



Verified Carbon Standard

EMPOWERING COMMUNITIES THROUGH IMPROVED COOKSTOVES



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Client	CarbonKind Ltd
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Summary:

- **A description of the project**

The project “Empowering Communities Through Improved Cookstoves” employs VCS methodology; VMR0006 version 1.2 /B02/. The project involves distribution of high thermal efficiency fuel-efficient improved cookstoves (ICS) to replace the baseline cookstove models at household level in Togo and may expand further into Benin. It is intended that under this project high thermal efficient cookstoves will be distributed which will burn wood more efficiently thereby improving thermal transfer to pots, saving fuel wood. In addition to halting the progressing deforestation in Togo, this project will also help in reducing health risks associated with indoor smoke pollution and time spent for the collection of firewood.

- **A description of the validation and verification**

Validation and Verification: Carbon Kind Ltd has appointed Carbon Check (India) Private Ltd., to carry out the combined validation and verification of the project “Empowering Communities Through Improved Cookstoves”, with regards to the relevant requirements of VCS Standard V4.6 (dated 21-March-2024). The combined validation and verification are based on the site visit, desk review of the VCS Joint PD & MR and the corresponding supporting emission reduction calculation spread sheets /02/and other relevant supporting documents made available to the validation and verification team by the project proponent accompanied by on-site interviews. This verification involves the period of 01-March-2023 to 29-february -2024.

- **The purpose and scope of validation and verification**

Purpose: The purpose of validation is to have a thorough and independent assessment of the proposed project activity against the applicable VCS requirements, particularly the project's baseline, monitoring plan, and compliance with the relevant VCS and host Party criteria. These are validated in order to confirm that the project design, as documented, is sound and reasonable and meets the identified criteria. Validation 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. Carbon Check’s objective is to perform a thorough, independent assessment of the validation of the project activity.

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

Scope: Validation scope is defined as an independent and objective review of the Project Description section of the Joint PD & MR. The Joint PD & MR is reviewed against the relevant criteria and guidance documents provided by VCS which include the following: VCS Program Guide (v4.4, dated 29-August-2023), VCS Standard (v4.6, dated 21-March-2024), Program Definitions (v4.5, dated 16-April -2024), Registration & Issuance Process (v4.4, dated 16-April-2024) VCS Validation and Verification Manual (v3.2, dated 19-October-2016) applicable at the time in order to confirm that the project meets the

applicability conditions of the selected baseline and monitoring VCS methodology VMR0006 (version 1.2, Dated 06-July-2023), also assess the claims and assumptions made in the PD without limitation on the information provided by the project participants.

The scope of the verification is:

- To verify the project implementation and operation with respect to the registered VCS JOINT PD & MR.
- To verify the implemented monitoring plan with the registered VCS Joint PD & MR 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 validation and verification**

The validation consists of the following four phases:

I. A desk review of the project description documents.

- A review of data and information.
- Cross checks between information provided in PD and information from sources with all necessary means without limitations to the information provided by the project proponent.

II. Onsite interviews with project stakeholders

- Interviews with relevant stakeholders in the host country with personnel having knowledge with the project development via telephone, email, or direct on-site visits;
- Cross-checking between information provided by interviewed personnel with all necessary means without limitations to the information provided by the project proponent.

III. Onsite interviews with project stakeholders

- Interviews with relevant stakeholders in the host country with personnel having knowledge with the project development via telephone, email, or direct on-site visits;
- Cross-checking between information provided by interviewed personnel with all necessary means without limitations to the information provided by the project proponent.

IV. Issuance of Final Validation Report

- The resolution of outstanding issues and the issuance of the final validation report and opinion.

The verification consists of the following four phases:**I. Desk review, involving:**

- Review of the data and information presented to verify their completeness.
- 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.
- 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.

II. Onsite assessment involving:

- Assessment of the implementation and operation of the proposed VCS project activity as per the VCS Joint PD & MR.
- Verification of implemented monitoring plan as per the VCS Joint PD & MR and applied baseline and monitoring methodology.
- Review of information flows for generating, aggregating, and reporting the monitoring parameters.
- Interview with relevant personnel to confirm that the operational and data collection procedures are implemented in accordance with the monitoring plan in the VCS Joint PD & MR.
- A cross-check between information provided in the monitoring report and data from other sources such as inventories, purchase records, or similar data sources.
- A check of the monitoring equipment including calibration performance and observations of monitoring practices against the requirements of the VCS Joint PD & MR and the selected methodology.
- Review of calculations and assumptions made in determining the GHG data and emission reductions.
- 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.

III. The number of findings raised during validation and verification

- A risk-based approach has been followed to perform this Gap Validation & Verification. During the course of Joint Gap Validation & Verification, a total of 20 findings were raised, which includes:
- 09 Corrective Action Request (CAR); 10 Clarification Requests (CLs) and 1 Forward Action Request.
- All the raised findings have been successfully resolved by the PP.

IV. Any uncertainties associated with the validation and verification

There are no uncertainties associated with the joint validation & verification of the project activity. The validation and verification have been done with a reasonable level of assurance.

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

- **Summary of the validation and verification conclusions**

Carbon Check (India) Private Ltd. concludes the validation with a positive opinion that the VCS Project “Empowering Communities Through Improved Cookstoves” as described in the joint PD - MR (version 5.2 dated 16-June -2024) /01-e/, meets all applicable VCS requirements, including those specified in the VCS Standard (v4.6, dated 21-March-2024), relevant methodology, tools, and guidelines.

The selected baseline and monitoring methodology (VMR0006 version 1.2, dated 06-July-2023) is applicable to the project and correctly applied. Carbon Check (India) Private Ltd. Therefore, requests the registration of the project as a VCS project.

In CCIPL’s opinion, the emission reductions reported for the “Empowering Communities Through Improved Cookstoves” in the monitoring report are fairly and correctly stated. CCIPL is therefore able to certify that the emission reductions from the “Empowering Communities Through Improved Cookstoves” The average annual and total GHG emission reduction expected from the grouped project is expected to be 333,391 tCO₂e and 3,333,907 tCO₂e, respectively, over the 10-year fixed crediting period.

The first monitoring period for the project activity is 01-March-2023 to 29-February -2024. Total 7,197 improved cookstove distributed during current monitoring period and the actual emission reduction achieved during current monitoring period is 3,898 tCO₂e.

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1 INTRODUCTION

1.1 Objective

CarbonKind Ltd has appointed the VVB, Carbon Check (India) Private Ltd. to perform a joint validation and verification of the VCS Project “Empowering Communities Through Improved Cookstoves”. This report summarizes the findings of validation of the project, performed based on the VCS Program Guide (v4.4, dated 29-August-2023), VCS Standard (v4.6, dated 21-March-2024), Program Definitions (v4.5, dated 16-April -2024), Registration & Issuance Process (v4.4, dated 04-October-2023), VCS Validation and Verification Manual (v 3.2, dated 19/10/2016). Validation is required for all VCS project activities intending to register project under the VCS program. The purpose of a joint validation and verification is to have a thorough and independent assessment of the proposed 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 validated in order to confirm that the project design and monitoring report, as documented, is sound and reasonable and meets the identified criteria. Validation and verification are 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.

Through this joint validation and verification activities, it is to be confirmed that:

- The project is implemented as described in the VCS Joint PD & MR /01-e/
- The monitoring system is implemented and fully functional to generate emission reductions without any double counting,
- 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.

The joint validation and verification followed the requirements of the current version of the VCS standard version 4.6 and VCS program guide (version 4.4)/B01/ to ensure the quality and consistency of the joint validation and verification work and the report.

1.2 Scope and Criteria

The validation scope is defined as an independent and objective review of the Project Description (PD), project design, the project’s baseline study and monitoring plan and other relevant documents. The PD is reviewed against the relevant criteria and decisions by the VCS Program, and against the approved baseline and monitoring methodology. Carbon Check has employed a risk-based approach in the validation, focusing on the identification of significant risks and reliability of project monitoring and generation of emission reductions.

The validation is not meant to provide any consulting towards the project participants. However, stated requests for clarifications and/or corrective actions may have provided input for improvement of the project design.

The joint validation and verification of this project is based on the Joint PD & MR /01-e/ emission reduction calculation spreadsheets /02/, supporting documents made available to the verifier /02 – 18/ and information collected through performing onsite visit interviews. Furthermore, publicly available information was considered as far as available and required.

CCIPL 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 joint validation and verification are carried out on the basis of the following requirements, applicable for this project:

- VCS Program Guide v4.4
- VCS Standard v4.6
- Program Definitions v4.5
- Registration & Issuance Process v4.4
- VCS Validation and Verification Manual v 3.2
- VCS Methodology: VMR0006.: Methodology for Installation of High Efficiency Firewood Cookstoves” (Version 1.2)/BO2/.
- AMS-II.G.: Small-scale Methodology: Energy efficiency measures in thermal applications of non-renewable biomass, Version 13.1.
- Other relevant rules, including the host country legislation.

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

- To verify that the project is implemented as described in the joint VCS Joint PD & MR.
- To assess the project’s compliance with other relevant rules including the host country legislation.
- To confirm that the monitoring system is implemented and fully functional to generate voluntary emission reductions 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.

- 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 consisted of the following phases:

1. Completeness check and desk review
2. On site interviews with stakeholders
3. Resolution of outstanding issues and issuance of final verification report and applicable VCS Validation and Verification Deeds of Representation.

CC IPL conducts all its work under strict rules to safeguard impartiality and ensure the independence of the verification team. The verification team VVBs did 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 Reasonableness of Assumptions and Level of Assurance

The joint validation and verification report is based on the Joint PD & MR /01/, supporting documents /02-32 made available to the Validation and Verification team and information collected through performing interviews.

The verification has been planned and organized to achieve a:

- Reasonable level of assurance as per VCS Standard (v4.6)
- Limited level of assurance

The threshold for quantitative materiality with respect to the aggregate of errors, omissions and misrepresentations, relative to the total reported GHG emission reductions and/or removals was limited to one percent, as required by section 4.1.10 of the VCS Standard version 4.6/B01/.

1.4 Summary Description of the Project

The project “Empowering Communities Through Improved Cookstoves” is a project that employs the VCS methodology, VMR0006, version 1.2 /B02/. The project involves the distribution of energy-efficient cookstoves to the population of Togo, located in West Africa. Currently, under the project activity, it is expected to distribute a total of 481,697 ICS throughout the program’s lifetime in Joint PD and MR Section 1.1. /01-e/. The ICS will be high efficiency cooking devices, leading to a reduction in indoor smoke levels,

time spent on the collection of firewood used for cooking a specified quantity of meal, and a reduction in the usage of firewood compared with the pre-project scenario.

The first monitoring period for the project activity is 01-March -2023 to 29-February -2024. A total of 7,197 improved cookstoves were distributed during the current monitoring period, and the actual emission reduction achieved during the current monitoring period is 3,898 tCO₂e.

The project proponent for the project activity is Carbon Kind Ltd, which owns the rights to VERs /06/.

The project activity has been implemented in accordance with the joint VCS PD and MR /01/, and the emission reductions are calculated conservatively as per the applied methodologies /B02/. The ICS numbers have varied during the actual implementation, and the same has been updated during the verification activity. The estimated average annual GHG emission reduction is 333,391 tCO₂e and the total is 3,333,907 tCO₂e for the ICS grouped project activity over the entire crediting period.

2 VALIDATION AND VERIFICATION PROCESS

2.1 Method and Criteria

Carbon Kind Ltd has appointed the VVB, Carbon Check (India) Private Ltd., to carry out the joint validation and verification of the project "Empowering Communities Through Improved Cookstoves" with regards to the relevant requirements of VCS Standard Version 4.6 /B01/.

The joint validation and verification include a thorough and independent assessment of the proposed project against the applicable VCS requirements /B01/, in particular the project's baseline, additionality, monitoring plan, and compliance with relevant VCS and host party criteria. The validation involves an assessment of the project to confirm that the project meets the applicability conditions of the selected methodology, VMR0006. version 1.2/B02/, and to assess the claims and assumptions made in the Joint PD and MR /01/ without limitation on the information provided by the project participants. The overall joint validation and verification were conducted using Carbon Check's internal procedures.

The Joint validation and verification consist of the following three phases:

1. Completeness check and desk review of the joint PD and MR, monitoring plan, monitoring methodology, 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. On-site visit interviews (including follow-up interviews with project stakeholders, when deemed necessary). The onsite interviews include the following:

- An assessment of the implementation and operation of project activity with respect to joint PD and MR.
 - Review of information flows for generating, aggregating, and reporting the monitoring parameters.
 - Interview with relevant persons to determine whether the operational and data collection procedures are implemented and in accordance with the monitoring plan of the project.
 - Cross check of information and data provided in the monitoring report with purchase records or similar data sources.
 - Review of assumptions made in calculating the emission reductions (if any). Implementation of QA/QC procedure in-line with the VCS joint PD & MR and methodology requirements.
3. Resolution of outstanding issues and the registration and issuance of the final joint validation and verification report and as applicable the VCS validation and verification Deed of Representation.

2.2 Document Review

During the document review, CCIPL has applied standard auditing techniques including but not limited to document reviews and on-site interviews, review of the applicable/applied methodology and its underlying formulae and calculations to assess the quality of information provided. The validation and verification were performed primarily based on the review of the VCS joint PD & MR and the supporting documentation. This process included:

- A review of data and information presented by the PP to verify their completeness.
- A review of the MP and monitoring methodology, paying particular attention to the frequency of measurements, the quality of metering equipment including calibration requirements, and the QA/QC procedures, and
- An evaluation of data management and the QA/QC system in the context of their influence on the generation and reporting of ERs.

The Joint PD and MR /01/ was initially reviewed and CCIPL requested the PP to present the supporting information and documents /02/-/32/. The documents were reviewed by CCIPL. Through the process of the validation and verification, the revised Joint PD and MR, monitoring report and the supporting documents were evaluated to confirm the actions taken by the PP to the CARs and CLs issued by the CCIPL team.

The list of documents referred during the course of this verification has been provided in Appendix-1.1.

2.3 Interviews

The table below describes the onsite interview process and further identifies personnel, including their roles, who were interviewed and/or provided information additional to that provided in the joint project description & MR /01/ and any supporting documents.

VVB has applied a sampling approach for the stakeholder’s interview and for acceptance sampling in accordance with the paragraph 26 & 39 c of the Standard: Sampling and surveys for CDM project activities and programmes of activities, Version 09.0. In accordance with paragraph 28 of the sampling standard, acceptance sampling has been chosen by the verification team, and accordingly, the steps listed in paragraph 29 of the sampling standard were followed. So, in accordance with paragraph 39 (c) of the sampling standard the Verification team opted for AQL of 1.0% and UQL of 20%; producer risk of 10 %, and consumer risk of 5 % in determining the VVB’s sample size for which the sample size (n) is 8 samples for baseline and 8 samples for monitoring with acceptance number 0 (c).

