no improved combustion air supply or flue gas ventilation, that is without a grate or a chimney. Before distributing the ICS, the PO has conducted the baseline survey and only household which were using traditional stoves or three-stone fires with firewood to cook meals are not eligible to receive the project ICS. The verification team during onsite visit has conducting interviews with end-users and stakeholders, it was verified that households in project activity had signed a beneficiary agreement /19/ to confirm again on this issue before receiving the project ICS.

	The VVB has reviewed the beneficiary agreement /19/ and confirmed that all the baseline cookstove in this project activity is traditional stoves or three-stone fires with firewood and therefore, the default value of 0.1 can be used.
How were the values in the monitoring report verified?	The value has been verified by checking the beneficiary agreement signed with end-user /19/ and interview during onsite audit.
Does the data management (from data generation to emission reduction calculation) ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?	Yes, the data management ensures correct transfer of data and reporting of emission reductions and all necessary QA/QC processes are in place.
In case only partial data are available because activity levels or non-activity parameters have not been monitored in accordance with the registered monitoring plan, has the most conservative assumption theoretically possible been applied or has a request for deviation been approved?	NA

Monitoring Parameter Requirement	Assessment/ Observation by the VVB
Data / Parameter: (as in monitoring plan of VCS PD):	The operating lifetime of the project device. (Life Span)
Measuring frequency/Time Interval:	Once at the time of project stove installation
Reporting frequency:	Once at the time of project stove installation
Reported value:	10
Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	Yes
Details of monitoring equipment:	Value obtained from Manufacturer specification /04/

If applicable, has the reported data been cross-checked with other available data?	Yes, the reported data in MR has been compared with monitoring survey records /07/ and the ER sheet /02/. The total number of ICS has been cross checked with the database /09/ and evidence to demonstrate ICS as free /15/ as provided by the PP.
How were the values in the monitoring report verified?	The value has been verified by checking the technical specification of the ICS /04/.
Does the data management (from data generation to emission reduction calculation) ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?	Yes, the data management ensures correct transfer of data and reporting of emission reductions and all necessary QA/QC processes are in place.
In case only partial data are available because activity levels or non-activity parameters have not been monitored in accordance with the registered monitoring plan, has the most conservative assumption theoretically possible been applied or has a request for deviation been approved?	NA

The verifier based on the above verified equations and the parameter values to replicate the annual emission reductions calculation as table below:

Name of PA	Age	Quantity	Start date of improved cookstove in a month	End date of distribution improved cookstove in a month	The start date of monitoring period	The end date of monitoring period	Equivalent Operational year in the monitoring period	$B_{y,savings,i,j}$	$EF_{wf,CO_2} + EF_{wf,non\ CO_2}$	$NCV_{wood\ fuel}$	$F_{NRB,y}$	Ny,i,j	Leakage factor	CERs
PA 001	3	9,814	7-Jan-22	6-May-22	1-Jan-24	30-Jun-24	0.49863	2.219	138.23	0.0156	0.6522	96.29%	0.95	13,972
PA 002	3	1,472	13-Apr-22	9-Aug-22	1-Jan-24	30-Jun-24	0.49863	2.219	138.23	0.0156	0.6522	96.29%	0.95	2,095
PA 003	2	8,342	1-Aug-22	8-Aug-22	1-Jan-24	30-Jun-24	0.49863	2.254	138.23	0.0156	0.6522	96.29%	0.95	12,063
PA 004	2	9,814	14-Oct-22	16-Oct-22	1-Jan-24	30-Jun-24	0.49863	2.254	138.23	0.0156	0.6522	96.29%	0.95	14,191
PA 005	2	4,907	17-Apr-22	22-Apr-22	1-Jan-24	30-Jun-24	0.49863	2.254	138.23	0.0156	0.6522	96.29%	0.95	7,095
PA 006	3	9,814	20-Apr-22	12-Jun-22	1-Jan-24	30-Jun-24	0.49863	2.219	138.23	0.0156	0.6522	96.29%	0.95	13,972
PA 007	3	9,814	12-Jun-22	19-Nov-22	1-Jan-24	30-Jun-24	0.49863	2.219	138.23	0.0156	0.6522	96.29%	0.95	13,972
PA 008	3	6,112	14-Nov-22	16-Nov-22	1-Jan-24	30-Jun-24	0.49863	2.219	138.23	0.0156	0.6522	96.29%	0.95	8,838
PA 010	2	3,702	15-May-22	15-Jun-22	1-Jan-24	30-Jun-24	0.49863	2.254	138.23	0.0156	0.6522	96.29%	0.95	5,271
PA 011	2	3,926	15-Jun-22	17-Nov-22	1-Jan-24	30-Jun-24	0.49863	2.254	138.23	0.0156	0.6522	96.29%	0.95	5,676
PA 012	3	9,814	17-May-22	19-May-22	1-Jan-24	30-Jun-24	0.49863	2.219	138.23	0.0156	0.6522	96.29%	0.95	13,972
PA 013	3	2,139	5-Jul-22	5-Jul-22	1-Jan-24	30-Jun-24	0.49863	2.219	138.23	0.0156	0.6522	96.29%	0.95	3,045
PA 014	2	2,768	7-Apr-22	6-May-22	1-Jan-24	30-Jun-24	0.49863	2.254	138.23	0.0156	0.6522	96.29%	0.95	4,002
PA 015	3	4,942	14-Jul-22	22-Jul-22	1-Jan-24	30-Jun-24	0.49863	2.219	138.23	0.0156	0.6522	96.29%	0.95	7,035
PA 016	2	2,807	16-Jul-22	9-Sep-22	1-Jan-24	30-Jun-24	0.49863	2.254	138.23	0.0156	0.6522	96.29%	0.95	4,057
PA 017	3	9,814	18-Jul-22	5-Oct-22	1-Jan-24	30-Jun-24	0.49863	2.254	138.23	0.0156	0.6522	96.29%	0.95	13,972
PA 018	2	9,813	8-Jul-22	4-Sep-22	1-Jan-24	30-Jun-24	0.49863	2.254	138.23	0.0156	0.6522	96.29%	0.95	14,190
PA 019	2	3,450	4-Sep-22	6-Sep-22	1-Jan-24	30-Jun-24	0.49863	2.254	138.23	0.0156	0.6522	96.29%	0.95	4,988
PA 020	2	4,907	5-Jun-22	18-Jul-22	1-Jan-24	30-Jun-24	0.49863	3.201	138.23	0.0156	0.6522	96.29%	0.95	7,095
PA 021	2	9,814	9-Jul-22	24-Jul-22	1-Jan-24	30-Jun-24	0.49863	3.201	138.23	0.0156	0.6522	96.29%	0.95	14,191
PA 022	2	7,440	22-Jul-22	24-Jul-22	1-Jan-24	30-Jun-24	0.49863	3.201	138.23	0.0156	0.6522	96.29%	0.95	10,757
PA 023	3	5,888	11-Jun-22	21-Jul-22	1-Jan-24	30-Jun-24	0.49863	3.156	138.23	0.0156	0.6522	96.29%	0.95	11,921
PA 024	2	3,926	21-Jul-22	4-Aug-22	1-Jan-24	30-Jun-24	0.49863	3.201	138.23	0.0156	0.6522	96.29%	0.95	8,060
PA 025	2	9,814	4-Aug-22	15-Aug-22	1-Jan-24	30-Jun-24	0.49863	3.201	138.23	0.0156	0.6522	96.29%	0.95	20,150
PA 026	2	9,814	12-Apr-22	15-Apr-22	1-Jan-24	30-Jun-24	0.49863	3.201	138.23	0.0156	0.6522	96.29%	0.95	20,150
PA 027	3	3,513	12-Apr-22	5-Jun-22	1-Jan-24	30-Jun-24	0.49863	3.156	138.23	0.0156	0.6522	96.29%	0.95	7,112