Table 01: On-site interview process

Sl. no	Date	Name	Organisation	Topic	Persons Interviewed
/01/		Kadangah Christian	IADES	1.Project Design 2. Project Implementation status 3.Project start date and Project Location 4. Baseline Scenario 5.Baseline Identification and Additionality 6.Qualification and Training 7.Monitoring and reporting documentation 8.Quality Assurance - Management and operating system 9.Social and Environmental Impacts 10.Local Stakeholders meeting process 11. Compliance with relevant laws 12. Roles and responsibility, Data Management and Reporting	Muhammed Suhail K & Tornyedzi Allen
/02/		Vasthi Seth	Carbon Kind-Manager	1.Project Design 2. Project Implementation status 3.Project start date	Muhammed Suhail K & Tornyedzi Allen

				<p>and Project Location</p> <p>4. Baseline Scenario</p> <p>5. Baseline Identification and Additionality</p> <p>6. Qualification and Training</p> <p>7. Monitoring and reporting documentation</p> <p>8. Quality Assurance – Management and operating system</p> <p>9. Social and Environmental Impacts</p> <p>10. Local Stakeholders meeting process</p> <p>11. Compliance with relevant laws</p> <p>12. Roles and responsibility, Data Management and Reporting</p>	
/02/		Alona Eloge	IADES- Project Manager	<p>1. Project Design</p> <p>2. Project Implementation status</p> <p>3. Project start date and Project Location</p> <p>4. Baseline Scenario</p> <p>5. Baseline Identification and Additionality</p> <p>6. Qualification and Training</p> <p>7. Monitoring and reporting documentation</p> <p>8. Quality Assurance – Management and operating system</p> <p>9. Social and Environmental Impacts</p> <p>10. Local Stakeholders meeting process</p> <p>11. Compliance with relevant laws</p> <p>12. Roles and responsibility, Data Management and Reporting</p>	Muhammed Suhail K & Tornyedzi Allen

/03/		Kpatcha Fako	IADES- Animateur Vendeur	<p>1. Project Design 2. Project Implementation status 3. Project start date and Project Location 4. Baseline Scenario 5. Baseline Identification and Additionality 6. Qualification and Training 7. Monitoring and reporting documentation 8. Quality Assurance - Management and operating system 9. Social and Environmental Impacts 10. Local Stakeholders meeting process 11. Compliance with relevant laws 12. Roles and responsibility, Data Management and Reporting</p>	Muhammed Suhail K & Tornyedzi Allen
/04/		Segla Akossiwa	Seve- Kpoto	Monitoring survey of the project activity and grievance mechanism.	Muhammed Suhail K & Tornyedzi Allen
/05/		Atike Kodjo	Seve- Kpoto	Monitoring survey of the project activity and grievance mechanism.	Muhammed Suhail K & Tornyedzi Allen
/06/		Adjoyi Akouto	Seve- Kpoto	Monitoring survey of the project activity and grievance mechanism.	Muhammed Suhail K & Tornyedzi Allen

/07/		Adjovou	Kowe	Monitoring survey of the project activity and grievance mechanism.	Muhammed Suhail K & Tornyedzi Allen
/08/		Ayissoudove	Kowe	Monitoring survey of the project activity and grievance mechanism.	Muhammed Suhail K & Tornyedzi Allen
/09/		Deho Amowopu	Seve- Kpoto	Monitoring survey of the project activity and grievance mechanism. Discussion on LSC meet and the projects feedback	Muhammed Suhail K & Tornyedzi Allen
/10/		Azalekor Adjo	Gadjatoo	Monitoring survey of the project activity and grievance mechanism. Discussion on LSC meet and the projects feedback	Muhammed Suhail K & Tornyedzi Allen
/11/		Gawodjo Akkossiwa	Gadjatoo	Monitoring survey of the project activity and grievance mechanism.	Muhammed Suhail K & Tornyedzi Allen
/12/		Oakoe Afi	Atti- Atovou	Baseline survey of the project activity and grievance mechanism.	Muhammed Suhail K & Tornyedzi Allen
/13/		Mondji Atsoupu	Atti- Atovou	Baseline survey of the project activity	Muhammed Suhail K &

				and grievance mechanism.	Tornyedzi Allen
/14/		Daxu Akpone	Atti- Atovou	Baseline survey of the project activity and grievance mechanism.	Muhammed Suhail K & Tornyedzi Allen
/15/		Tonfai Kossouwa	Amakpape, Haho	Baseline survey of the project activity and grievance mechanism.	Muhammed Suhail K & Tornyedzi Allen
/16/		Agrou Antou	Amakpape, Haho	Baseline survey of the project activity and grievance mechanism.	Muhammed Suhail K & Tornyedzi Allen
/17/		Hangui Kossouwwa	Amakpape, Haho	Baseline survey of the project activity and grievance mechanism. Discussion on LSC meet and the projects feedback	Muhammed Suhail K & Tornyedzi Allen
/18/		Amate Ami	Amakpape, Haho	Baseline survey of the project activity and grievance mechanism.	Muhammed Suhail K & Tornyedzi Allen
/19/		Mbansa Adjo	Amakpape, Haho	Baseline survey of the project activity and grievance mechanism.	Muhammed Suhail K & Tornyedzi Allen

/20/		Ahama Kokou	Animateur Vendeur	Discussion on LSC meet and the projects feedback	Muhammed Suhail K & Tornyedzi Allen
/21/		Dadji Koffi	Animateur Vendeur	Discussion on the implementation status, employment and training details	Muhammed Suhail K & Tornyedzi Allen
/22/		Aladji Nasser	Animateur Vendeur	Discussion on the implementation status, employment and training details	Muhammed Suhail K & Tornyedzi Allen
/23/		Elori Soumassi	ICAT	Discussion on the implementation status, employment and training details	Muhammed Suhail K & Tornyedzi Allen
/24/		Amelo Essi	IADES- Potter	Discussion on the implementation status, employment and training details	Muhammed Suhail K & Tornyedzi Allen
/25/		Alok Pati	IADES- Pot	Discussion on the implementation status, employment and training details	Muhammed Suhail K & Tornyedzi Allen
/26/		Awali	Ferlentier	Discussion on LSC meet and the projects feedback	Muhammed Suhail K & Tornyedzi Allen

/27/		Selinam Ayivi Ametefe	ANADEB- Women Development Agency	Discussion on LSC meet and the projects feedback	Muhammed Suhail K & Tornyedzi Allen

Apart from the monitoring survey, VVB has also interviewed the beneficiary and confirmed the baseline cookstove (i.e Three stone fire) used prior to the implementation of the project stove. Furthermore, through document review registration certificate cum consent deed signed by the beneficiary, VVB could verify that all new instances comply with the above 10% efficiency requirement as per the applied methodology /B02/.

2.4 Site Visits

Carbon Check has conducted an on-site inspection to confirm the implementation and operation status of the group project activity. A reasonable level of assurance has been maintained through the on-site visit for the purpose of validation and verification as follows:

- An assessment of the implementation and operation of the project activity through onsite interviews with the representatives of the project proponent and end users.
- Confirmation of the pre-project scenario
- Confirmation of the applicability of the methodology and monitoring and controlling instruments and operational arrangements.
- Confirm the data collection procedures are implemented in accordance with the MP
- Assessment of the project boundaries
- Assessment of the monitoring provisions by checking the monitoring arrangement.
- A review of information aggregating and reporting of the monitoring parameters
- A check of the observations of monitoring practices against the requirements of the VCS JOINT PD & MR and the applied monitoring methodologies.
- A review of calculations and assumptions made in determining the GHG data and ERs, and

- An identification of QA/QC procedures in place to prevent, or identify and correct, any errors or omissions in the reported monitoring parameters.

2.5 Resolution of Findings

This section summarizes the findings from the joint validation & 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 validation are addressed either as CARs, CLs or FARs.

- Clarification requests (CLs): Project reporting lacks transparency and further information is needed to determine if a material discrepancy is present.
- Corrective action requests (CARs): The VVB has identified a material discrepancy or non-conformance that the project proponent must address.

The validation & verification team identified 09 CAR and 10 CLs. All CAR and CLs raised by Carbon Check during this joint validation & verification have been resolved by the PP. Please refer to Appendix 4 below for the details of the CARs/CLs and their closure. If this was not completed, the ERs cannot be certified and recommended for issuance to the VCS Registry.

2.5.1 Forward Action Requests

A forward action request (FAR) should be issued, where:

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

CC IPL has raised one (01) FAR during this joint validation and verification. Please refer to appendix 5 for further details.

3 VALIDATION FINDINGS

3.1 Project Details

VVB confirms the details provided in the table below and the details provided by the PP in the Joint PD & MR are found to be appropriate and conforms the with applicable requirements. In order to verify these, PP has reviewed and crosschecked the relevant documents /02/-/05/. Further The completeness and accuracy of the project description were validated through onsite interviews/25/.

Item	Evidence gathering activities, evidence checked, and assessment conclusion												
Audit history	<p>PP has provided the audit history in section 1.1 of the Joint PD&MR/1/. The verra registry page has been reviewed to</p> <table border="1" data-bbox="667 394 1398 730"> <thead> <tr> <th data-bbox="667 394 834 478">Audit type</th> <th data-bbox="834 394 984 478">Period</th> <th data-bbox="984 394 1117 478">Program</th> <th data-bbox="1117 394 1398 478">Validation/verification body name</th> </tr> </thead> <tbody> <tr> <td data-bbox="667 478 834 636"><i>Validation/verification</i></td> <td data-bbox="834 478 984 636">01-03-2023 to 29-02-2024</td> <td data-bbox="984 478 1117 636">VCS</td> <td data-bbox="1117 478 1398 636">Carbon Check (India) Pvt. Ltd</td> </tr> <tr> <td data-bbox="667 636 834 730">Total</td> <td data-bbox="834 636 984 730">1 year</td> <td data-bbox="984 636 1117 730">VCS</td> <td data-bbox="1117 636 1398 730">Carbon Check (India) Pvt. Ltd</td> </tr> </tbody> </table> <p>confirm that the information provided in the Joint PD_MR is accurate.</p>	Audit type	Period	Program	Validation/verification body name	<i>Validation/verification</i>	01-03-2023 to 29-02-2024	VCS	Carbon Check (India) Pvt. Ltd	Total	1 year	VCS	Carbon Check (India) Pvt. Ltd
Audit type	Period	Program	Validation/verification body name										
<i>Validation/verification</i>	01-03-2023 to 29-02-2024	VCS	Carbon Check (India) Pvt. Ltd										
Total	1 year	VCS	Carbon Check (India) Pvt. Ltd										
Sectoral scope	3.1 Energy Demand												
AFOLU project category, if applicable	NA												
Project activity type	Type II (Energy Efficiency Improvement)												
General eligibility of the project to participate in the VCS Program	<p>The group project focuses on energy-efficient cookstove distribution, which falls under the category of efficiency improvements in thermal applications, thus eligible for the VCS Program.</p> <p>In the section 1.4 of the VCS Joint PD&MR v4.3, General eligibility criteria are provided by PP, the project is eligible under the scope of the VCS program based on the following criteria:</p> <ul style="list-style-type: none"> • The program aims reduces greenhouse gas (GHG) emissions from cooking fuel combustion, including CO₂, CH₄, and N₂O gases. • The program's ICS utilizes the VCS-approved methodology "VMR0006 "Methodology for Installation of High Efficiency Firewood Cookstoves", version 1.2." <p>The start date of the project was on 01-March-2023 and the and the pipeline listing was initiated on 8-June-2023. The project meets the pipeline listing requirements. Public comment was open from 28-September-2023 to 02-October - 2023 and there were no comments received during this period.</p>												

	The VVB has conducted opening meeting on March 2023, after the public comment period was completed.
AFOLU project eligibility, if applicable	N/A
Transfer project eligibility, if applicable	N/A
Project design	<p>The project activity is designed as a group project activity and includes several project activity instances (PAIs) of the same activity type in one project description. New instances shall be introduced to the grouped project activity at any monitoring period; this is indicated in Section 1.5. of the VCS Joint PD and MR/01-e/</p> <p>In the section 1.4 of the Joint PD and MR/01/, the PP describes the eligibility criteria for new instances of grouped projects conforms with the following VCS Program requirements:</p> <ul style="list-style-type: none"> • Eligibility criteria as per section 3.6.10 to 3.6.15 of the VCS Standard v4.6. • Eligibility criteria as per section 3.6.16 to 3.6.18 of the VCS Standard v4.6 • Eligibility conditions specific to inclusion of New PAIs • project activity is included under the scope of the VCS Program and not excluded under Table 2.1 of the VCS Standard. <p>In order to verify the eligibility criteria of the project design and new instances of the grouped project has reviewed the relevant documents /02/-/05/ and through onsite visit/25/</p>
Project ownership	Carbon Kind Ltd
Project start date	01-March-2023
Project crediting period	01-March-2023 to 28-February-2033
Project scale	Large Project
Likelihood of achieving estimated GHG emission reduction or removals	3,333,907 for the first 10-year fixed crediting period & 333,391 annually

<p>Technologies and measures implemented by the project activity</p>	<p>The project “Empowering Communities Through Improved Cookstoves” employs baseline and monitoring methodology (VRM0006 version 1.2/B02/. The project involves the distribution of Improved Cooking Stoves (ICS) in Togo. The ICS distributed through this project will replace the baseline cookstoves, i.e., three-stone fires or conventional open fires. This project is expected to be distributed to a total of 481,697 ICS throughout the program’s lifetime. The project results in reducing the amount of non-renewable biomass used for cooking and each household will receive one ICS. Through the reduction in non-renewable biomass consumption, the program will decrease greenhouse gas emissions. In the project, the Cookstoves Adokpo Wazam model, which improves the thermal energy directly to the pot, thus conserving non-renewable biomass</p>
<p>Implementation schedule of the project activity or activities</p>	<p>The implementation schedule is given in Section 1.1 of the VCS Joint PD and MR. The grouped project planned to distribute the 481,697 improved cookstoves in host country. The first ICS under the grouped project was distributed on 01-March-2023. The monitoring period for the current issuance request is 01-March-2023 to 29-February-2024. Total 7,197 ICS have been distributed till the end of the monitoring period.</p> <p>The operation of stoves was confirmed by a survey undertaken as part of monitoring requirements of VCS JPD&MR and it was found that 100% of the stoves are in use. The results of surveys are demonstrated in the ER spreadsheet and furnished to VVB for verification. The cookstoves were distributed in the targeted project area, with the location chosen in consultation with the local representative. Considering there were no stove distribution after 29- February-2024, hence the first monitoring surveys were undertaken between 13 February 2024 to 23 February 2024 by visiting the sampled households. Sample size was selected by using the latest version 4 of CDM guideline, “Sampling and surveys for CDM project activities and programmes of activities” version 04.</p>
<p>Project location</p>	<p>The indication of the project activity instance location and the geographic boundaries is provided in Section 1.12. of the VCS Joint PD and MR. They are in accordance with paragraph 3.11.1 of the VCS Standard and can confirm that the project activity</p>

	<p>boundary is uniquely defined. The project location and geographic boundaries of the project are in the Togo for this monitoring period. This is in accordance with paragraph 3.6.10 of the VCS standard version 4.6 /B01/, which requires projects to have one or more clearly defined geographic areas within which new project activity instances may be developed.</p> <p>The project's geographical location is outlined in the provided KML files/26/. The PP has provided details of the coordinates of locations of the project activity in which the ICS is distributed in the section 1.13 of the Joint PD& MR/01/. The geo coordinates of the project location are as follows:</p> <p>8.6195° N, 0.8248° E</p> <p>In order to pinpoint and validate the project location, VVB collected GPS coordinates during the onsite inspection. These coordinates were compared with the GPS locations documented in the JPD&MR, v5.2/01/ and those indicated for project location in the KML file/26/ provided by PP. Additionally, the accuracy of these location was cross verified by reviewing the approval for project activities from the relevant authorities, confirming alignment with the project locations as stated by the Project Proponent.</p> <p>Based on the observations, VVB confirms that the locations mentioned in the approval documents are in line with the project locations as indicated by the Project Proponent.</p>
<p>Conditions prior to project initiation</p>	<p>The project activity will use methodology VMR0006 version 1.2/B02/. Since the project activity that apply the indicative simplified methodology VMR0006 version 1.2/B02/, the baseline scenario for this project activity is the one indicated by this methodology, i.e. "The baseline scenario is the target population's continued use of non-renewable biomass (i.e., firewood or charcoal) or fossil fuel (i.e., coal or kerosene) to meet similar thermal energy needs, as provided by project devices'. The baseline described in the JPD&MR complies with the requirements of the methodology, as the energy baseline is the existing level of consumption of non-renewable biomass used by the cooking systems currently in use and which is used in the absence of the project activity.</p>

	<p>The project activity baseline in the Togo focuses on the use of inefficient, conventional cooking devices by the rural population. The baseline stoves are 3-stone stoves with poor combustion air supply or flue gas ventilation systems, using non-renewable biomass (firewood). A baseline survey confirmed the baseline technology, confirming that these stoves were unimproved and using firewood as fuel. The project's implementation involves verifying this information through signed usage practices posters.</p> <p>The baseline survey was conducted using CDM Guidelines: Sampling and surveys for CDM project activities and programmes of activities version 9.0/B04/. The sample size was calculated for each group, with a 90/10 precision confidence of 129.</p> <p>VVB based on review of the VCS Joint PD & MR /01/ and baseline survey reports/02/ confirms that the documentary evidence used in determining the above baseline scenarios are relevant, and correctly quoted and interpreted in the project description and confirms that conditions existing prior to project activity implementation are the same as the baseline scenario explained in the section 1.14 and 3.4 of the VCS Joint PD & MR/01/.</p>
<p>Project compliance with applicable laws, statutes and other regulatory frameworks</p>	<p>In the section 1.15 of the Joint PD&MR, the PP has described that the Togo government do not have any laws or regulations related to the distribution of the ICS to households. This was confirmed by the VVB through reviewing public documents and onsite visit/25 /.</p>
<p>Double counting and participation under other GHG programs</p>	<p>The project is not involved in any other form of GHG emission program and VCU's generated from this verification will not be used for other trading program to avoid any kind of double counting. The same is confirmed by the PP during the on-site audit. VVB also conducted independent review regarding the same and found that the statement of the PP is accurate, and project is not involved in any other kind of GHG trading for the present monitoring period.</p>

<p>No double claiming with emissions trading programs or binding emission limits</p>	<p>The proposed project is an energy efficiency project activity and is located in a non-Annex I country. Therefore, the ER generated would not be part of an emission trading program, nor would it be located in a jurisdiction or sector with binding limits. The project proponent intends to claim carbon credits under the VCS program only for the emission reductions achieved. The PP states in the VCS Joint PD and MR that the emission reductions generated by this project will not be used for compliance with an emission-trading program or to fulfil binding commitments. In fact, at the time of validation, no binding targets have been set by Togo under the Kyoto Protocol, as indicated on the UNFCCC website (B04).</p>
<p>No double claiming with other forms of environmental credit</p>	<p>The proposed project activity instances do not generate another form of environmental credit. The project proponent indicates in the VCS Joint PD & MR that the project does not intend to generate any other form of GHG-related environmental credit other than those claimed under this VCS project.</p>
<p>Supply chain (Scope 3) emissions double claiming</p>	<p>PP will inform the manufacturers of the project stoves and the implementation partner that the Verified Carbon Units (VCUs) may be issued for the greenhouse gas emission reductions and removals under this grouped project. For these VCUs, the PP will be claiming carbon credits under VERRA. PP will further apprise that the ownership of these credits lies exclusively with Carbon Kind Ltd to avoid any potential risk of double claiming of Scope 3 emissions.</p>
<p>Sustainable development contributions</p>	<p>The distribution of Integrated Controlled Cooking Systems (ICS) in the Togo is expected to significantly reduce indoor air pollution levels, reducing the risks associated with traditional cooking devices like 3 stone fires. This will help reduce the number of deaths among children due to indoor household air pollution and improve indoor air quality. ICS will also save women time spent collecting firewood, which can be used for better household management or income-generating activities. The project aims to distribute ICS to individual households in the Togo at a subsidized cost, reducing their reliance on firewood fuel usage. The ICS models claim to reduce fuel usage by over 50%, allowing households to lead a healthier and less</p>

	<p>worried life. The project will provide indirect employment to the distribution team and maintain permanent staff in IADES. The workforce will be trained to meet monitoring data requirements. The ICS will also reduce GHG emissions caused by burning firewood, as per the VCS methodology VMR0006, ver. 1.2.</p> <p>The implementation of the project activity contributes to the following sustainable development goals:</p> <ul style="list-style-type: none"> • SDG :1.4.1 - Project Specific Indicator – Average monthly household savings due to reduction in expenditure on purchase fuel after shifting to project technology. • SDG 3.9.1 Mortality rate attributed to household and ambient air pollution • SDG 5.4 Proportion of time spent on unpaid domestic and care work, by sex, age and location • SDG 4.3.1 Participation rate of youth and adults in formal and non-formal education and training in previous 12 months, by gender • SDG 8.5.1 Average hourly earnings of female and male employees, by occupation, age, and persons with disabilities • SDG 7.1 Proportion of population with primary reliance on clean fuels and technology • SDG 13.0. Tonnes of greenhouse gas emissions avoided or removed. • SDG 15.- Project Specific Indicator: Reduction in woody biomass used per household per year, due to the use of the ICS
<p>Additional information relevant to the project</p>	<p>No additional information is provided by the Project Proponent.</p>

3.2 Project Activity Instances in Grouped Projects

The Empowering Communities Through Improved Cookstoves aims to distribute Improved Cook Stoves (ICS) to rural households in Togo, a least developed country. The Togo law does not mandate the distribution of ICS, and the Grouped Project is a voluntary initiative run by the PP. The project activity is a Grouped Project Activity, combining multiple Project Activity Instances (PAIs) of the same activity type and sectoral scope into one Project Description. Each ICS distributed under this grouped project will be considered as a project activity instance. New instances shall be introduced to the grouped project activity at any monitoring period, this is indicated in the VCS Joint PD & MR /01/.

The applicability of the grouped project and inclusion of the new project activity instances into the grouped project is provided below;

Criterion	Justification by the PP	Assessment
<p>Grouped projects shall specify one or more clearly defined geographic areas within which project activity instances may be developed. Such geographic areas shall be specified using geodetic polygons</p>	<p>Each project activity instance shall be located within the geographic boundaries of Togo and Benin.</p>	<p>VVB confirms that the PAI has been implemented in Togo. The PP has provided details of the coordinates of locations and geodetic polygons of the project activity to VVB and adding details in section 1.13 of the Joint PD& MR/01/. In order to pinpoint and validate the project location, VVB collected GPS coordinates during the onsite inspection. These coordinates were compared with the GPS locations documented in the JPD&MR, v5.2/01/ and those indicated for project location in the KML file/26/ provided by PP.</p> <p>Based on the observation confirms that the justification provided by the PP is appropriate.</p>
<p>Determination of baseline scenario and demonstration of additionality are based upon the initial project activity instances. The initial project activity instances are those that are included in the project description at validation and shall include all project activity instances currently</p>	<p>All new project activity instances will be installed within Togo and Benin.</p> <p>The baseline scenario is the continued use of non-renewable wood fuel by the target population to meet similar thermal energy</p>	<p>VVB confirms that the baseline scenario and additionality for PAIs, which are included in section 1.14 and 3.4 of the VCS Joint PDMR are appropriate and in line with the applied methodologies.</p>

<p>implemented on the issue date of the project description. The initial project activity instances may also include any instances of the project activity that have been planned and developed to a sufficient level of detail to enable their assessment at validation.</p>	<p>needs as provided by project cookstoves in absence of project activity. This conforms to the applied methodology.</p> <p>The baseline scenario is detailed in Section 3.4 of this VCS-PDMR. The baseline scenario and geographical boundary will be verified using registration records and consent deeds from individual ICS. These records will include geographical coordinates. Additionally, baseline surveys were conducted, accompanied by photographs. These photographs will confirm the usage by end-users of traditional three-stone fires.</p>	
<p>Where a grouped project includes multiple project activities, the project description shall designate which project activities may occur in each geographic area.</p>	<p>All project activities will be installed within Togo and Benin.</p>	<p>Based on the observation confirms that the grouped project includes only one project activity.</p>
<p>The baseline scenario for a project activity shall be determined for each designated geographic area, in accordance with the methodology applied to the project.</p>	<p>All new project activity instances will be implemented exclusively within Togo or Benin. The baseline scenario involves the continuous use of non-renewable wood fuel by the</p>	<p>Baseline scenario has been determined for PAIs for Togo</p> <p>VVB confirms that the baseline scenario for Project activity are determined for each designated geographical area which are</p>

	<p>target population to meet thermal energy needs similar to those addressed by the project cookstoves in the absence of the project activity. Different FNRB calculations will be used in Togo and Benin. This approach is in line with the applied methodology.</p>	<p>included in section 1.14 and 3.4 of the VCS Joint PDMR are appropriate and in line with the applied methodologies.</p>
<p>The additionality of the initial project activity instances shall be demonstrated for each designated geographic area, in accordance with the methodology applied to the project. Where the additionality of the initial project activity instances within a particular geographic area cannot be demonstrated for the entirety of that geographic area, the geographic area shall be redefined or divided such that the additionality of the instances occurring in the revised geographic area or areas can be demonstrated.</p>	<p>All new project activity instances in Togo and Benin will use the activity method for demonstration of additionality.</p> <p>Step 1: Regulatory Surplus</p> <p>There is no mandated government programme or policy in host country of this project ensuring the distribution of new project activity instances.</p> <p>Step 2: Positive List</p> <p>An investment comparison analysis was conducted, employing NPV (Net Present Value) analysis. The project's NPV is negative in the absence of Verified Emission Reduction (VER) revenue. This finding substantiates that the project activity is not financially viable</p>	<p>Based on the observation and review of the Joint PD & MR, VVB confirms that Additionality has been determined for each designated geographic area which is included in the section 3.5 of the Joint PD & MR. This is in line with the applied methodology.</p>

	without the proceeds from the sale of VER revenues.	
<p>Where factors relevant to the determination of the baseline scenario or demonstration of additionality require assessment across a given area, the area shall be, at a minimum, the grouped project geographic area. Examples of such factors include, inter alia, common practice; laws, statutes, regulatory frameworks, or policies relevant to demonstration of regulatory surplus; determination of regional grid emission factors; and historical deforestation and degradation rates</p>	<p>All new project activity instances will be implemented exclusively within Togo or Benin. The baseline scenario involves the continuous use of non-renewable wood fuel by the target population to meet thermal energy needs similar to those addressed by the project cookstoves in the absence of the project activity. Different FNRB calculations will be used in Togo and Benin. This approach is in line with the applied methodology. FNRB calculations and baseline surveys have not yet been carried out in Benin, as the project is only currently active in Togo.</p>	<p>The project activity is the ICS distribution in Togo and Benin. Based on the observation VVB confirms that baseline and demonstration of additionality for PAIs has been done for Togo. And for Benin baseline and additionality and FNRB will be demonstrated separately.</p>
<p>Grouped projects shall include one or more sets of eligibility criteria for the inclusion of new project activity instances. At least one set of eligibility criteria for the inclusion of new project activity instances shall be provided for each combination of project activity and geographic area specified in the project description.</p>	<p>All new project activity instances will be implemented exclusively within Togo or Benin. The baseline scenario involves the continuous use of non-renewable wood fuel by the target population to meet thermal energy needs similar to those addressed by the project cookstoves in the absence of the project activity. Different FNRB calculations will be used in Togo and Benin. This</p>	<p>Based on the observation and review of the Joint PD & MR, VVB confirms that at least one set of eligibility criteria for the inclusion of new project activity instances shall be provided for each combination of project activity and geographic area specified in the PD&MR. This is in line with the applied methodology.</p>

	<p>approach is in line with the applied methodology.</p>	
<p>Grouped projects provide for the inclusion of new project activity instances subsequent to the initial validation of the project. New project activity instances shall:</p> <ol style="list-style-type: none"> 1) Occur within one of the designated geographic areas specified in the project description. 2) Conform with at least one complete set of eligibility criteria for the inclusion of new project activity instances. Partial conformance with multiple sets of eligibility criteria is insufficient. 3) Be included in the monitoring report with sufficient technical, financial, geographic, and other relevant information to demonstrate conformance with the applicable set of eligibility criteria and enable evidence gathering by the validation/verification body. 4) Have evidence of project ownership, in respect of each project activity instance, held by the project proponent from the respective start date of each project activity instance (i.e., the 	<p>All new project activity instances will be implemented exclusively within Togo or Benin. The baseline scenario involves the continuous use of non-renewable wood fuel by the target population to meet thermal energy needs similar to those addressed by the project cookstoves in the absence of the project activity. Different FNRB calculations will be used in Togo and Benin. This approach is in line with the applied methodology.</p> <p>All project instances will conform to at least one complete set of eligibility criteria.</p> <p>All project instances will be included in the monitoring report with sufficient technical, financial, geographic, and other relevant information to demonstrate conformance with the applicable set of eligibility criteria and enable evidence gathering by the</p>	<p>VVB confirms that each PAI under grouped project is within host country the Togo. The same is cross checked and verified with distribution data base wherein location details of each end user are recorded.</p> <p>Based on the observation, the PAIs meets the eligibility criteria for inclusion under grouped project activity.</p> <p>New Instances may be added to the grouped project activity in the future. The MR act as the documentary compliance summary.</p> <p>The PP will provide the supportive evidence for the same while including new PAIs</p> <p>VVB confirms that the new PAIs will include all the technical, financial, geographic and other relevant information related to the compliance of the applicable set of eligibility criteria & also enable sampling by the VVB</p> <p>The MR will act as the supporting evidence for the stated requirement by the PP.</p> <p>The PP has provided the evidence related to the ownership rights of the PAI and is verified by the VVB.</p> <p>The start date of the grouped project activity is 01-March-2023.This is verified by the relevant documents /04/. For the new PAIs,it will have start date later than the GP start date.</p> <p>VVB confirms that The PAIs are eligible for crediting from the start date of the GP through to the end of the project crediting period.</p> <p>The start date of the PAI can be verified through the distribution database, while the end date of GP crediting can be referenced from the</p>

<p>date upon which the project activity instance began reducing or removing GHG emissions).</p> <p>5) Have a start date that is the same as or later than the grouped project start date.</p> <p>6) Only be eligible for crediting from the later of start date of the project activity instance or the start of the verification period in which they were added to the grouped project, through to the end of the total project crediting period.</p> <p>7) Not be or have been enrolled in another VCS project.</p> <p>8) Adhere to the clustering and capacity limit requirements for multiple project activity instances set out in 3.6.8 - 3.6.9 of VCS Standard v4.5.</p>	<p>validation/verification body.</p> <p>In all instances will provide evidence for project ownership by the PP.</p> <p>All project activity instances will have a start date that aligns with or is later than the grouped project start date and will only continue until the end of the project crediting period.</p> <p>The project activity instances have not been and will not be enrolled in another VCS project.</p> <p>The project activity instances will adhere to the clustering and capacity limit requirements for multiple project activity instances as outlined in sections 3.6.8 - 3.6.9 of VCS Standard v4.5.</p>	<p>VCS Project Registry webpage. The overlap of monitoring periods can be checked through previous monitoring reports.</p> <p>The PAI enrolled under the VCS GP will not be enrolled under any other VCS project and will not be enrolled under any other VCS project if removed from the VCS GP.</p> <p>The project involves the distribution of improved cookstoves by the same PP within 10 kilometers, and there are no other instances of the same PP distributing within 10 kilometres for the same project activity. This is confirmed by the VVB during the onsite visit.</p>
<p>The project boundary shall be described (using diagrams, as required) and GHG sources, sinks, and reservoirs shall be identified and assessed in</p>	<p>The project boundary is defined by the geographic borders of both Togo and Benin.</p>	<p>The Validation team through an hybrid interviews analyze that the project location is demonstrated in the section 1.12 of the PD. PP will install only Adodko wazam ICS and other similar stoves within the project boundary of Togo and Benin and will replace the baseline cookstoves. This has also been mentioned in the</p>