PA 028	2	6,301	5-Sep-22	7-Sep-22	1-Jan-24	30-Jun-24	0.49863	3.201	138.23	0.0156	0.6522	96.29%	0.95	12,936
PA 029	2	9,814	1-Sep-22	1-Oct-22	1-Jan-24	30-Jun-24	0.49863	3.201	138.23	0.0156	0.6522	96.29%	0.95	20,150
PA 030	2	9,814	1-Oct-22	7-Oct-22	1-Jan-24	30-Jun-24	0.49863	3.201	138.23	0.0156	0.6522	96.29%	0.95	20,150
PA 031	3	9,814	10-May-22	2-Jun-22	1-Jan-24	30-Jun-24	0.49863	3.156	138.23	0.0156	0.6522	96.29%	0.95	19,868
PA 032	3	9,814	16-May-22	16-May-22	1-Jan-24	30-Jun-24	0.49863	3.156	138.23	0.0156	0.6522	96.29%	0.95	19,868
PA 032	2	9,814	5-Jan-23	11-Jan-23	1-Jan-24	30-Jun-24	0.49863	3.201	138.23	0.0156	0.6522	96.29%	0.95	20,150
PA 033	2	9,814	8-Jan-23	10-Jan-23	1-Jan-24	30-Jun-24	0.49863	3.201	138.23	0.0156	0.6522	96.29%	0.95	20,150
PA 034	2	4,907	10-May-22	2-Jun-22	1-Jan-24	30-Jun-24	0.49863	3.201	138.23	0.0156	0.6522	96.29%	0.95	10,075
PA 034	3	9,814	2-Jan-23	2-Jan-23	1-Jan-24	30-Jun-24	0.49863	3.156	138.23	0.0156	0.6522	96.29%	0.95	19,868
PA 035	3	20	2-Jan-23	7-Jan-23	1-Jan-24	30-Jun-24	0.49863	3.156	138.23	0.0156	0.6522	96.29%	0.95	39
PA 036	2	3,237	2-Jan-23	7-Jan-23	1-Jan-24	30-Jun-24	0.49863	3.201	138.23	0.0156	0.6522	96.29%	0.95	6,644
PA 037	2	9,814	18-Apr-22	25-Jul-22	1-Jan-24	30-Jun-24	0.49863	3.201	138.23	0.0156	0.6522	96.29%	0.95	20,150
PA 038	3	6,674	18-Jul-22	18-Aug-22	1-Jan-24	30-Jun-24	0.49863	3.156	138.23	0.0156	0.6522	96.29%	0.95	13,510
PA 039	2	3,140	5-Aug-22	18-Aug-22	1-Jan-24	30-Jun-24	0.49863	3.201	138.23	0.0156	0.6522	96.29%	0.95	6,448
PA 040	2	9,814	5-Aug-22	13-Aug-22	1-Jan-24	30-Jun-24	0.49863	3.201	138.23	0.0156	0.6522	96.29%	0.95	29,051
PA 041	2	9,814	5-Aug-22	11-Sep-22	1-Jan-24	30-Jun-24	0.49863	3.201	138.23	0.0156	0.6522	96.29%	0.95	29,051
PA 042	3	4,504	3-Sep-22	4-Sep-22	1-Jan-24	30-Jun-24	0.49863	3.156	138.23	0.0156	0.6522	96.29%	0.95	9,118
PA 043	2	5,310	4-Sep-22	13-Sep-22	1-Jan-24	30-Jun-24	0.49863	3.201	138.23	0.0156	0.6522	96.29%	0.95	10,902
PA 044	2	9,814	4-Sep-22	11-Dec-22	1-Jan-24	30-Jun-24	0.49863	3.201	138.23	0.0156	0.6522	96.29%	0.95	20,150
PA 045	2	9,814	22-Apr-22	14-Sep-22	1-Jan-24	30-Jun-24	0.49863	3.201	138.23	0.0156	0.6522	96.29%	0.95	20,150
PA 046	2	9,814	7-Sep-22	22-Oct-22	1-Jan-24	30-Jun-24	0.49863	3.201	138.23	0.0156	0.6522	96.29%	0.95	20,150
PA 047	2	9,814	12-Oct-22	22-Oct-22	1-Jan-24	30-Jun-24	0.49863	3.201	138.23	0.0156	0.6522	96.29%	0.95	20,150
PA 048	2	9,814	18-Sep-22	22-Sep-22	1-Jan-24	30-Jun-24	0.49863	2.254	138.23	0.0156	0.6522	96.29%	0.95	20,150
PA 049	2	9,814	22-Sep-22	14-Nov-22	1-Jan-24	30-Jun-24	0.49863	2.254	138.23	0.0156	0.6522	96.29%	0.95	20,150
PA 051	2	9,814	21-Sep-22	14-Oct-22	1-Jan-24	30-Jun-24	0.49863	2.254	138.23	0.0156	0.6522	96.29%	0.95	20,150
PA 052	3	5,005	8-Oct-22	11-Oct-22	1-Jan-24	30-Jun-24	0.49863	2.219	138.23	0.0156	0.6522	96.29%	0.95	10,131
PA 053	2	4,809	28-Jul-22	13-Nov-22	1-Jan-24	30-Jun-24	0.49863	2.254	138.23	0.0156	0.6522	96.29%	0.95	9,874
PA 054	2	9,814	10-May-22	13-Jun-22	1-Jan-24	30-Jun-24	0.49863	2.254	138.23	0.0156	0.6522	96.29%	0.95	20,150
PA 055	2	9,814	13-Jun-22	9-Oct-22	1-Jan-24	30-Jun-24	0.49863	2.254	138.23	0.0156	0.6522	96.29%	0.95	20,150
PA 056	2	9,814	6-Oct-22	18-Dec-22	1-Jan-24	30-Jun-24	0.49863	2.254	138.23	0.0156	0.6522	96.29%	0.95	14,191