<p>accordance with the methodology applied to the project. The project shall justify not selecting any relevant GHG source, sink, and reservoir.</p>	<p>Diagrams and coordinates have been added to section 1.13 of the PDMR.</p> <p>Links to KLM files have been provided to VVB</p>	<p>PD. Thus, the eligibility criteria has been met for the new project activity instances under this group project.</p>
<p>Ownership: Have evidence of project ownership, in respect of each project activity instance, held by the project proponent from the respective start date of each project activity instance</p>	<p>For any project activity instance, a default beneficiary agreement shall be provided to end users. This agreement stipulates that the emission reductions generated by the project activity are owned by the Project Proponents.</p>	<p>The validation team during the hybrid interviews and document review understood that Carbonkind is the sole entity. Moreover, in section 1.7 of the revised PD it is clearly mentioned about ownership and right transfer from the end users. This is in line with section 3.7.1 of the VCS standard version 4.6. Thus, the eligibility criteria have been met for the new project activity instances under this group project.</p>
<p>Apply the technologies or measures in the same manner as specified in the project description.</p>	<p>Local ICS model cookstoves to be adopted in the project and will replace traditional cookstoves in household.</p>	<p>The validation team reviewed the stove efficiency test performed on ICS/30/ which confirms that the ICS distributed to the end users has 31.3% thermal efficiency. This is deemed appropriate to the Validation team.</p>
<p>Use the technologies or measures specified in the project description.</p>	<p>The ICS to be adopted in the project will have a minimum efficiency of 25%; those below this threshold are not eligible for inclusion as new project instances under this grouped project.</p>	<p>The validation team reviewed the stove efficiency test performed on ICS/30/ which confirms that the ICS distributed to the end users has 31.3% thermal efficiency. This is deemed appropriate to the Validation team.</p>
<p>Meet the applicability conditions set out in the methodology applied to the project</p>	<p>New project activity instances Improved cookstoves will meet the applicability conditions set out in Section 3.2 where the target of the end-user is household.</p>	<p>New project activity instances will meet the applicability conditions set out in Section 3.2 where the target of the end-user is household</p>

<p>The start date of project activity instance shall be same as or later than the grouped project start date.</p>	<p>The Project Activity Instance Database contains the date of installation of each ICS.</p>	<p>The start date for the project activity is 01-March-2023 as stated in the PD /01/ and the same is confirmed from the distribution records/04/. PP has considered the start date of commissioning of the first ICS.</p> <p>The validation team reviewed the provided declaration and confirmed that the start date is on or after the start date of the grouped project activity. Also, the validation team confirms that the crediting period of the project activity instances lies within the lifetime of the grouped project activity. Based on the above assessment, validation team concludes, that the eligibility criteria have been met for the new project activity instances under this group project</p>
<p>The validation/verification body shall ensure that the project is listed on the project pipeline with a status of under validation before the opening meeting with the project proponent, such opening meeting representing the beginning of the validation process. Further, validation shall not begin until the 30-day public comment period has begun, and the validation/verification body shall not complete validation until after the 30-day public comment period has ended.</p>	<p>The opening meeting with the validation/verification body was held on the 5th of March 2024. This was after the 30-day-public comment period, which ended 28/10/2023.</p>	<p>The validation team reviewed the Verra Registry, this project was open for public comment from 28/09/2023 to 28/10/2023. The opening meeting with the validation/verification body was held on the 5th of March 2024, which was after the public comment period.</p>
<p>Where a capacity limit applies to a project activity included in the project, no project activity instance shall exceed such limit. Further, no single cluster of project activity instances shall</p>	<p>No project activity instance shall exceed the applicable capacity limit, which is 180 GWhth/y.</p>	<p>PP has considered each ICS as a project activity instance which is deemed acceptable as per the VCS Program Definitions and VCS Standard /B01/.</p> <p>Since the annual energy saving per ICS is approximately 0.028GWth/y</p>

<p>exceed the capacity limit, determined as follows:</p> <ol style="list-style-type: none"> 1) Each project activity instance that exceeds one percent of the capacity limit shall be identified. 2) Such instances shall be divided into clusters, whereby each cluster is comprised of any system of instances such that each instance is within one kilometer of at least one other instance in the cluster. Instances that are not within one kilometer of any other instance shall not be assigned to clusters. 3) None of the clusters shall exceed the capacity limit and no further project activity instances shall be added to the project that would cause any of the clusters to exceed the capacity limit. 	<p>The expected annual energy saving for each project activity instance (i.e., each project ICS) comes out to be 0.028 GWhth, which are well below 1% (i.e. 1.80 GWhth) of capacity limit.</p> <p>As the annual energy saving is below 1% of the limit, therefore, no project activity instances under this grouped project activity shall not be is identified and divided into clusters.</p>	<p>the capacity of project activity instance is well below the 1% of the threshold limit. Therefore, it is not required to divide any project activity instance into clusters. This criterion is deemed appropriate, and it can be verified from the energy saving per ICS included in the grouped project.</p>
<p>Double counting: The Improved Cookstove distributed under this project shall be uniquely identifiable based on the distribution records.</p>	<p>The Project Activity Instance database will contain a unique serial number for each ICS. Each distributed ICS will be associated with corresponding end user details, including the stove owner's name, geographical coordinates, address, and the unique serial number. The combination of the ICS's unique serial number and the stove owner's geographical address</p>	<p>The validation team by means of hybrid audit interviews with the beneficiaries and PP also confirms that the ICSs distributed under this project activity will have unique identification number with the combination of customer 's name, address, geographical location clearly identifiable. Hence there will be no double counting of project device within the project, confirms that the proposed procedures prevent double counting of emission reductions.</p> <p>Since each ICS will have a unique serial number and the stove owner's address confirms the unique identity of each project device, the project activity instances under this grouped project are completely distinct from</p>

	ensures the unique identity of each project device.	other similar projects in the same region.
Target Population: End user for each project activity instance shall be households, with non-renewable biomass on inefficient firewood stoves.	Each ICS will be assigned a unique serial number with name of ICS user, address, GPS of household, stove model, distribution date, etc.	<p>Based on the review of the PD /01/, and interviews with IP and LSC, validation team is able to confirm that the target group for the distribution of ICS will be households with non-renewable biomass on inefficient wood. Furthermore, project activity will disseminate ICSs over the Togo and Benin.</p> <p>Based on the above assessment, the validation team concludes that this eligibility criterion have been met for the new project activity instances under this group project.</p>

3.2.1 Stakeholder Engagement and Consultation

3.2.1.1 Stakeholder Identification

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Stakeholder identification	<p>Stakeholders were identified and assessed according to the guidelines outlined in section 3.18.1 of the VCS standard, v.6 /B01/. During validation and verification process VVB found that a comprehensive approach was taken to identify all the relevant stakeholders of the project.</p> <p>The VVB team thoroughly examined the legal, environmental, and socio-economic impacts associated with the project activity while evaluating and analyzing stakeholders and stakeholder groups. This involved mapping out the persons, groups, and entities who are directly or indirectly affected by the project (i.e., those deriving income, livelihood, and/or community value from the project). These stakeholders were further evaluated based on how deeply affected</p>

	<p>they may be by the project, and those most impacted have been included in the stakeholder engagement.</p> <p>Based on this comprehensive assessment, it is determined that the stakeholder identification process has effectively captured all (potential) stakeholders. The approach to stakeholder identification is considered appropriate for the project's context.</p>
Legal or customary tenure/access rights	The project does not affect any legal or customary tenure issues or access rights as it is not a land use project.
Stakeholder diversity and changes over time	The project's primary stakeholders are rural households in Togo, and there are no anticipated changes in their composition.
Expected changes in well-being	The distribution of efficient cookstoves could reduce the release of pollutants and save women time by consuming less fuelwood, allowing them to focus on other tasks. This helps reduce household air pollution caused by inefficient cookstoves, which causes long-term illnesses and deaths.
Location of stakeholders	The project beneficiaries and staff are primarily situated in rural Togo.
Location of resources	Not applicable since it's not a land use project

3.2.1.2 Stakeholder Consultation and Ongoing Communication

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Stakeholder engagement process	The local stakeholder consultation meetings were held on July 12, 2023, at Ministère de l'Action Sociale, Kéve, Préfecture d'Ave, Togo, with an objective of gathering comments and concerns of the stakeholders on the grouped project level, to be implemented in various districts of Togo & Benin and have been provided in the section of 2.1.2 of the joint PD & MR /01/which was verified by the VVB through onsite visit/25/ and documents related to stakeholder consultation/22//18/.

<p>Consultation outcome</p>	<p>The Project Proponent has reported its feedback and grievance redressal procedure in Section 2.1.2 of the joint PD & MR /01/, and the policy is outlined in the document “Project Grievance Redress Mechanism” /18/. The key comments made by the local stakeholders were all answered during the local stakeholder consultation meetings and have also been provided in the section of 2.1.2 the joint PD & MR /01/.</p> <p>In the opinion of the assessment team, based on the onsite inspection interviews and observations, the grievance redressal procedure will address issues that may arise during project planning and implementation.</p>
<p>Ongoing communication</p>	<p>The ongoing communication process has been designed where beneficiaries and stakeholders have PP contact information and the understanding that they should contact the organization with any problems, questions, or grievances. The stakeholders can also connect through IADES members, who are part of communities where stoves have been distributed. During the onsite inspection interviews and based on document review /22/, /18/, it can be confirmed that ongoing communication procedure has been designed and is implemented according to section 2.1.2 of the Joint PD & MR /01/ and that it is effective in its aim.</p>
<p>Stakeholder input</p>	<p>VVB confirms the procedure and method for engagement, the method for documenting the outcomes of local stakeholders’ consultation, and account of all inputs received.</p> <p>During the monitoring period, no negative feedback or comments were reported from the stakeholders.</p> <p>VVB confirms that the project proponent has taken due account of all input/ feedback received during the monitoring process (positive or negative) have been compiled in the survey results spreadsheet/08/, this has been checked by the verification team during the onsite inspection interviews. Hence VVB deemed the local stakeholders ongoing communication as appropriate.</p>

3.2.1.3 Free, Prior, and Informed Consent

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Obtaining consent	The PP did not identify any potentially significant adverse impacts, including activities that affect land, natural resources, and cultural resources owned or used by Indigenous Peoples, so Free Prior and Informed Consent was not received. The same is confirmed from during OSV interviews/25/.
Outcome of FPIC discussion	N/A

3.2.1.4 Grievance Redress Procedure

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Development process	The project follows a well-defined Feedback and Grievance Redress Policy and Procedure to ensure that grievances from project-affected communities and individual stakeholders are prioritized and addressed properly. These measures aim to enhance the project's accountability and transparency, supporting initiatives that enable communities to identify and mitigate adverse effects on themselves or their environment, which may not have been previously identified by the project team. VVB confirms the statement provided in the Joint PD&MR is found appropriate and is verified by the checking the relevant documents/18/ and by interviewing the local stakeholders and staffs during the onsite visit.
Grievance redress procedure	As a part of on-going communication with local stakeholders, the grievance register will be maintained at the local office locations of the project manager IADES for any grievances regarding the project activity. Any relevant concern received during operation of project activity, will be addressed according to its merit and will receive a response within 14 days of lodging a grievance. During the onsite inspection interviews and based on document review /22/. it can be confirmed that grievance addressal procedure has been designed and is implemented according to section 2.1.2 of the Joint PD & MR /01/ and that it is effective in its aim.

3.2.1.5 Public Comments

Comments received	Actions taken by the project proponent	Evidence gathering activities, evidence checked, and assessment conclusion
No Comments received during the public comment period	Not applicable as none was received during the 30 days listing period on VERRA registry. The VCS PD was made available for the public comments from 28-September-2023 to 28-October-2023.	<p>The public commenting period for the project was from 28-September-2023 to 28-October-2023.</p> <p>No public comments were received during this period.</p> <p>VVB has confirmed the same by crosschecking the project VERRA Registry/29/.</p>

3.2.2 Respect for Human Rights and Equity

3.2.2.1 Labor and Work

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Discrimination and sexual harassment	<p>As per the statement provided in the section 2.3.1 by the PP and IADES HR unit monitors and implements various HR policies for staff and beneficiaries, ensuring no instances of discrimination or sexual harassment were recorded during the monitoring period.</p> <p>VVB confirm the statement provided in the Joint PD&MR is appropriate. This is verified from the relevant documents/24/ and interviews with the stakeholders.</p>
Management experience	As per the statement provided in the section 2.3.1 by the PP, The project team includes individuals with diverse backgrounds and experiences in project management, community engagement, cookstove manufacturing and environmental sustainability.

Gender equity in labor and work	As per the statement provided in the section 2.3.1 by the PP is committed to gender equity in recruitment policies, actively aiming to increase female recruitment whenever possible.
Human trafficking, forced labor, and child labor	As per the statement given in clause 2.3.2 of PD&MR /01/, the Implemented project activity complies with all the relevant state & national laws and there is no child is forced to or allowed to work in the project activity.

3.2.2.2 Human Rights

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Human rights	As per statement provided by the PP in the section 2.3.2 of the Joint PD & MR/01/, The project distributes improved cookstoves to households, avoiding legal or customary tenure or access rights to territories and resources. Primary stakeholders can choose whether to receive a free stove, regardless of their tribal, ethnic, religious, or political background. The stoves are distributed irrespective of the beneficiaries' backgrounds, and they are not forced or coerced to use them during monitoring work. This approach ensures that stakeholders, indigenous people, local communities, and customary rights holders have equal access to the stoves.

3.2.2.3 Indigenous Peoples and Cultural Heritage

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Preservation and protection of cultural heritage	<p>As per the statement provided in the section 2.3.3 of the Joint PD&MR/01/, The project distributes improved cookstoves to Togo households without affecting cultural heritage sites. And if any identified the project will obtain FPIC from the affected communities.</p> <p>VVB confirms that the project doesn't affect the cultural heritage as per the joint PD and MR, which was confirmed through an onsite visit and an interview with the stakeholders/25/.</p>

3.2.2.4 Property Rights

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Rights to territories and resources	This is not applicable since the project activity involves only the distribution of ICS cookstoves.
Respect for property rights	This is not applicable since the project activity involves only the distribution of ICS cookstoves.

3.2.2.5 Benefit Sharing

N/A

3.2.3 Risks to Local Stakeholders and the Environment

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Risks to stakeholder participation	<p>As per the statement provided in the section 2.2 of the Joint PD&MR/01/, there were few risks identified in stakeholder participation. The identified risk is:</p> <ul style="list-style-type: none"> • Lack of awareness or understanding of the benefits of improved cookstoves among community members. • Resistance or opposition from traditional cooking practices or cultural norms. • Limited engagement or representation of diverse stakeholders in project planning and decision-making processes. <p>Mitigation or preventative measure taken for above risks are:</p> <p>Ensure rural communities are engaged through awareness and environmental and health benefits of the cookstoves through training provided to community members on the environmental, health and time benefits of using a cookstove, as opposed to a three stone fire.</p>

	<p>Representation of diverse stakeholders were included in the stakeholder consultation process.</p> <p>VVB confirms the statement provided is found appropriate by crosschecking the training materials/14/ stakeholder consultation reports /22/, onsite visit/25/ and interview with the stakeholders.</p>
<p>Working conditions</p>	<p>As per the statement provided in the section 2.2 of the Joint PD&MR/01/, the IADES staffs are at risk and Disputes or conflicts related to wages may occur. This was due to their remote working locations.</p> <p>IADES provide training on safe handling and usage of cookstoves, enforce safety protocols in the workshop, ensure access to appropriate protective gear, IADES to monitor working conditions regularly, and establish mechanisms for workers to report any concerns or issues. Team members are paid equally for the same level of work no matter of age, gender or any other discriminatory reason.</p> <p>VVB confirms the statement provided in the Joint PD&MR is found appropriate by crosschecking the relevant documents /24/, onsite visit/25/ and interview with the local staffs of the Project.</p>
<p>Safety of women and girls</p>	<p>As per the statement provided in the section 2.2 of the Joint PD&MR/01, the project identified risks to indoor air pollution-related health issues, including respiratory illnesses to women and girls.</p> <p>IADES provide Training around prevention of avoidable respiratory illnesses by using the ICS.</p> <p>VVB confirms the statement provided in the Joint PD&MR is found appropriate by crosschecking the relevant documents /24/, onsite visit/25/ and interview with the local stakeholders.</p>
<p>Safety of minority and marginalized groups, including children</p>	<p>As per the statement provided in section 2.2 of the Joint PD&MR/01, the project identified risks of minority and children being recruited to the deliver the project.</p> <p>IADES has strict policies and complies with all the relevant state & national laws and there is no child forced to or allowed to work in the project activity.</p> <p>PP provides subsidies to make cookstoves affordable for low-income households.</p> <p>VVB confirms the statement provided in the Joint PD&MR is found appropriate by crosschecking the relevant documents /22/, onsite visit and interview with the local stakeholders/25/.</p>

<p>Pollutants (air, noise, discharges to water, generation of waste, release of hazardous materials)</p>	<p>As per the statement provided in the section 2.2 of the Joint PD&MR/01/, The project identified no risk to both staff and project beneficiaries related to pollutants.</p> <p>The project does not involve the manufacture, trade, release, and/or use of hazardous and non-hazardous materials, thus it will not result in any release of pollutants. Project activity implements environmentally sustainable practices are maintained throughout the project lifecycle, including locally sourced clay and metal.</p> <p>VVB confirms the statement provided in the Joint PD&MR is found appropriate by crosschecking the documents/01//05//21/ and onsite visit and interview with the local stakeholders/25/</p>
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3.2.4 Ecosystem Health

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

3.2.4.1 Rare, Threatened, and Endangered species

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Species and habitat	The project involves the distribution of Improved Cooking Stoves (ICS) in Togo. The project is not located in or adjacent to habitats for rare,

[REDACTED]	threatened, or endangered species. Since it's an ICS distribution project, the project boundary involves the physical, geographical site of the efficient devices that utilize biomass. VVB had cross verified the statement through reviewing the relevant documents /05//10//22//26/ and onsite visit/25/.
...	...

3.2.4.2 Introduction of Species

The project involves the distribution of Improved Cooking Stoves (ICS) in Togo. Hence this section is not applicable.

3.2.4.3 Ecosystem conversion

The project involves the distribution of Improved Cooking Stoves (ICS) in Togo and the grouped project is not an ARR, ALM, WRC, or ACoGS. Hence this section is not applicable.

3.3 Application of Methodology

3.3.1 Title and Reference

The Project provides for projects that use one of the VCS-approved methodologies:

VMR0006: Methodology for Installation of High Efficiency Firewood Cookstoves, Version 1.2.

The associated methodologies, tools, and guideline documents in the Project include:

- Methodology “AMS-II.G: Energy efficiency measures in thermal applications of non-renewable biomass” Version 13.0;
- CDM TOOL01 “Tool for demonstration and assessment of additionality “Version 07.0
- CDM TOOL30 “Calculation of the fraction of non-renewable biomass” Version 04.0;
- CDM TOOL33 “Default values for common parameters” Version-01.0;
- CDM Guideline “Sampling and surveys of CDM project activities and programmes of activities” version 04;
- CDM Standard “Sampling and surveys for CDM project activities and programmes of activities” version 09;
- Guidelines: “General Guidelines for CDM SSC methodologies” Version-23.1

3.3.2 Applicability

The applicability of methodology is justified as below:

Methodology ID	Applicability condition	Assessment and conclusion
<p>VMR0006: V1.2.</p>	<p>This methodology applies to project activities that introduce energy efficiency and fuel switch measures in thermal applications (including cookstoves, ovens, and dryers) that:</p> <ol style="list-style-type: none"> 1) Increase thermal efficiency to reduce the consumption of non-renewable biomass; or 2) Switch from fossil fuel (coal or kerosene) to renewable biomass in new or existing improved thermal energy generation units. 	<p>Through document review and on-site visits, VVB verified that the confirmed that the proposed group project involves an increase in thermal efficiency in cookstoves to reduce consumption of non-renewable biomass.</p> <p>Therefore, this applicability criteria have been met by the project activity.</p>
<p>VMR0006: V1.2.</p>	<p>This methodology is applicable to both ‘Projects’ and ‘Large Projects’ under the following conditions:</p> <ol style="list-style-type: none"> 1) All applicability conditions of the latest version of AMS II.G. must be met. 2) The project activities must be implemented in households, community-based kitchens, institutions (e.g., schools), or small and medium-sized enterprises (SMEs). 	<p>Through document review and onsite visit interviews, VVB can confirm that both types of cookstoves will only be distributed in households, and each ICS distributed under this project will be considered a large project.</p> <p>The average annual GHG emission reduction for the project is greater than 300,000 metric tons of CO₂ per year, and hence the project is a large one as per VCS Standard 4.6.</p> <p>Therefore, this applicability criteria have been met by the project activity.</p>

<p>VMR0006: V1.2.</p>	<p>For fuel switch activities, the following additional conditions must be met:</p> <p>3) Projects must exclusively use renewable biomass², and meet the following additional conditions:</p> <p>(a) If biomass residues are used, they have been left for decay or burned without energy recovery before the implementation of the project activity.</p> <p>(b) If biomass residues from a production process are used, the implementation of the project does not result in an increase of the processing capacity of raw input or any other substantial changes (e.g., product change) in this process.</p> <p>(c) If biomass from dedicated plantations is used, the applicability conditions of TOOL16 “Project and leakage emissions from biomass” must be satisfied.</p>	<p>Through document review and onsite visit interviews, VVB confirmed that the group project does not involve fuel switch measures.</p> <p>Therefore, the applicability criteria are not applicable.</p>
<p>VMR0006: V1.2.</p>	<p>The renewable biomass sources must be documented in the project description and monitoring periods, including origin, quantities, and pre-project conditions. If the biomass is sourced from a third-party, proof of purchase must be provided (e.g.,</p>	<p>Through document review and onsite visit interviews, VVB confirmed that the group project does not involve fuel switch measures.</p> <p>Therefore, the applicability criteria are not applicable.</p>

	contractual agreements or purchase receipts).	
VMR0006: V1.2.	More than one type of biomass may be used (e.g., briquettes and wood chips).	Through document review and onsite visit interviews, VVB confirmed that the group project does not involve fuel switch measures. Therefore, the applicability criteria are not applicable
AMS-II.G., V13.1	In the case of cookstoves, the methodology is applicable to the introduction of single pot or multi pot portable or in-situ cookstoves with rated efficiency of at least 25 per cent.	VVB has reviewed the test reports/30/ which confirms that the ICS distributed to the end users i.e, the <i>Adokpa Wazam</i> has an thermal efficiency of 31.3%.This is found appropriate to the Validation and verification team. Thus, the eligibility criteria have been met for the new project activity instances under this group project.
AMS-II.G., V13.1	The aggregate energy savings of a single project activity shall not exceed the equivalent of 60 GWh per year or 180 GWh thermal per year in fuel input.	VVB confirms that the aggregate energy savings of a single project activity does not exceed the equivalent of 60 GWh per year or 180 GWh thermal per year in fuel input, making them microscale units. As per Paragraph 15 of CDM Tool 19, if each unit qualifies as a microscale unit, the project is not required to meet microscale or small-scale thresholds and cab be verified from the ER sheet.
AMS-II.G., V13.1	Non-renewable biomass has been used in the project	The validation team reviewed publicly available documents

	<p>region since 31 December 1989, using survey methods or referring to published literature, official reports or statistics.</p>	<p>and the use of Non-renewable biomass since 1989 in Togo. This is deemed appropriate to the Validation team.</p> <p>Thus, the eligibility criteria have been met for the new project activity instances under this group project.</p>
<p>AMS-II.G., V13.1</p>	<p>For cases where the biomass is sourced from renewable sources, the project participants should use a corresponding Type I methodology.</p>	<p>Not applicable</p>
<p>AMS-II.G., V13.1</p>	<p>The CDM-PDD or CDM-PoA-DD/CPA-DD shall explain the proposed method for distribution of project devices including the method to avoid double counting of emission reductions such as unique identifications of product and end-user locations (e.g. programme logo).</p>	<p>VVB by means of onsite visit audit interviews confirms that the proposed method for distribution of project devices includes the method to avoid double counting of emission reductions such as unique identifications of product, end-user details (name, address etc) and unique GPS referenced location (if available). Therefore, VVB confirms that the record-keeping system will eliminate double counting.</p>
<p>AMS-II.G., V13.1</p>	<p>The project document shall also explain how the proposed procedures prevent double counting of emission reductions, for example to avoid that project stove manufacturers, wholesale providers or others claim credit for emission reductions from the project devices.</p>	<p>VVB confirms that the proposed procedures prevent double counting of emission reductions. This is verified from the onsite visit and can be cross verified with the end user agreement.</p>

3.3.3 Project Boundary

As per the applied methodologies VMR0006, V1.2 and AMS-II. G_v13.0, the project boundary of the project is the physical, geographical site of the efficient devices that utilize biomass.

The sources of greenhouse gas identified in the Joint PD & MR /01-e/ are deemed to be appropriate and assessed below:

Source		Gas	Included?	Assessment and conclusion
Baseline	Source 1 Emission from burning of non-renewable Biomass, i.e. Woody Biomass for household cooking requirements	CO ₂	Yes	Identified as major source, since in the Pre-project scenario it involves the use of non-renewable Biomass, i.e. Woody Biomass for cooking requirements resulting emission of CO ₂
		CH ₄	Yes	Identified as major source, since in the in the Pre-project scenario it involves the use of non-renewable Biomass, i.e. Woody Biomass for cooking requirements resulting emission of CH ₄
		N ₂ O	Yes	Identified as major source, since in the in the Pre-project scenario it involves the use of non-renewable Biomass, i.e. Woody Biomass for cooking requirements resulting emission of N ₂ O
Project	Source 1 Emission from burning of non-renewable Biomass, i.e. Woody Biomass for household cooking requirements	CO ₂	Yes	Identified as major source, since in the project scenario it involves the use of non-renewable Biomass, i.e. Woody Biomass for cooking requirements resulting emission of CO ₂
		CH ₄	Yes	Identified as major source, since in the project scenario it involves the use of non-renewable Biomass, i.e. Woody Biomass for cooking requirements resulting emission of CH ₄
		N ₂ O	Yes	Identified as major source, since in the project scenario it involves the use of non-renewable Biomass, i.e. Woody Biomass for cooking requirements resulting emission of N ₂ O

The map showing the project boundary of the project in which the ICS is distributed is given below:



VVB confirms that the sources of greenhouse gas identified in the Joint PD & MR /01/ are deemed to be appropriate and the project boundary is defined as per the applied methodologies VMR0006, V1.2/B02/ and AMS-II. G_v13.0/B02/.

3.3.4 Baseline Scenario

The project activity will use methodology VMR0006 version 1.2. This is the most recent valid version available on the VERRA site at the time of validation. Since the project activity that apply the indicative simplified methodology VMR0006 version 1.2, the baseline scenario for this project activity is the one indicated by this methodology, i.e. “The baseline scenario is the target population’s continued use of non-renewable biomass (i.e., firewood or charcoal) or fossil fuel (i.e., coal or kerosene) to meet similar thermal energy needs, as provided by project devices. “The baseline described in the Joint PD_MR complies with the requirements of the methodology, as the energy baseline is the existing level of consumption of non-renewable biomass used by the cooking systems currently in use and which is used in the absence of the project activity.

VVB based on review of the VCS Joint PD & MR /01/ confirms that the documentary evidence used in determining the above baseline scenarios are relevant, and correctly quoted and interpreted in the project description. The baseline scenario of TOGO for the applied methodology was also confirmed through onsite interviews with the end users of technologies and representatives of PP. The baseline scenario for Benin is not determined, PP will assess the baseline scenario before the distribution of ICS in Benin, FAR has been raised in this regard.

A baseline survey was undertaken in Togo to confirm the baseline technology, it was confirmed that three stone and other traditional stoves prevalently used along with a few metal pots. Baseline surveys were conducted for 129 households based on confidence interval/ precision level of 90/10.

VVB used acceptance sampling during validation of baseline surveys for checking the PP's sample size. In accordance with the §31 and §32 of the sampling standard, version 09/B08-1/, a sample size of 08 households was chosen (with no discrepant records). A sample size of 08 ICS was chosen, based on an AQL of 0.5% and UQL of 20%, producer risk 10% and consumer risk 10%. Acceptance number (c) thus determined for the sample is 0. The baseline survey results were cross-checked with the household respondents, and it was confirmed that the baseline KPTs were conducted at the households. It was observed that out of the 8 samples for baseline surveys and KPTs, the responses matched with the PP's record. Thus, PP's sample has been accepted with an acceptance number of c=0.

VVB confirms that the baseline scenario opted by the project activity is in accordance with the requirements of the applied methodology /B02/ and is justified and also confirms that the host country does not have any official policies or programs requiring the distribution of household cookstoves that are fuel-efficient. The project is not mandated by any law, statute, or other regulatory framework, or for UNFCCC non-Annex I countries, any systematically enforced law, statute, or other regulatory framework.

3.3.5 Additionality

The additionality of the large-scale project has been demonstrated by the PP as per the methodology section 7 /B02-a/. The methodology uses activity method for the demonstration of additionality using Tool 01, V7.0 and Tool 27, V11./B03/ PP has demonstrated regulatory surplus in accordance with the rules and requirements regarding regulatory surplus set out in the latest version of the VCS Standard and it can be confirmed that the project is not mandated by any law, statute or other regulatory framework, or for UNFCCC non-Annex I countries, any systematically enforced law, statute or other regulatory framework.

Furthermore, the project meets all the applicability conditions of the applied methodology VMR0006, version 1.2 /B02-a/ and distributes stoves at subsidized price (i.e., at a price lower than the purchase cost of ICS) to the end-users. There is no financial or economic benefit other than VER income, given all sale revenues are less than the cost to PP per unit of ICS. Although simple cost analysis can be applied, a better presentation might be achieved via Investment Comparison Analysis.

Therefore, PP has applied Step 3 i.e. project method where the additionality is demonstrated using investment analysis method (Step 2) set out in the CDM Tool for the Demonstration and Assessment of Additionality V7.0 and "Tool 27: Investment Analysis, version 11.0. /B03/.

PP has conducted investment analysis using following sub-steps of the tool:

Sub-step 2a: Determine appropriate analysis method

As the project generated revenue from sales of ICS apart from the revenues from VCUs, simple cost analysis (Option I) is not applicable.

- (The project will distribute ICS at a subsidized price (i.e., at a price lower than the purchase cost of ICS). There is no financial or economic benefit other than VER income, given all sale revenues are less than the cost to PP per unit of ICS. Although simple cost analysis can be applied, a better presentation might be achieved via Investment Comparison Analysis.)

PP has therefore chosen Option II i.e., Investment Comparison Analysis

- Sub-step 2b: Option II. Apply Investment Comparison Analysis

The financial indicator identified is NPV and PP has demonstrated that the project's NPV is negative without VER revenue and hence substantiates that the project activity is not financially viable / economically attractive without the sale of VER revenues, which is deemed acceptable to the validation team.

- (The project applies NPV analysis. The project's NPV is negative without VER revenue and hence substantiates that the project activity is not financially viable / economically attractive without the sale of VER revenues.)

Sub-step 3c: Calculation and comparison of financial indicators

The alternative to the project activity is deemed as continuation of current practice by the potential beneficiaries i.e., use of traditional / inefficient means of cooking. For this alternative, the PP does not need to make any investment nor shall earn any revenue associated with the continuation of current practice. Thus, the NPV for the alternative is deemed as 0.