PA 057	2	9,795	11-Dec-22	16-Dec-22	1-Jan-24	30-Jun-24	0.49863	2.254	138.23	0.0156	0.6522	96.29%	0.95	14,163
PA 059	2	9,814	5-Aug-22	14-Sep-22	1-Jan-24	30-Jun-24	0.49863	2.254	138.23	0.0156	0.6522	96.29%	0.95	14,191
PA 060	2	6,870	10-Sep-22	10-Nov-22	1-Jan-24	30-Jun-24	0.49863	2.254	138.23	0.0156	0.6522	96.29%	0.95	9,934
PA 061	2	9,814	7-Nov-22	5-Dec-22	1-Jan-24	30-Jun-24	0.49863	2.254	138.23	0.0156	0.6522	96.29%	0.95	14,191
PA 062	3	9,814	20-Jul-22	15-Dec-22	1-Jan-24	30-Jun-24	0.49863	2.254	138.23	0.0156	0.6522	96.29%	0.95	13,972
PA 062	3	6,036	3-Jan-23	6-Jan-23	1-Jan-24	30-Jun-24	0.49863	2.219	138.23	0.0156	0.6522	96.29%	0.95	8,593
PA 063	2	3,778	2-Jan-23	6-Jan-23	1-Jan-24	30-Jun-24	0.49863	2.254	138.23	0.0156	0.6522	96.29%	0.95	5,463
PA 064	2	9,814	4-Jul-22	21-Oct-22	1-Jan-24	30-Jun-24	0.49863	3.201	138.23	0.0156	0.6522	96.29%	0.95	14,191
PA 065	2	3,935	14-Oct-22	27-Nov-22	1-Jan-24	30-Jun-24	0.49863	3.201	138.23	0.0156	0.6522	96.29%	0.95	5,690
PA 066	2	9,814	21-Nov-22	27-Nov-22	1-Jan-24	30-Jun-24	0.49863	3.201	138.23	0.0156	0.6522	96.29%	0.95	14,191
PA 067	2	9,814	21-Nov-22	22-Nov-22	1-Jan-24	30-Jun-24	0.49863	3.201	138.23	0.0156	0.6522	96.29%	0.95	14,191
PA 068	2	9,814	23-Apr-22	26-Apr-22	1-Jan-24	30-Jun-24	0.49863	3.201	138.23	0.0156	0.6522	96.29%	0.95	14,191
PA 069	2	6,717	23-Apr-22	10-Nov-22	1-Jan-24	30-Jun-24	0.49863	3.201	138.23	0.0156	0.6522	96.29%	0.95	9,713
PA 070	2	3,097	8-Nov-22	23-Nov-22	1-Jan-24	30-Jun-24	0.49863	3.201	138.23	0.0156	0.6522	96.29%	0.95	4,478
PA 071	2	9,814	10-Nov-22	19-Nov-22	1-Jan-24	30-Jun-24	0.49863	3.201	138.23	0.0156	0.6522	96.29%	0.95	14,191
PA 072	2	9,814	3-Nov-22	16-Nov-22	1-Jan-24	30-Jun-24	0.49863	3.201	138.23	0.0156	0.6522	96.29%	0.95	20,150
PA 073	2	9,814	7-Nov-22	19-Nov-22	1-Jan-24	30-Jun-24	0.49863	3.201	138.23	0.0156	0.6522	96.29%	0.95	20,150
PA 074	2	9,814	1-Nov-22	19-Dec-22	1-Jan-24	30-Jun-24	0.49863	3.201	138.23	0.0156	0.6522	96.29%	0.95	20,150
PA 075	2	9,814	15-Dec-22	19-Dec-22	1-Jan-24	30-Jun-24	0.49863	3.201	138.23	0.0156	0.6522	96.29%	0.95	20,150
PA 076	3	9,814	16-Aug-22	10-Sep-22	1-Jan-24	30-Jun-24	0.49863	3.156	138.23	0.0156	0.6522	96.29%	0.95	19,868
PA 077	3	2,434	6-Sep-22	8-Oct-22	1-Jan-24	30-Jun-24	0.49863	3.156	138.23	0.0156	0.6522	96.29%	0.95	4,928
PA 078	2	7,380	30-Jun-22	30-Jun-22	1-Jan-24	30-Jun-24	0.49863	3.201	138.23	0.0156	0.6522	96.29%	0.95	15,152
PA 080	2	9,814	18-Jun-22	3-Nov-22	1-Jan-24	30-Jun-24	0.49863	3.201	138.23	0.0156	0.6522	96.29%	0.95	20,150
PA 081	2	9,814	6-Nov-22	19-Nov-22	1-Jan-24	30-Jun-24	0.49863	3.201	138.23	0.0156	0.6522	96.29%	0.95	20,150
PA 082	2	9,814	3-Nov-22	16-Nov-22	1-Jan-24	30-Jun-24	0.49863	3.201	138.23	0.0156	0.6522	96.29%	0.95	20,150
PA 083	2	9,814	16-Jun-22	27-Dec-22	1-Jan-24	30-Jun-24	0.49863	3.201	138.23	0.0156	0.6522	96.29%	0.95	20,150
PA 084	2	9,814	21-Dec-22	27-Dec-22	1-Jan-24	30-Jun-24	0.49863	3.201	138.23	0.0156	0.6522	96.29%	0.95	20,150
PA 085	2	9,814	21-Dec-22	21-Dec-22	1-Jan-24	30-Jun-24	0.49863	3.201	138.23	0.0156	0.6522	96.29%	0.95	29,051
PA 085	2	9,814	1-Jan-23	3-Jan-23	1-Jan-24	30-Jun-24	0.49863	3.201	138.23	0.0156	0.6522	96.29%	0.95	20,150
PA 086	2	9,814	9-May-22	20-Dec-22	1-Jan-24	30-Jun-24	0.49863	3.201	138.23	0.0156	0.6522	96.29%	0.95	20,150