The MOU was signed in between Carbon Kind (PP) and the ICS supplier on 1st of February 2023/32/. This specific date has been considered as the official investment decision date, as this marks the first point of no return from the project and PP's commitment to invest in the project. Consequently, the corresponding date dollar exchange rate has been applied in the investment analysis spreadsheet

Basic parameters for calculation of financial indicators for one ICS /27/ of the Project are shown in the table below:

Category	Input Values	Value XOF	Comment
COST	ICS purchase from manufactures per unit	5000	The purchase price and sale price agreed with the manufacturer is the same for all the listed cookstoves and for each of the fuel types. The same is verified from the manufacture

		agreement /27/ and OSV interview by validation team to substantiate the subsidized sale price of ICS.
Dispatch costs	88	The value is cross-checked and confirmed from the Agreement with local distribution partner/23/
Distribution commission per unit	1000	The value is cross-checked and confirmed from the Agreement with local distribution partner/23/
Fuel costs for distribution	100	The value is cross-checked and confirmed from the Agreement with local distribution partner/23/
inflation rate	2.76 %	IMF (https://www.imf.org/en/Publications/WEO/weo-database/2024/April/weo-report?c=742.&s=PCPIPCH.&sy=2024&ey=2028&ssm=0&scsm=1&ssc=0&ssd=1&ssc=0&sic=0&sort=country&ds=.&br=1) for average of 5 years. Inflation rate as per para 16 of Tool 27: Investment Analysis, V 13.0. This rate is based on the average forecasted inflation rate for the Togo over a 5-year period (from 2023 – 2027, i.e. duration of the crediting period), as provided by the International Monetary Fund's World Economic Outlook /B05/

	VAT	0.00%	
	Stove Replacements costs	0	
	Operation and Maintenance costs	0	
	Project Management costs	0	
	Marketing overheads	0	
	General business expenses	0	
	Office related expenses	0	
	Staff Cots	0	Assumed as 0 as a
	Corporate Overheads	0	conservative measure.
	Total ICS Cost per unit	6359	
Revenue	ICS sale price to beneficiary per unit	1000	Confirmed from the End user agreement/17/ and interviews from the OSV/25/.
	Discount Rate	4%	Consideration of central bank of West African States (Debt) is deemed most conservative as the discount rate. This is the central bank of West African States lending rate, available at the time of investment decision /32/ (sourced from https://www.bceao.int/en/content/main-indicators-and-interest-rates) /B05/.
	Gross Profit per unit	-5359	
	NPV	NEGATIVE	

Total ICS Cost per unit	6359
revenue / sale price of ICS	1,000

Discount Rate	4.00%
Present Value	961.54
NPV	Negative

Sub-step 2d: Sensitivity analysis

A sensitivity analysis has been carried out for parameters contributing more than 20% revenues and costs, to demonstrate the robustness of the financial analysis. The parameters for which sensitivity analysis is done are increase in project revenue / increase in sale price of ICS, decrease in purchase cost of ICS. Reasonable variations for these parameters were checked by calculating the variation necessary to reach the positive NPV and then discussing the likelihood for that to happen.

Sensitivity	Achieved Variation needed to achieve 0 NPV
Revenue / sale price of ICS	536%
Purchase cost	-80%

The results of sensitivity analysis /27/ show that even with a variation of project revenue / increase in sale price of ICS, decrease in purchase cost of ICS. NPV is negative. And it is evident from the results given above; the project remains additional even under the most favourable conditions.

It is verified that the NPV is reached if:

1. ~532% increase in sale price of ICS

A ~532% increase in the sale price of ICS is not possible. The target beneficiaries cannot afford to buy the ICS at such increased prices.

2. ~80% reduction in purchase cost of ICS

The purchase cost is binding as per the supply agreement with the ICS supplier. The purchase cost is likely to increase over time rather to decrease. Thus, it is not feasible to achieve a ~80% reduction in the purchase cost of ICS.

Thus, the project is not sensitive to significant variations to the input parameters and scenarios in which the project activity might become financially more favorable than the alternative does not exist. As per para 42a) of Tool1, v 7.0.0, since the NPV of alternative (continuation of current practice) is higher than the NPV of the proposed project without considering carbon revenues.

Based on the data above, the NPV value without VCUs revenue is negative which indicates that the project activity is not financially viable without the support of carbon revenues from sale of VCUs.

Therefore, the validation team confirms that the large-scale project is additional.

3.3.6 Quantification of GHG Emission Reductions and Carbon Dioxide Removals

The equations and choices provided in the methodology and all other methodological tools are correctly quoted in the Joint PD & MR /01/. The emission reductions of the project instances of the project would be calculated using the formulae mentioned in the applied methodology; VMR0006 (version 1.2) /B02/.

VVB based on the review of the Joint PD & MR /01/, confirms that the formulae are correctly presented for the determination of emissions reductions at project instance level. The parameters and equations presented in the Joint PD & MR /01/, as well as other applicable documents, have been compared with the information and requirements presented in the methodology respectively. An equation comparison has also been made to ensure consistency between all the formulae presented in the Joint PD & MR/01/ and ER spreadsheet/02/ and methodology VMR0006 (version 1.2) /B02/.

PP has not accounted for baseline emissions and project emissions separately; instead, PP directly quantified emission reductions based on the reduced consumption of non-renewable biomass or fossil fuels. This is in line with the applied methodology VMR0006 (version 1.2)/B02.

For leakage emission, had applied an adjustment factor to account for leakage related to the non-renewable woody biomass saved by the project activity (Adj_{LE}). This in line with the paragraph 41 of the applied methodology AMS-II.G Version 13.0/B02/.

The improved cookstove is introduced as energy efficiency measure in the project. Therefore, following equation is used which replaces Equations 1 and 2 of the AMS-II.G. This equation used is in line with the applied methodology VMR0006 (version 1.2) /B02/.

$$ER_y = \sum_i \sum_j B_{y,savings,i,j} \times N_{0,i,j} \times n_{y,i,j} \times \mu_y \times f_{NRB,y} \times NCV_{biomass} \times (EF_{wf,CO2} + EF_{wf,non\ CO2}) \times Adj_{LE} \times (1 - u_d) \quad \text{(equation 1)}$$

Where:

ER_y = Emission reductions in year y (tCO₂e)

$B_{y, savings, i, j}$ = Quantity of woody biomass that is saved per project device i and batch j in year y (tonnes)

$N_{0, i, j}$ = Number of project devices of type i and batch j commissioned (number)

$n_{y,i,j}$ = Proportion of commissioned project devices of type i and batch j ($N_{0,i,j}$) that remain operating in year y (fraction)

μ_y = Adjustment to account for any continued use of pre-project devices during the year y

$f_{NRB,y}$ = Fraction of woody biomass that can be established as non-renewable biomass (%)

$NCV_{biomass}$ = Net calorific value of the non-renewable woody biomass that is substituted or reduced (TJ/tonne)

$EF_{wf,CO2}$ = CO2 emission factor for non-renewable woody biomass (tCO2/TJ)

$EF_{wf,non\ CO2}$ = non-CO2 emission factor for non-renewable woody biomass (tCO2e/TJ)

Adj_{LE} = Adjustment factor to account for leakage related to the non-renewable woody biomass saved by the project activity (fraction)

u_d = Uncertainty deduction for fnrb (%)

The quantity of woody biomass saved $B_{y,savings,i,j}$ due to implementation of improved cook stoves are estimated using Option 3 i.e. equation 8 of AMS-II.G Version-13.0 as follows:

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

Where

η_{old} = Efficiency of baseline cookstove

$\eta_{new,y,i,j}$ = Efficiency of the improved cookstove type i and batch j determined through the water boiling test (WBT) during year y

$B_{y=1,new,i,j,survey}$ = 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 implementation through sample surveys.

As per VMR0006-v1.2 methodology, efficiency of a batch of stoves will be measured using the WBT protocol each year after installation to determine loss of thermal efficiency.

The below approximation assumes a linear decrease in thermal efficiency, based on an estimated efficiency loss of 1% per year. The efficiency rating will be tested annually using the Water Boiling Test.

The PP has provided the detailed calculations on the VERs in the ER sheet for both (i) estimates throughout the crediting period and actual VERs obtained in the first monitoring period.

Leakage emissions are calculated as 5% of the net baseline emission reductions. This follows in accordance with Section 5.4 of AMS.II.G Version 13 where it is stated that a net to gross adjustment factor of 0.95 may be applied to reductions to account for leakages.

As the efficiency loss per year is not yet known the table below is based on the ICS having an efficiency of 31.3%.

The estimated emission reductions for ICS are given below:

Vintage period	Estimated baseline emission reductions (tCO2e)	Estimated project emissions (tCO2e)	Estimated leakage emissions (tCO2e)	Estimated reduction VCUs (tCO2e)	Estimated removal VCUs (tCO2e)	Estimated total VCUs (tCO2e)
01-Mar-2023 to 29-Feb-2024	3,898	0	0	3,898	0	3,898
01-Mar-2024 to 28-Feb-2025	43,006	0	0	43,006	0	43,006
01-Mar-2025 to 28-Feb-2026	131,009	0	0	131,009	0	131,009
01-Mar-2026 to 28-Feb-2027	219,220	0	0	219,220	0	219,220
01-Mar-2027 to 29-Feb-2028	303,896	0	0	303,896	0	303,896
01-Mar-2028 to 28-Feb-2029	382,466	0	0	382,466	0	382,466

01-Mar-2029 to 28-Feb-2030	458,019	0	0	458,019	0	458,019
01-Mar-2030 to 28-Feb-2031	529,795	0	0	529,795	0	529,795
01-Mar-2031 to 29-Feb-2032	599,750	0	0	599,750	0	599,750
01-Mar-2032 to 28-Feb-2033	662,759	0	0	662,759	0	662,759
Annual Average	333,391	0	0	333,391	0	333,391

The VCS methodology, VMR0006 is applicable to both ‘Projects’ and ‘Large Projects’. Hence there are no limits on volume of credits from Improved Cookstove component that can be certified per annum.

This project would achieve an estimated annual average of emission reduction of 333,391tCO_{2e} in the 10-year fixed crediting period Start 01/03/2023. So, the start date of the project activity will be the actual date from which the distribution activities will start taking place, which may be 01/03/2023.

The project activity has been distributed over 7,197 ICS and the total emission reduction achieved in the monitoring period is 3,898 tCO_{2e as} which is also provided in the ER spreadsheet/02/.

In conclusion, all values used in the VCS Joint PD & MR to calculate emission reductions are considered reasonable in the context of the proposed project “Empowering Communities Through Improved Cookstoves” and calculation approach is correct.

3.3.7 Methodology Deviations

No methodology deviations are identified in the project activity.

3.3.8 Monitoring Plan

The project employs baseline and monitoring methodology namely VMR0006, version 1.2 /B02/. According to section 6.1 and 6.2 of Joint PD & MR /01/ the parameters determined ex-ante as per the requirements of the methodology are given below.

Parameters	Unit	Value	Source	Assessment
$\eta_{old,IJ}$	Fraction	15%	CDM Tool 33	VVB confirms that the The default values for the efficiency of pre-project device used for cooking For a three-stone fire using firewood is appropriately taken which has been verified from the applied CDM tool 33/B03/.
$EF_{wf CO2}$	ton CO2/TJ	112	IPCC	VVB confirms that the value for the CO2 emission factor for woody biomass is appropriately taken and is verified from the IPCC values/B05/
$EF_{wf non-CO2}$	ton CO2/TJ	9.46	IPCC	VVB confirms that the value for the non-CO2 emission factor for woody biomass is appropriately taken and is verified from the IPCC values/B05/
Adj_{LE}	Fraction	0.95	Applied Methodology AMS-II.G,Version 13.0	VVB confirms that the value for Adjustment factor to account for leakage related to the non-renewable woody biomass saved by the project activity is appropriately taken and is line with the applied methodology AMS-II.G, Version 13.0/B02/

fNRB_y	Fraction	0.77	Third Party Report	VVB confirms that the calculation of $fNRB_y$ is correct and in line with the CDM Methodological tool: Calculation of the fraction of non-renewable biomass (v4.0) and thus acceptable to the validation team. The assessment of $fNRB_y$ provided below.
ud	Fraction	0.26	VMR0006_v1.2	VVB confirms that the value for the Uncertainty deduction for $fnrB$ is appropriately taken and is verified from the applied methodology/B02/

Assessment of $fNRB_y$

PP has contracted an independent party “C4Ecosolutions” for a study and calculation of $fNRB$ as per CDM Methodological Tool: “Calculation of fraction of non- renewable biomass” (v04.0). Validation team confirms that it has checked $fNRB$ calculation spread sheet /12/ prepared by C4Ecosolutions. As per the applied methodological tool, In the case of ex ante calculation of $fNRB$, the parameter $fNRB$ shall be estimated using the most recent historical year for which data is available. Review of $fNRB$ report /12/ prepared by C4Ecolution revealed that all the data used for the calculation is latest available data at the time of validation.

Review of $fNRB$ calculation spread sheet /12/ prepared by C4Ecosolutions reveals that the total woody biomass consumption in a country comprises its domestic, non-domestic energy and non-domestic non-energy consumption. For Togo, this total is estimated using consumption data sourced from the FAO Forest Products Databases and World Bank. population statistics. The reported volumes of fuelwood consumed in cubic meters are converted to metric tonnes using the FAO default conversion factor. The reported value of charcoal consumption is converted to the equivalent woody biomass using the latest CDM Tool 30 v04.0 2022, default charcoal-to-wood biomass conversion factor. Finally, consumed volumes of commercial forest products – including industrial roundwood, sawn wood, veneer sheets and wood-based panels– are converted to metric tonnes using a biomass conversion and expansion factor provided for the region.

Domestic woody biomass consumption is estimated by multiplying the 2019 per capita consumption rates for wood fuel obtained from FAO (Table 1) /12/ with total 2021 population of Togo. The FAO accounts for non-users as the per capita consumption rate of fuel wood is estimated by dividing the total consumption of fuelwood in 2019 by the total population in 2019. Accordingly, the total domestic woody biomass consumption is conservatively estimated to be 3,364,502 t/yr. The non-domestic woody biomass consumption is estimated using 2019 per capita consumption rates obtained from FAO and disregards the deforestation likely occurring because of the conversion of land for agricultural use and informal or illegal harvesting, as available data for these activities are scarce.

Non-domestic energy consumption is reported as the quantity wood charcoal, and non-domestic non-energy consumption is reported as the quantity of industrial roundwood, sawn wood, veneer sheets and wood-based panels.

Per capita consumption rates were multiplied by the national 2021 population for each consumption category. Togo non-domestic energy and non-domestic non-energy consumption values are estimated to be 1,183,251 t/yr and 361,898 t/yr , respectively. Togo’s total woody biomass consumption is the sum of domestic, non-domestic, non-energy, and non-domestic energy consumption and is estimated to be 4,909,651 t/yr,

In Togo three ecological zone has been found i.e., Tropical dry forest, Tropical rainforest and Tropical moist forest, the same was verified by referring the Global ecological zones for FAO forest reporting. The resulting average MAI estimates for Togo are 1.60, 3.53 and 0.90 t/ha/year for the tropical dry forest, tropical rainforest and tropical moist forest, respectively. Table below provides the validated total, protected and remote forest cover extent, mean annual increment and renewable biomass by ecological zone for Togo.

Ecological Zone	Total forest cover (ha)	Protected area cover (ha)	Remote area cover (ha)	MAI(t/ha/yr)	Annual growth (t/yr)
Tropical dry forest	75	0	10	1.60	104
Tropical moist forest	165,709	50,996	40,515	0.90	112,675
Tropical rainforest	331,311	4,331	39,201	3.54	1,034,069
Total	497,095	55,327	79,726	6.04	1,146,848

The quantity of renewable biomass (RB) for Togo as per the verified f_{NRB} report and calculation sheet /12/ is estimated to be 1,146,848t/yr. The calculation is based on the equation -04 of tool 30 v04. /B03/, checked and deemed appropriate by the VVB.

The difference between woody biomass consumption and renewable biomass is considered to be non-renewable. Non-renewable biomass utilisation in Togo is, therefore, validated as 3,762,803t/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 the Togo is, therefore, validated as 0.77. From the review of this report/spreadsheet/12/ and interviews with the CME and C4 EcoSolutions (Pty) Ltd, the validation teams confirm the following:

The report has been prepared by an independent party (i.e., C4 EcoSolutions (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 /12/.
- The study has been done in accordance with the CDM Methodological Tool: “Calculation of fraction of non- renewable biomass” (v4.0) including the equation used and the data source as required by the tool.
- All the reference and data source used for the calculation/study has been listed and assessed by the VVB

In line with paragraph 6 of tool 30 v4 /B03/, f_{NRB} value has been compared with peer reviewed literature such as “The carbon footprint of traditional wood fuels” by Bailis and colleagues using the WISDOM method”. It has also been observed by the VVB that the resulting value is higher than the expected as per the cited peer reviewed literature. 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:/12/

1. More recent population statistics (2021) for Togo were used in the present study. The more recent data represents an increase in population numbers since the 2009 data utilised in the study by Bailis and colleagues.
2. Updated 2019 FAO forest products statistics were used in the present study, whereas the study conducted by Bailis and colleagues used 2013 FAO forest products statistics.

3. The approach used to determine the amount of forest that is accessible yields lower estimates in the present study when compared to the study by Bailis and colleagues. This results in a lower estimated RB and consequently increased NRB and *f*NRB.
4. In the present study, MAIs 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 was used in combination with extrapolating the observed forest gain extents between 2000 and 2012 to a future 20-year period. As per the study by Bailis and colleagues, MAI values were derived from a combination of field observations and IPCC values, followed by a different estimation of growth rates as a percentage of standing stock. This approach often yields higher MAIs and may lead to higher estimations of RB and subsequently, lower estimations of NRB and *f*NRB.

On the basis of the review of the tool 30 version 4, and the *f*NRB report provided by the PP the above information is deemed acceptable. Thus, in the opinion of validation team, the calculation of *f*NRB_y is correct and in line with the CDM Methodological tool: Calculation of the fraction of non-renewable biomass (v4.0) and thus acceptable to the validation team.

Parameters monitored ex-post

S.N.	Parameters	Methodology/Source of data	Description
1	$N_{y,i,j}$	Monitoring surveys	<p>Description: - Proportion of commissioned project devices of type i and batch j</p> <p>Monitoring Method and Frequency of monitoring: - Monitored directly or based on a representative sample. Sampling standard shall be used for determining the sample size to achieve 90/10 confidence precision according to the latest version of Standard for sampling and surveys for CDM project activities and programme of activities version 09. Simple random sampling approach will be used in sampling surveys. Minimum sample size will be determined.</p>

2	N, o, i, j	Monitoring surveys	<p>Description: -Number of project devices of type i and batch j operating during year y.</p> <p>Monitoring Method and Frequency of monitoring: - Monitored directly or based on a representative sample. Sampling standard shall be used for determining the sample size to achieve 90/10 confidence precision according to the latest version of Standard for sampling and surveys for CDM project activities and programme of activities version 09. Simple random sampling approach will be used in sampling surveys. Minimum sample size will be determined.</p>
3	μ_y	Monitoring surveys	<p>Description: Adjustment to account for any continued use of pre-project devices during the year y</p> <p>Monitoring Method and Frequency of Monitoring: Measured directly or based on a representative sample. Sampling standard shall be used for determining the sample size to achieve 95/10 confidence precision according to the latest version of Standard for sampling and surveys for CDM project activities and programme of activities.</p> <p>The proportion of operational stoves obtained from the survey is multiplied by the total commissioned stoves to arrive at this value.</p>
4	$\eta_{new,y,i,j}$	VMR0006	<p>Description: - Efficiency of the improved cookstove type i and batch j determined through water boiling test (WBT) during year y.</p>

			<p>Monitoring Method and Frequency of monitoring: - To adopt Option V given in the methodology: “Efficiency of the improved cookstoves to be estimated using equation 5 above where loss in efficiency per year is calculated, and therefore this parameter does not need to be monitored” can be used by PP, with Annually monitoring frequency.</p>
5	$B_{y=1,new,i,j,survey}$	VMR0006	<p>Description: - 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.</p> <p>Monitoring Method and Frequency of monitoring: - Minimum sample size of each type i and batch j should be in line with the latest version of Standard for sampling and surveys for CDM project activities and programme of activities or guidelines provided in methodology Section 8.4 option (b).</p> <p>Determined in the first year of the introduction of the devices (e.g. during the first year of the crediting period, y=1) through measurement campaigns at representative households and/or sample survey. Sample surveys to estimate this parameter, that are solely based on questionnaires or interviews (i.e. that do not implement measurement campaigns) may only be used if the following conditions are satisfied. (i) Baseline cookstoves have been completely decommissioned and only improved cookstoves are exclusively used in the project households; (ii) If</p>

			multiple devices are used in the project, it is possible from the results of the survey questions to clearly differentiate the quantity of firewood being used by each device. In other words, if more than one device, or another device that consumes firewood, are in use in project households, then the sample survey needs to distinguish the quantity of firewood used by the project device and the other devices that use firewood.
6	Life Span	VMR0006	<p>Description: -The operating lifetime of the project device. The life span should be reported if methodology equation 5 is adopted to determine the project stove efficiency.</p> <p>Monitoring Method and Frequency of Monitoring: - efficiency test done in university has been checked once at the time of project stove installation.</p>
7	NCV _{biomass}	IPCC Default for firewood	<p>Description: Net calorific value of the non-renewable woody biomass.</p> <p>Monitoring Method and Frequency of Monitoring: The value has been checked from the IPCC Default value for firewood.</p>

The validation and verification team determined that the monitored parameters and data used to estimate emission reduction under project activity and as mentioned in Section 6.1 and 6.2 of the VCS Joint PD&MR v5.2 /01/ are appropriate and meet the requirements of the methodology VMR0006, version 1.2 /B02/.

3.4 Non-Permanence Risk Analysis

This is not applicable to the project activity as the Project is not an AFOLU (Agriculture, Forestry and Other Land Use) project.

4 VERIFICATION FINDINGS

4.1 Project Implementation Status

Implementation Status	Assessment steps, evidence checked, & conclusion:
Project implementation	<p>The project “Distribution of Improved Cooking Stoves (ICS) in the Least Developed Country Togo” employs VCS methodology; VMR0006 version 1.2 /B02/. The project involves distribution of high thermal efficiency fuel-efficient improved cookstoves (ICS) to replace the baseline cookstove models at household level in Togo. It is intended that under this project high thermal efficient cookstoves will be distributed which will burn wood more efficiently thereby improving thermal transfer to pots, saving fuel wood. In addition to halting the progressing deforestation in Togo, this project will also help in reducing health risks associated with indoor smoke pollution and time spent for the collection of firewood.</p> <p>The group project is planned to distribute 481,697 ICS. Each Household will receive one ICS. The monitoring period for the current issuance request is 01-March-2023 to 29-February-2024. The last stove distributed under the current MP is on 29 February -2024. A total of 7,197 ICS has been distributed till the end of the monitoring period.</p> <p>VVB has confirmed the current implementation status of the project activity by reviewing the information in the VCS Joint PD&MR v5.2 /01/ and checking the distribution database provided by the Project Proponent.</p>
Monitoring plan	<p>The monitoring plan was assessed to be effective and fully implemented at the time of the verification exercise. Monitoring activities were also observed to be carried out in accordance with the documented monitoring plan. The monitoring system was deemed appropriate and suitable for the project activity The VVB did not identify and material discrepancy between the actual monitoring system and the monitoring plan as set out in the VCS Joint PD&MR v5.2 /01/and the applied methodology VMR0006, version 1.2 /B02/</p>

AFOLU-specific project implementation	Not applicable as the project activity do fall under For AFOLU Projects.
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The details of monitoring parameters used for calculation of emission reductions are provided below.

Table 4:- Parameters monitored ex-post

Monitoring Parameter Requirement	Assessment/ Observation by the VVB
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:	At least once every two years
Reporting frequency:	At least once every two years
Reported value:	7197
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 /07/.
Is accuracy of the monitoring equipment as stated in the VCS PD? If the VCS PD does not specify the accuracy of the monitoring equipment, does the monitoring equipment represent good monitoring practise?	NA
Calibration frequency /interval: Is it monitoring methodology /CDM EB guidance / local or national standards / manufacturers specification	NA
Is the calibration interval in line with the monitoring plan of the VCS PD? If the VCS PD does not specify the frequency of calibration, does the selected frequency represent good monitoring practise?	NA. QA/QC procedures stated in JPD&MR is compiled /01/
Company performing the calibration(internal or external calibration):	NA

Did calibration confirm proper functioning of monitoring equipment? (Yes / No):	NA
Is (are) calibration(s) valid for the whole reporting period?	NA
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/.
How were the values in the monitoring report verified?	NA
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):	Efficiency of the improved cookstove type i and batch j during year y ($\eta_{new,y,i,j}$)
Measuring frequency/Time Interval:	At least once every two years
Reporting frequency:	At least once every two years
Reported value:	0
Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	Yes
Details of monitoring equipment:	Value is calculated in the ER spread sheet /02/

Is accuracy of the monitoring equipment as stated in the VCS PD? If the VCS PD does not specify the accuracy of the monitoring equipment, does the monitoring equipment represent good monitoring practise?	NA
Calibration frequency /interval: Is it monitoring methodology /CDM EB guidance / local or national standards / manufacturers specification	NA
Is the calibration interval in line with the monitoring plan of VCS PD? If the VCS PD does not specify the frequency of calibration, does the selected frequency represent good monitoring practise?	NA. QA/QC procedures stated in JPD&MR is compiled /01/
Company performing the calibration (internal or external calibration):	NA
Did calibration confirm proper functioning of monitoring equipment? (Yes / No):	NA
Is (are) calibration(s) valid for the whole reporting period?	NA
If applicable, has the reported data been cross-checked with other available data?	Yes, the reported data in JPD&MR/01/ has been compared with the ER sheet /02/.
How were the values in the monitoring report verified?	NA
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:	1.67 (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 is calculated in the ER spread sheet /02/
Is accuracy of the monitoring equipment as stated in the VCS PD? If the VCS PD does not specify the accuracy of the monitoring equipment, does the monitoring equipment represent good monitoring practise?	NA
Calibration frequency /interval: Is it monitoring methodology /CDM EB guidance / local or national standards / manufacturers specification	NA
Is the calibration interval in line with the monitoring plan of the VCS PD? If the VCS PD does not specify the frequency of calibration, does the selected frequency represent good monitoring practise?	NA. QA/QC procedures stated in JPD&MR is compiled /01/
Company performing the calibration(internal or external calibration):	NA
Did calibration confirm proper functioning of monitoring equipment? (Yes / No):	NA
Is (are) calibration(s) valid for the whole reporting period?	NA
If applicable, has the reported data been cross-checked with other available data?	Yes, the reported data in JPD&MR has been compared with the ER sheet /02/.

How were the values in the monitoring report verified?	NA
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 from monitoring survey /07/ 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):	Adjustment to account for any continued use of pre-project devices during the year y (μ_y)
Measuring frequency/Time Interval:	At least once every two years
Reporting frequency:	At least once every two years
Reported value:	0
Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	Yes
Details of monitoring equipment:	Value is calculated in the ER spread sheet /02/
Is accuracy of the monitoring equipment as stated in the VCS PD? If the VCS PD does not specify the accuracy of the monitoring equipment, does the monitoring equipment represent good monitoring practise?	NA
Calibration frequency /interval:	NA

Is it monitoring methodology /CDM EB guidance / local or national standards / manufacturers specification	
Is the calibration interval in line with the monitoring plan of the VCS PD? If the VCS PD does not specify the frequency of calibration, does the selected frequency represent good monitoring practise?	NA. QA/QC procedures stated in JPD&MR is compiled /01/
Company performing the calibration (internal or external calibration):	NA
Did calibration confirm proper functioning of monitoring equipment? (Yes / No):	NA
Is (are) calibration(s) valid for the whole reporting period?	NA
If applicable, has the reported data been cross-checked with other available data?	Yes, the reported data in JPD&MR/01/ has been compared with the ER sheet /02/.
How were the values in the monitoring report verified?	NA
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:	5
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.
Is accuracy of the monitoring equipment as stated in the VCS PD? If the VCS PD does not specify the accuracy of the monitoring equipment, does the monitoring equipment represent good monitoring practise?	NA
Calibration frequency /interval: Is it monitoring methodology /CDM EB guidance / local or national standards / manufacturers specification	NA
Is the calibration interval in line with the monitoring plan of the VCS PD? If the VCS PD does not specify the frequency of calibration, does the selected frequency represent good monitoring practise?	NA. QA/QC procedures stated in JPD&MR is compiled /01/
Company performing the calibration (internal or external calibration):	NA
Did calibration confirm proper functioning of monitoring equipment? (Yes / No):	NA
Is (are) calibration(s) valid for the whole reporting period?	NA
If applicable, has the reported data been cross-checked with other available data?	Yes, the reported data in MR has been compared with the ER sheet /02/.

How were the values in the monitoring report verified?	NA
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 from monitoring survey /08/ 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

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 VCS PD&MR /01/. The total number of emission reductions for the monitoring period (01-March-2023 to 29-February-2024) is 3898 tCO₂e.

4.2 Accuracy of Reduction and Removal Calculations

The equations and choices provided in the methodology and all other methodological tools are correctly quoted in the Joint PD & MR /01/. The emission reductions of the project instances of the project and project activity instance are calculated using the formulae mentioned in the applied methodologies; VMR0006 version 1.2/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 PD and the applied monitoring methodology.

Sampling approach: -

The VVB confirms that the project has been implemented in accordance with the Joint PD & MR/01/.

Monitoring period: From 01- March-2023 to 29- February -2024.

The first monitoring period for the project activity is 01- March-2023 to 29- February -2024. Total of 7,194 ICS improved cookstove will be distributed and operational during recent monitoring period and the actual emission reduction achieved during current monitoring period is 3,898 tCO₂e.

The sampling plan implemented by the PP is in accordance with the applied approved monitoring methodology /B02/ and the VCS Joint PD & MR /01-e/. The PP has appropriately performed a Simple random sampling procedure, reliability levels were set at 95% confidence and 10% precision in line with the applied methodology VMR 0006 version 1.2/B02/. As the VCS Joint PD & MR /01-e/ mentions the option for Simple random sampling procedure, it is acceptable to the validation and verification team.

The sampling surveys have been carried out by the well-trained personnel /14/. Monitoring parameters $N_{y,j,j,\mu y}$ and loss of efficiency are monitored through monitoring sample surveys. Monitoring of the parameters ensures compliance with the applied methodology VMR0006, version 1.1 /B02/. Verification team has checked the survey records confirming the monitoring parameters are appropriately given.

PP has surveyed total 93 ICS for monitoring and 45 for wood usage sampled households for the current monitoring period

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. Applying paragraph 39 (c) of the sampling standard, version 09 /B04/, a sample size of 08 households was chosen (with no discrepant records). A sample size of 08 ICS was chosen, based on an AQL of 0.5% and UQL of 20%, producer risk 10% and consumer risk 10%. Acceptance number (c) thus determined for the sample is 0. VVB interviewed 08 samples from monitoring survey. It was observed that out of the 08 samples, all the 08 stoves were found to be operational, and this matched with the PP's records and hence no discrepant records were observed with the Joint PD & MR /01/ and ER sheets /02/ and thus $c=0$. Thus, PP's set of records has been accepted in line with paragraph 33 of the sampling standard, version 09 /B04/. Validation and Verification team has cross verified these sample documents.

The monitoring parameters to be monitored through the sampling plan are:

- 1.Number of project devices operating during year y ($N_{y,j,j}$)
- 3.Adjustment to account for any continued use of pre-project devices during the year y (μy)
4. Loss in efficiency as per para 37 (c) of AMS.II.G. v13,water boiling test

5. Annual quantity of woody biomass used by improved cookstoves in tonnes per device of type i and batch j

As per the applied methodology VMR0006 version 01.2 section 9.2 /B02/. 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/13/.