PA 087	3	518	16-Dec-22	20-Dec-22	1-Jan-24	30-Jun-24	0.49863	3.156	138.23	0.0156	0.6522	96.29%	0.95	1,047
PA 088	3	5,358	16-Dec-22	20-Dec-22	1-Jan-24	30-Jun-24	0.49863	3.156	138.23	0.0156	0.6522	96.29%	0.95	10,846
PA 088	2	4,456	8-Jan-23	9-Jan-23	1-Jan-24	30-Jun-24	0.49863	3.201	138.23	0.0156	0.6522	96.29%	0.95	9,149
PA 089	2	9,814	11-May-22	3-Jun-22	1-Jan-24	30-Jun-24	0.49863	3.201	138.23	0.0156	0.6522	96.29%	0.95	20,150
PA 090	2	9,814	4-Oct-22	24-Oct-22	1-Jan-24	30-Jun-24	0.49863	3.201	138.23	0.0156	0.6522	96.29%	0.95	20,150
PA 091	3	8,047	9-Oct-22	28-Oct-22	1-Jan-24	30-Jun-24	0.49863	3.156	138.23	0.0156	0.6522	96.29%	0.95	16,290
PA 092	2	1,767	8-Dec-22	11-Dec-22	1-Jan-24	30-Jun-24	0.49863	3.201	138.23	0.0156	0.6522	96.29%	0.95	3,629
PA 093	2	9,814	6-Dec-22	8-Dec-22	1-Jan-24	30-Jun-24	0.49863	3.201	138.23	0.0156	0.6522	96.29%	0.95	20,150
PA 093	2	9,476	13-Jan-23	14-Jan-23	1-Jan-24	30-Jun-24	0.49863	3.201	138.23	0.0156	0.6522	96.29%	0.95	19,454
PA 094	3	8,097	1-Dec-22	6-Dec-22	1-Jan-24	30-Jun-24	0.49863	2.219	138.23	0.0156	0.6522	96.29%	0.95	16,393
PA 095	2	1,717	5-Dec-22	8-Dec-22	1-Jan-24	30-Jun-24	0.49863	2.254	138.23	0.0156	0.6522	96.29%	0.95	3,524
PA 096	2	9,814	3-Jan-22	6-Jan-23	1-Jan-24	30-Jun-24	0.49863	2.254	138.23	0.0156	0.6522	96.29%	0.95	20,150
PA 097	2	8,189	29-Apr-22	6-May-22	1-Jan-24	30-Jun-24	0.49863	2.254	138.23	0.0156	0.6522	96.29%	0.95	16,813
PA 098	3	9,814	13-Jan-23	13-Jan-23	1-Jan-24	30-Jun-24	0.49863	3.201	138.23	0.0156	0.6522	96.29%	0.95	19,868
TOTAL														1,556,062

In conclusion, the verification team confirms that all parameters are used correctly in the calculations, all results are verifiable and transparent, all assumptions are described and based on verifiable evidence and calculations are done in accordance with the pre-defined formulae from registered VCS PD /24/. The total number of emission reductions for the monitoring period **01-January-2024 to 30-June-2024** is 1,556,062 tCO₂e.

The verification team has checked and confirmed the calculations in the spreadsheet and found to be accurate. The monitoring report is supported by emission reduction spreadsheet. The consistency and formula were verified and found to be accurate.

4.4 Quality of Evidence to Determine Reductions and Removals

EPL verification team was able to confirm that the calculations are based on authentic data and the ER spreadsheet /02/ used to calculate the VCU calculations and all figures were tracked, checked, and found to be consistent.

The quality of supporting evidence submitted to the VVB for verification is adequate and found to be verifiable. The transfer of carbon rights and other supporting documents related to quality and maintenance were checked by the verification team during the on-site audit to confirm the authenticity of the documents and to check the correctness of the calculation.

When verifying the reported emission reductions, EPL ensured that there was a clear audit trail that contained the evidence and records that validate the stated figures. All source of documents that form the basis for assumptions and other information underlying the GHG data were checked by the verification team.

When assessing the audit trails, EPL also examined:

1. Whether sufficient evidence was available, both in terms of frequency and in covering the full monitoring period
2. The source and nature of the evidence.
3. If comparable information was available from sources other than that used in the monitoring report, EPL cross-checked the monitoring report against the other sources to confirm that the stated figures were correct.

EPL also assessed that the data collection system met the requirements of the monitoring plan as per the applied methodology /B02/.

Proper data management inclusive of data acquisition and aggregation, data management system is being followed for the project activity.

Therefore, Verification Team of EPL hereby confirms that the evidence used to determine the GHG emission reductions are sufficient in quantity and appropriate in quality.

4.5 Non-Permanence Risk Analysis

N/A

There is no requirement for non-permanence risk analysis for this project.

5 VERIFICATION OPINION

5.1 Verification Summary

EcoLance Private Limited, (the VVB) has performed the fourth (4th) emission reduction verification of the registered VCS project activity “Grouped Projects for Viet Nam Cookstove Program” having VCS ID: 2923. The scope of the activities covers the verification and certification of GHG emissions reductions reported in latest monitoring report /01/. And this report summarizes the findings of the verification of the project, performed on the basis of VCS criteria, as well as criteria given to provide for consistent project operations, monitoring and reporting.

The project activity falls under the group project which involves the distribution of fuel-efficient improved cook stoves (ICS) in Viet Nam. The verification process was performed on the basis of all guidance and criteria as provided in VCS Standard version 4.7 /B01-a/, VCS Program Guide version 4.4 /B01-b/, VCS Validation and Verification Manual version 3.2 /B01-c/, ISO14064-3: 2019 and Registration & Issuance Process version 4.5 /B01-d/.

The component project activities PA001, PA002, PA003, PA004, PA005, PA006, PA007, PA008, PA010, PA011, PA012, PA013, PA014, PA015, PA016, PA017, PA018, PA019, PA020, PA021, PA022, PA023, PA024, PA025, PA026, PA027, PA028, PA029, PA030, PA031, PA032, PA033, PA034, PA035, PA036, PA037, PA038, PA039, PA040, PA041, PA042, PA043, PA044, PA045, PA046, PA047, PA048, PA049, PA051, PA052, PA053, PA054, PA055, PA056, PA057, PA059, PA060, PA061, PA062, PA063, PA064, PA065, PA066, PA067, PA068, PA069, PA070, PA071, PA072, PA073, PA074, PA075, PA076, PA077, PA078, PA080, PA081, PA082, PA083, PA084, PA085, PA086, PA087, PA088, PA089, PA090, PA091, PA092, PA093, PA094, PA095, PA096, PA097, PA98 were correctly implemented according to selected monitoring methodology, monitoring plan and the registered VCS PD /24/ for the grouped project activity. The monitoring system was installed, maintained in a proper manner, while collected monitoring data allowed for the verification of the amount of achieved GHG emission reductions. Through the review and on-visit the verification team confirms that the project activity has resulted in emission reductions of 1,556,062 tCO₂e during the fourth monitoring period **01-January-2024 to 30-June-2024** as per MR /01/.

5.2 Verification Conclusion

EcoLance Private Limited as a VVB is able to issue a positive verification opinion expressed in the attached Certification statement. And as the result of verification of the project activity of this grouped project, the verifier confirms that the GHG emission reductions are calculated without material misstatements in a conservative and appropriate manner. The project complies with the verification criteria for projects and their GHG emissions reductions or removal set out in VCS criteria.

EcoLance Private Limited herewith confirms that the project has achieved emissions reductions in the mentioned reporting period as follows.

Verification period: From 01-January-2024 to 30-June-2024

Verified GHG emission reductions and removals in this verification period is as below:

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

Vintage period	Baseline emissions (tCO ₂ e)	Project emissions (tCO ₂ e)	Leakage emissions (tCO ₂ e)	Reduction VCU (tCO ₂ e)	Removal VCU (tCO ₂ e)	Total VCUs (tCO ₂ e)
01-January-2024 to 30-June-2024	1,556,062	0	0	1,556,062	0	1,556,062
Total	1,556,062	0	0	1,556,062	0	1,556,062

5.3 Ex-ante vs Ex-post ERR Comparison

Vintage period	Ex-ante estimated reductions/removals	Achieved reductions/removals	Percent difference	Explanation for the difference
01-January-2024 to 30-June-2024	1,661,733	1,556,062	-6.36%	- Parameter By=1,new,i,j,survey is estimated value in registered PD, when do monitoring, this value is decrease.
Total	1,661,733	1,556,062	-6.36%	- The fraction of operation cookstove is decrease - Efficiency of cookstove reduce annually

APPENDIX 1: COMMERCIALLY SENSITIVE INFORMATION

Not applicable.

No commercially sensitive information included in the monitoring report to be excluded in the public version.

<i>Section</i>	<i>Information</i>	<i>Justification</i>	<i>Assessment method and conclusion</i>
N/A	N/A	N/A	N/A

APPENDIX 2: ABBREVIATIONS

AQL	Acceptable Quality Level
BAU	Business As Usual
CA	Corrective Action / Clarification Action
CAR	Corrective Action Request
CDM	Clean Development Mechanism
CER	Certified Emission Reduction
CL	Clarification Request
CO₂	Carbon Dioxide
CO_{2e}	Carbon Dioxide Equivalent
DVR	Draft Validation Report
EB	CDM Executive Board
EF	Emission Factor
EPL	EcoLance Private Limited
FA	Final Approval
FAR	Forward Action Request
FVR	Final validation Report
GCC	Global Carbon Council
GHG	Greenhouse gas(es)
GS	Gold Standard
GWh	Giga Watt Hour
ICS	Improved Cooking Stove
IPCC	Intergovernmental Panel on Climate Change
MW	Megawatts
MWh	Mega Watt Hour
OSV	On Site Visit
QC/QA	Quality control/ Quality assurance
SDG	Sustainable Development Goal
SIPCO	Sustainability Investment Promotion and Development Joint Stock Company
REC	Renewable Energy Certificate
TA	Technical Area
TR	Technical Review
UNFCCC	United Nations Framework Convention on Climate Change
UQL	Unacceptable Quality Level
VCS	Verified Carbon Standard
VVB	Validation / Verification Body

APPENDIX 3: REFERENCE DOCUMENTS

Ref	Document
/01/	- Monitoring report for Grouped Projects for Viet Nam Cookstove Program (version 01, dated 12-July-2024) - Monitoring report for Grouped Projects for Viet Nam Cookstove Program (version 02; dated: 28-August-2024) - Monitoring report for Grouped Projects for Viet Nam Cookstove Program (version 03; dated: 08-November-2024)
/02/	ER calculation spread sheet “VCS_ER_ID2923_10JAN2024_30JUN2024” correspond to /01-2/
/03/	Agreement between beneficiary and SIPCO first stove distributed/installed ICS-N001-00001 (evidence for the start date of the grouped project)
/04/	Technical specifications of the TK90 Rocket and Ecozen Stove including the life span. - The efficiency test report and certificate of Ecozen and TK90 cookstove model. - The Ecozen_WIPO and TK9_WIPO Certificates - The Ecozen and TK90 Lifespan certificates
/05/	Proof of right of VCUs.
/06/	Baseline survey report prepared by SIPCO
/07/	Signed declaration by PP as evidence for free distribution of improved cookstoves.
/08/	Local stakeholders meeting related evidence - Invitation Letter - MoM of LSC - LSC Project Introduction
/09/	Project implementation schedule.
/10/	Evidence of unique identification system of the ICS.
/11/	Global Alliance for Clean cookstove (evidence for stove efficiency tests performed by third party).
/12/	fNRB report and calculation done by C4 EcoSolutions (Pty) Ltd.
/13/	Sample sales records/warranty cards for the stove
/14/	Monitoring survey questionnaire template & monitoring survey records
/15/	Declaration from the project proponent that the project is not creating any other form of environmental credit under any specific program.

/16/	Declaration from the project proponent that the project has not or shall not claim carbon credits any other scheme after Registration of the project under VCS.
/17/	ICS distribution agreement between Women Union and SIPCO
/18/	Training plan/ records of personnel appointed for surveys.
/19/	Distribution Database & beneficiary agreement
/20/	Sample planning
/21/	Random generator
/22/	Annual reports by Women Union to SIPCO & by SIPCO to donor
/23/	Registered VCS PD & corresponding validation report.
/24/	MR of 1st monitoring period & corresponding verification report.
/25/	Grievance form and response from PP
/26/	Company code of conduct Business License
/27/	f _{NRB} report and calculation done by C4 EcoSolutions (Pty) Ltd, dated 12 May 2023
/28/	ICS procurement documents - Equipment contract - Delivery confirmation - Payment proof
/29/	Payroll & salary receipt information Employment contract

Background Documents

Ref	Document
/B01/	VCS Requirements a. VCS Program Guide version 4.4, updated 29-August-2023 b. VCS Standard version 4.7, updated 16-April-2024 c. Program Definitions version 4.5, updated 16-April-2024 d. Registration & Issuance Process version 4.5 updated 16-April-2024 e. VCS validation and verification manual version 3.2, dated 19-October-2016 f. VCS Verification report template v4.3, dated 29-August-2023

/B02/	Applied baseline and monitoring methodology 1. VMR0006 “Methodology for installation of High efficiency firewood cookstoves”, version 1.1
/B03/	a. “Standard for sampling and surveys for CDM project activities and programme of activities” (version 09.0) b. Guidelines for sampling and surveys for CDM project activities and Programme of Activities (version 04)
/B04/	Website and links: 1. IPCC (http://www.ipcc-nggip.iges.or.jp) 2. http://cdm.unfccc.int 3. http://www.terra.org

APPENDIX 4: CERTIFICATES OF COMPETENCE



Certificate of Appointment

<< TRANG NGUYEN >>

The qualification and appointment are done following the requirements of
ECOLANCE PRIVATE LIMITED (EPL/PR/5)

Standard/ Scheme			
☒ VCS	☐ CCBS	☒ GS4GG	☒ GCC
☐ SD Vista	☐ Social Carbon	☐ Plan Vivo	☐ Plastic Standard
☐ CerCarbono	☐ ISO 14064-1: 2018		

Role			
☒ Auditor	☒ Team Leader	☐ Reviewer	☒ Technical Expert
☐ Financial Expert	☐ Trainee	☒ Local Expert (Vietnam)	☐ GHG Verifier [Applicable to 14064-1: 2018]

Sectoral Scopes	
☒ Energy Industries (Renewable/Non-Renewable)	
☒ Energy Demand	
☒ Waste Handling and Disposal	
☐ Forestry and Other Land Use	
☐ Agriculture	
☐ Livestock and Manure	
☐ General [Applicable to 14064-1: 2018]	

Certificate No	EPL/CER/TN/2
Date	15/02/2024
Validity	14/02/2025

Authorized by	Rekha Menon
Designation	Director
	



Certificate of Appointment

<< ESWAR MURTY >>

The qualification and appointment are done following the requirements of
ECOLANCE PRIVATE LIMITED (EPL/PR/5)

Standard/ Scheme			
☒ VCS	☒ CCBS	☒ GS4GG	☒ GCC
☐ SD Vista	☒ Social Carbon	☐ Plan Vivo	☐ Plastic Standard
☐ CerCarbono	☒ ISO 14064-1: 2018		

Role			
☒ Auditor	☒ Team Leader	☒ Reviewer	☒ Technical Expert
☐ Financial Expert	☐ Trainee	☐ Local Expert	☒ GHG Verifier [Applicable to 14064-1: 2018]

Sectoral Scopes	
☒ Energy Industries (Renewable/Non-Renewable)	
☒ Energy Demand	
☒ Waste Handling and Disposal	
☐ Forestry and Other Land Use	
☐ Agriculture	
☐ Livestock and Manure	
☒ General [Applicable to 14064-1: 2018]	

Certificate No	EPL/CER/EM/1
Date	15/02/2024
Validity	14/02/2025

Authorized by	Rekha Menon
Designation	Director
	

EPL/PR/5

ECOLANCE PRIVATE LIMITED

Version 2

12-02-2024



Certificate of Appointment

<< CHAMPOK BURAGOHAIN >>

The qualification and appointment are done following the requirements of
ECOLANCE PRIVATE LIMITED (EPL/PR/5)

Standard/ Scheme			
☒ VCS	☒ CCBS	☒ GS4GG	☒ GCC
☐ SD Vista	☒ Social Carbon	☐ Plan Vivo	☐ Plastic Standard
☐ CerCarbono	☒ ISO 14064-1: 2018		

Role			
☒ Auditor	☒ Team Leader	☐ Reviewer	☒ Technical Expert
☐ Financial Expert	☐ Trainee	☐ Local Expert	☒ GHG Verifier [Applicable to 14064-1: 2018]

Sectoral Scopes	
☒ Energy Industries (Renewable/Non-Renewable)	
☒ Energy Demand	
☒ Waste Handling and Disposal	
☐ Forestry and Other Land Use	
☐ Agriculture	
☐ Livestock and Manure	
☒ General [Applicable to 14064-1: 2018]	

Certificate No	EPL/CER/CH/4
Date	15/02/2024
Validity	14/02/2025

Authorized by	Rekha Menon
Designation	Director
	

APPENDIX 5: FINDING LOGS

Table 1. CLs from this verification

Finding	CL 01		
Classification	☐ CAR	☒ CL	☐ FAR
Description of finding (VVB)	Section 1.12 1. The SDG indicators do not align with the contributions reported. In some cases, the indicator intends to collect a “proportion” or “rate”, yet the contribution does not align. 2. The contribution reported over the project lifetime is incorrect as per the template’s requirement 3. There is no evidence provided to support the reported contributions.		
Corrective Action or clarification #1 <i>(PP shall write a detailed and clear corrective action or further information for clarification as per finding)</i>	1. PPs have revised and reported the description of the contribution which aligned with the SDG indicators. The indicator intends to collect a “proportion” or “rate” have been revised to “project specific indicator” in section 1.12 of revised MR, version 02 2. The PP has submitted the revised VCS MR. In section 1.12, PPs have revised information in column “Contributions Over Project Lifetime”. In this column, PP has reported the cumulative contributions over the project lifetime. 3. PPs have submitted evidence supporting their contribution to SDG 8.3, including employment contracts for 10 employees for assembling and maintenance ICSs in this monitoring period. Furthermore, the grouped project activity has distributed 850,000 ICSs to households in Viet Nam. This has provided families with greater access to basic service (SDG 1.4) and clean technology, (SDG 7.1). The project has also managed to reduce total fuelwood usage, generating 1,556,769 tCO2e of emission reductions (SDG 13) during this monitoring period. The project has contributed an estimated reduction in removal of 1,144,661 tons wood fuel (SDG 15.1) In this monitoring period		
VVB Assessment #1	On the basis of review of the revised MR, it is clear that PP has revised the SDG indicators & the project contribution.		

<i>The assessment shall encompass all open issues in the finding. In case of non-closure, additional corrective action and VVB assessments (#2, #3, etc.) shall be added.</i>	1. The SDG indicators is now aligned with the contributions reported. 2. In section 1.12, PPs have revised information in column “Contributions Over Project Lifetime” correctly. 3. The project activity has distributed ICS to households and provided families with greater access to basic services in the form of clean cooking technology, supporting SDG 7.1. This activity helps reduce the total fuel wood usage in the project area and therefore save woody biomass and emission reduction (SDG13) during this monitoring period as verified during onsite interview with stakeholders, distribution database, MR & excel calculation sheet. The project activity also contributes to SDG target 8.3 by creating additional employment opportunities. This was confirmed by examining the payrolls, receipt confirmation and employment contracts of people, which provided clear details on employees' ages and genders. As a result, the verification team confirms that the project activity has contributed to at least 3 SDG targets (SDG 13, SDG 8 & SDG 7) by the end of this monitoring period, in line with the requirement of 3.17.1 of VCS standard 4.7.
Conclusion <i>Tick the appropriate checkbox</i>	☐ To be checked during the next periodic verification ☐ Outstanding finding (not closed) ☒ The finding is closed

Finding	CL 02		
Classification	☐ CAR	☒ CL	☐ FAR
Description of finding (VVB)	In Section 2.1.2, please include the date of the initial stakeholder consultation and the date of ongoing communication activities for this monitoring period. The current Monitoring Report only mentions the date of the report, which does not meet the requirements.		
Corrective Action or clarification #1 <i>(PP shall write a detailed and clear corrective action or further</i>	PP has included the date of the initial stakeholder consultation and the date of ongoing communication activities for this monitoring period in section 2.1.2 of the revised MR, ver 02		

information for clarification as per finding)	
VVB Assessment #1 <i>The assessment shall encompass all open issues in the finding. In case of non-closure, additional corrective action and VVB assessments (#2, #3, etc.) shall be added.</i>	On the basis of review of the revised MR, and supporting documents including the ongoing communication reports, it is clear that the information has been reported correctly in the section 2.1.2 of updated MR.
Conclusion <i>Tick the appropriate checkbox</i>	☐ To be checked during the next periodic verification ☐ Outstanding finding (not closed) ☒ The finding is closed

Finding	CL 03		
Classification	☐ CAR	☒ CL	☐ FAR
Description of finding (VVB)	During the onsite visit, the verification team discovered that the labels with the serial numbers for the project stoves are easily damaged. Please explain to the verification team how PP can ensure the unique identification of these stoves throughout the project lifetime.		
Corrective Action or clarification #1 <i>(PP shall write a detailed and clear corrective action or further information for clarification as per finding)</i>	The label with the serial number of the stove are not long-lasting labels, it can be used for about 3-6 months before they are totally damaged. Therefore, PPs at the time of distributing the stoves to the households should give the households a set of labels and ask the households to re-stick them when the label begin to be burnt. Women Union staffs shall periodically check the using status of the cookstoves being delivered to households, they shall also check the status of the label of stove and ask the households to replace if the label being damaged.		
VVB Assessment #1 <i>The assessment shall encompass all open issues in the finding. In case of non-closure, additional corrective action and VVB assessments (#2, #3, etc.) shall be added.</i>	On the basis of interview with end-users, PP and women union, the verification team confirmed that the labels has bee distributed to the end-users for replacement if need.		
Conclusion	☐ To be checked during the next periodic verification		

Tick the appropriate checkbox	☐ Outstanding finding (not closed)
	☒ The finding is closed

Finding	CL 04		
Classification	☐ CAR	☒ CL	☐ FAR
Description of finding (VVB)	In Section 4.2, parameter $N_{y,i,j}$, please clarify to the verification team why the proportion of operational stoves during the last monitoring period was 98.16%, yet only one stove was removed from the overall population. Additionally, can you explain why there is no information provided about the other non-operational stoves identified, aside from the one noted during the last monitoring survey?		
Corrective Action or clarification #1 <i>(PP shall write a detailed and clear corrective action or further information for clarification as per finding)</i>	To be conservative, PP has recalculated the emission reductions, using the proportion of operational stove during the last monitoring period of 98.14% to calculate number of operated ICSs in this monitoring. The total number of stoves used to calculate the sample size in this monitoring period was 834,190 stoves. Information about the non-operational stoves of last MR has been identified in updated MR, ver 02		
VVB Assessment #1 <i>The assessment shall encompass all open issues in the finding. In case of non-closure, additional corrective action and VVB assessments (#2, #3, etc.) shall be added.</i>	On the basis of review the revised MR, the verification team found the calculation method is now conservative and thus accept it.		
Conclusion <i>Tick the appropriate checkbox</i>	☐ To be checked during the next periodic verification ☐ Outstanding finding (not closed) ☒ The finding is closed		

Finding	CL 05		
Classification	☐ CAR	☒ CL	☐ FAR
Description of finding (VVB)	In Section 4.2, regarding the monitoring parameter $By=1,new,i,j,survey$ (Annual quantity of woody biomass used by		

	improved cookstoves in tonnes per device of type I and batch j, it is not clear which when was the survey conducted for this parameter. The detailed of monitoring equipment is missing also in the section.
Corrective Action or clarification #1 <i>(PP shall write a detailed and clear corrective action or further information for clarification as per finding)</i>	The monitoring parameter By=1,new,i,j,survey determined in the first monitoring period. The time of conducted survey and detail of monitoring equipment for this parameter have been added in section 4.2 of revised MR, ver 02.
VVB Assessment #1 <i>The assessment shall encompass all open issues in the finding. In case of non-closure, additional corrective action and VVB assessments (#2, #3, etc.) shall be added.</i>	On the basis of review the revised MR, the verification team confirmed that the details on survey of parameter By=1,new,i,j,survey has been included, the details of monitoring equipment was provided also. The verification team has checked and confirmed it is correctly included.
Conclusion <i>Tick the appropriate checkbox</i>	☐ To be checked during the next periodic verification ☐ Outstanding finding (not closed) ☒ The finding is closed

Table 2. CARs from this verification

Finding	CAR 01		
Classification	☒ CAR	☐ CL	☐ FAR
Description of finding (VVB)	1/ There was no evidence of training provided to surveyors before conducting the monitoring survey. The training record provided to the verification team was conducted from 01/2023. 2/ In Section 4.3, please also elaborate the implementation of the monitoring survey. How many surveyors has been involved in the process, how can all 54 samples be collected from 30 provinces in just 8 days?		
Corrective Action or clarification #1	1/ The updated evidence of training has been provided to VVB for coss check		

<i>(PP shall write a detailed and clear corrective action or further information for clarification as per finding)</i>	2/ We divide to 4 teams to conduct survey on 30 provinces of Viet Nam from 10 to 18 June 2024. Team 1: Dien Bien, Lai Chau, Lao Cai, Hà Giang, Tuyen Quang, Bac Kan, Lang Son Provinces Team 2: Vinh Phuc, Bac Ninh, Hai Duong, Hung Yen, Nam Dinh and Ha Tinh provinces Team 3: Gia Lai, Dak Lak, Dak Nong, Phu Yen, Lam Dong, Khanh Hoa and Ninh Thuan Provinces Team 4: Quang Binh, Quang Tri, Hue, Quang Nam, Quang Ngai provinces Survey team conducted survey 01-02 days/province depend on number of sample size of each province.
VVB Assessment #1 <i>The assessment shall encompass all open issues in the finding. In case of non-closure, additional corrective action and VVB assessments (#2, #3, etc.) shall be added.</i>	On the basis of review of the updated MR and supporting document including monitoring survey records & interview with sampling team, the verification team confirmed that the details has been provided correctly.
Conclusion <i>Tick the appropriate checkbox</i>	☐ To be checked during the next periodic verification ☐ Outstanding finding (not closed) ☒ The finding is closed

Finding	CAR 02		
Classification	☒ CAR	☐ CL	☐ FAR
Description of finding (VVB)	Section 5.4 of the MR does not include the relevant equations and does not provide sufficient information to allow a reader to reproduce the calculations.		
Corrective Action or clarification #1 <i>(PP shall write a detailed and clear corrective action or further information for clarification as per finding)</i>	The detail about calculation of ER has been provided in section 5.4 of the revised MR, version 02		

VVB Assessment #1 <i>The assessment shall encompass all open issues in the finding. In case of non-closure, additional corrective action and VVB assessments (#2, #3, etc.) shall be added.</i>	On the basis of review of the updated ER, it is clear that the PP has included the relevant equations and sufficient information to reproduce the calculations as requested by the VCS Project Standard v4.7.
Conclusion <i>Tick the appropriate checkbox</i>	☐ To be checked during the next periodic verification ☐ Outstanding finding (not closed) ☒ The finding is closed