On site assessment of Monitoring parameters (namely μ_y , $B_{y=1,new,i,j,survey}$ and $N_{y,i,j}$) was conducted based on following two methods:

- Confirmation with the household/end user whether or not the PP has performed monitoring/measurement campaign (or parameter μ_y) and survey on stove operation (for the parameter $N_{y,i,j}$).
- Assessment of Competence of personnel involved in conducting standardized tests viz., μ_y and surveys: Verification team has reviewed the abilities, qualifications and recognition of involved personnel and institutions of the measuring team involved in the μ_y . The verification team based on the onsite inspection interviews confirms that the team was qualified to carry out the μ_y in line with the methodology.

During the onsite interviews with PP's representative, VVB was able to understand the process in line with the methodology VMR 0006 version 1.2/B02/ and the PP monitoring procedure in line with the VCS Joint PD & MR /01-e/.

No discrepancy was found in the data/information flow. As per the section 2.3 above the end users were not interviewed in a single day. Hence, the survey process deemed acceptable to the verification team. Furthermore, the database /10/ and sample sales invoice /16/ was also checked/cross verified to confirm the number cookstove for the parameter $N_{y,i,j}$.

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.

As per the applied methodology VMR0006 version 01.1 section 9.2 /B01/. 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/12/.

Emission reductions have been calculated in accordance with the applied methodology VMR0006 version 1.2 /B02/. 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 Parameters Determined ex-ante is listed in section 6.1 of this Joint validation and verification report.

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 records (distribution records) /10/, VCS Joint PD & MR /01/, and applied methodology /B01/. The emission reductions calculated were compared with the emission reduction spread sheet /02/ and found to be correct. No significant reporting risks have been identified for the data reported.

VVB 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 Joint PD & MR /01/. The average annual and total GHG emission reduction expected from the grouped project is expected to be 333,391 tCO₂e and 33,33,907 tCO₂e, respectively, over the 10-year fixed crediting period.

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

4.3 Quality of Evidence to Determine Reductions and Removals

When verifying the report emission reduction, CCIPL ensured that there was a clear audit trail that contained the evidence and records that validate the stated figures. All source documents that form the basis for assumptions and other information underlying the GHG data are shown above.

When assessing the audit trails, CCIPL 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, CCIPL cross-checked the monitoring report against the other sources to confirm that the stated figures were correct. The sources and the data referenced are shown in Appendix 1 below.

CC IPL also assessed that the data collection system met the requirements of the monitoring plan as per the applied methodology.

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

The monitoring personnel at site are well trained and follow reproducible routines. Thus, they are competent to carry out the relevant tasks with sufficient accuracy.

5 VALIDATION AND VERIFICATION OPINION

5.1 Validation and Verification Summary

The Project Participant Carbon Kind Ltd, has commissioned the VVB, Carbon Check (India) Private Ltd. to perform a Joint validation and verification of the VCS Project Activity “Empowering Communities Through Improved Cookstoves”. This report summarizes the findings of the validation and 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 validation and verification process were performed on the basis of all guidance and criteria as provided in VCS Standard version 4.6 /B01/, VCS Program Guide version 4.4 /B01/, VCS Validation and Verification Manual version 3.2/B01/ and Registration & Issuance Process version 4.4/B01/.

The project activity provides the information in Joint PD & MR /01/ as required by the VCS Standard/B01/ and Validation and Verification Manual /B01/ and in Carbon Check’s opinion meets the requirements of the applied baseline and monitoring methodology, VMR0006 version 1.2 /B02/and is likely to achieve the estimated emission reductions. The joint validation and verification have been performed using a risk-based approach, as described above. The average annual and total GHG emission reduction expected from the grouped project is expected to be 333,391 tCO₂e and 33,33,907 tCO₂e, respectively, over the 10-year fixed crediting period.

5.2 Validation Conclusion

Carbon Check (India) Private Ltd concludes the validation with a positive opinion that the VCS Project Activity “Empowering Communities Through Improved Cookstoves ”, as described in the VCS Joint PD & MR (version 5.2, dated 10-June-2024) /01/, meets all the applicable VCS requirements, including those specified in the Project Standard, relevant methodology, tools and guidelines.

CC IPL’s validation opinion is purely based on the information made available to us by the project proponent during validation and hence CC IPL cannot guarantee the accuracy or correctness of the information. Keeping this in mind, no party can hold CC IPL liable for any decisions made or not made in this report.

The selected baseline and monitoring methodology (VMR0006, Version 1.2) is applicable to the project and correctly applied.

Crediting Period: 01-March-2023 to 28-February-2033

Validated estimated GHG emission reductions and carbon dioxide removals for the project crediting period:

Vintage period	Estimated baseline emission reductions (tCO ₂ e)	Estimated project emissions (tCO ₂ e)	Estimated leakage emissions (tCO ₂ e)	Estimated reduction VCUs (tCO ₂ e)	Estimated removal VCUs (tCO ₂ e)	Estimated total VCUs (tCO ₂ e)
01-Mar-2023 to 29-Feb-2024	3,898	0	0	3,898	0	3,898
01-Mar-2024 to 28-Feb-2025	43,006	0	0	43,006	0	43,006
01-Mar-2025 to 28-Feb-2026	131,009	0	0	131,009	0	131,009
01-Mar-2026 to 28-Feb-2027	219,220	0	0	219,220	0	219,220
01-Mar-2027 to 29-Feb-2028	303,896	0	0	303,896	0	303,896
01-Mar-2028 to 28-Feb-2029	382,466	0	0	382,466	0	382,466
01-Mar-2029 to 28-Feb-2030	458,019	0	0	458,019	0	458,019

01-Mar-2030 to 28-Feb-2031	529,795	0	0	529,795	0	529,795
01-Mar-2031 to 29-Feb-2032	599,750	0	0	599,750	0	599,750
01-Mar-2032 to 28-Feb-2033	662,759	0	0	662,759	0	662,759
Annual Average	333,391	0	0	333,391	0	333,391

5.3 Verification conclusion

Carbon Check (India) Private Ltd concludes the verification with a positive opinion that the VCS Project Activity “Empowering Communities Through Improved Cookstoves”, as described in the VCS Joint PD & MR (version 5.2, dated 10-June-2024) /01-e/, meets all the applicable VCS requirements, including those specified in the Project Standard, relevant methodology, tools, and guidelines.

The selected baseline and monitoring methodology, VMR0006, Version 1.2/B02-a/ is applicable to the project and correctly applied. Carbon Check (India) Private Ltd therefore requests the registration of the project as a VCS project activity.

The VVB confirms that the project has been implemented in accordance with the Joint PD & MR/01-e/.

Verification Period: 01-March-2023 to 29-February-2024

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 VCUs (tCO ₂ e)	Removal VCUs (tCO ₂ e)	Total VCUs (tCO ₂ e)
01-March 2023 to 31-Dec-2023	0	0	0	2260	0	2260
01-Jan-2024 to 29-Feb-2024	0	0	0	1638	0	1638
Total	-	-	-	3,898	-	3,898

The verification team is of the opinion that the project has been implemented in accordance with the joint PD & MR. The monitoring complies with the MP and the monitored data and calculation of ERs are assessed and confirmed as correct.

Therefore, CCIPL hereby certifies, and requests the issuance of, the reported ERs during the monitoring period of 01-March-2023 to 29-February-2024 amounting to 3,898tCO₂e to the VCS Registry.

5.4 Ex-ante vs Ex-post ERR Comparison

Vintage period	Ex-ante estimated reductions/removals	Achieved reductions/removals	Percent difference	Explanation for the difference
01-March 2023 to 31-Dec-2023	2260	2260	0%	There is no difference between estimated and actual reductions for this current monitoring period.
01-Jan-2024 to 29-Feb-2024	1638	1638	0%	There is no difference between estimated and actual reductions for this current monitoring period.
Total	3898	3898	0%	There is no difference between estimated and actual reductions for this current monitoring period.

APPENDIX 1: COMMERCIALY SENSITIVE INFORMATION

N/A

APPENDIX 2: REFERENCE DOCUMENTS

Ref	Document
/01/	<p>Joint Project Description and Monitoring Report titled:</p> <ol style="list-style-type: none"> Empowering Communities Through Improved Cookstoves (version 01; dated: 09-April-2024) Empowering Communities Through Improved Cookstoves (version 02; dated: 21-May-2024) Empowering Communities Through Improved Cookstoves (version 3; dated: 07-May-2024) Empowering Communities Through Improved Cookstoves (version 04; dated: 21-May-2024) Empowering Communities Through Improved Cookstoves (version 5.2; dated: 10-June-2024)
/02/	<p>ER calculation spreadsheets</p> <p>EMPOWERING COMMUNITIES THROUGH IMPROVED COOKSTOVES Version 01 dated 17/05/2024</p>
/03/	<p>Ex ante estimations sheets</p> <ul style="list-style-type: none"> ERS -3881 V1.0 fNRB sheet Wood usage survey sheet
/04/	Evidence for the start date of the project (commissioning certificate)
/05/	Man, Specs Adokpo Wazam
/06/	Self-Declaration - proj ID 3881 - signed - 20.05.2024
/07/	Monitoring survey questionnaire template
/08/	Survey records for the monitoring period
/09/	Purchase slip of weighing equipment
/10/	Database for the ICS distributed and sales records for the monitoring period
/11/	Evidence for unique identification of each of the ICS
/12/	<ul style="list-style-type: none"> fNRB_Report fNRB_calculation sheet
/13/	Sample size and precision level achieved calculator for the monitoring period
/14/	Training records
/15/	Evidence for the random sample selection for the parameters opted for monitoring survey
/16/	Sample sales records/warranty cards for the stove
/17/	End user consent/Carbon Credit waiver

/18/	Grievance Registry
/19/	Manufacture agreement
/20/	Monitoring Survey – Random Sample Generation Screenshot (1)
/21/	3881 1st stove distributed photos
/22/	LSC
/23/	Agreement with local distribution partner
/24/	HR Policy
/25/	Onsite Visit
/26/	KML Files
/27/	NPV sheet
/28/	Global Data Lab (https://shorturl.at/I0589)
/29/	VERRA Registry
/30/	Third Party Lab test report for ICS
/31/	Baseline survey reports
/32/	MOU signed with IADES

APPENDIX 3: BACKGROUND DOCUMENTS

Ref	Document
/B01/	<p>VCS Requirements</p> <ul style="list-style-type: none"> a. VCS Standard (v4.6, dated 21-March-2024), b. VCS Program Guide (v4.4, dated 29-August-2023), c. VCS Validation and Verification Manual version (v3.2, dated 19/10/2016) d. Registration & Issuance Process (v4.4, dated 16 April 2024) e. VCS Program Definitions version (v4.5, dated 16-April-2024), f. VCS JPD&MR template version 4.3
/B02/	<p>Applied baseline and monitoring methodology</p> <ul style="list-style-type: none"> a. VMR0006. version 1.2, “Methodology for Installation of High Efficiency Firewood Cookstoves” b. AMS-II. G_v13.1

/B03/	<p>Methodological Tool</p> <ul style="list-style-type: none"> • CDM Tool 30 “Calculation of the fraction of non-renewable biomass” Version 04.0 • CDM Tool 01” Tool for the demonstration and assessment of additionality” version 7.0.0 • CDM TOOL 33 : Default values for common parameters,V2.0 • CDM TOOL 01: Tool for the Demonstration and Assessment of Additionality V7.0 • CDM TOOL 27: Investment Analysis, version 11.0.
/B04/	<ol style="list-style-type: none"> 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)
/B05/	<p>Website and links:</p> <ol style="list-style-type: none"> 1. IPCC (http://www.ipcc-nggip.iges.or.jp) 2. http://cdm.unfccc.int 3. http://www.v-c-s.org 4. https://www.imf.org/en/Publications/WEO/weo-database/2024/April/weo-report?c=742,&s=PCPIPCH,&sy=2023&ey=2027&ssm=0&scsm=1&sc=0&ssd=1&ssc=0&sic=0&sort=country&ds=.&br=1 5. https://www.bceao.int/en/content/main-indicators-and-interest-rates

APPENDIX 4: ABBREVIATIONS

CDM	Clean Development Mechanism
BE	Baseline Emission
CAR	Corrective Action Request
CCIPL	Carbon Check (India) Private Ltd.
CDM	Clean Development Mechanism
CL	Clarification Request
CO ₂	Carbon Dioxide
CO _{2e}	Carbon Dioxide Equivalent
DPR	Detailed project report
DVR	Draft Validation Report
EB	CDM Executive Board
EF	Emission Factor
ER	Emission Reduction
FAR	Forward Action Request
FVR	Final validation Report
GHG	Greenhouse gas(es)
GWh	Giga Watt Hour
IPCC	Intergovernmental Panel on Climate Change
MW	Mega Watt
MWh	Mega Watt Hour
NA	Not Applicable
OSV	On Site Visit
PD	Project Description
PP	Project Proponent
QC/QA	Quality control/Quality assurance
TR	Technical Review
UNFCCC	United Nations Framework Convention on Climate Change
VCS	Verified Carbon Standard
VCSA	Verified Carbon Standard Association
VCU	Verified Carbon Unit
VB	Validation Verification Body
WM	Validation and Verification Manual
VS	Validation and Verification Standard

APPENDIX 5: FINDINGS LOG

Table 1 CLs from this verification

Finding	CL 01
Classification	<input type="checkbox"/> CAR <input checked="" type="checkbox"/> CL <input type="checkbox"/> FAR
Description of finding (VVB)	<p>As per the JPD&MR guidelines, In section 1.1 PP is requested to include the</p> <ul style="list-style-type: none"> • <i>implementation status and relevant implementation dates (e.g., dates of construction, commissioning, and continued operation periods).</i> • <i>An estimate of annual average and total reductions and removals.</i> • <i>The total GHG emission reductions or removals generated in the monitoring period.</i> <p>PP is requested to comply the same.</p>
Corrective Action or clarification #1 <i>(PP shall write a detailed and clear corrective action or further information for clarification as per finding)</i>	<ul style="list-style-type: none"> • <i>An implementation status and relevant implementation dates (e.g., dates of construction, commissioning, and continued operation periods), as well as an estimate of annual average and total reductions and removals and the total GHG emission reductions or removals generated in the monitoring period have now been included in section 1.1</i>
VB 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>	<p>PP has provided <i>implementation status and relevant implementation dates, estimate of annual average and total reductions and total GHG emission reductions or removals generated in the monitoring period in the JPD&MR, the same found to be appropriate. Hence, CL 01 is closed.</i></p>

Finding	CL 01
Conclusion <i>Tick the appropriate checkbox</i>	<input type="checkbox"/> To be checked during the next periodic verification <input type="checkbox"/> Outstanding finding (not closed) <input checked="" type="checkbox"/> The finding is closed

Finding	CL 02
Classification	<input type="checkbox"/> CAR <input checked="" type="checkbox"/> CL <input type="checkbox"/> FAR
Description of finding (VVB)	<p>In section 1.1 of the PD PP has not indicated the annual GHG emission reduction for each project instance, total number ICS that will be distributed and expected annual energy saving for each project activity instance. PP needs to update the project start date according to VCS rules and requirements.</p>
Corrective Action or clarification #1 <i>(PP shall write a detailed and clear corrective action or further information for clarification as per finding)</i>	<p>This has now been updated</p>
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>	<p>PP has updated the start date, the document provided w.r.t the supportive for start date, only 6144 ICS details has been provided. PP is requested to provide all the details of ICS distribution.</p> <p>The link provided in the column- client signature and client photo is unable to access, PP is requested to provide the access.</p> <p>Hence CL 02 is open.</p>
Corrective Action or clarification #1 <i>(PP shall write a detailed and clear corrective action or further information for clarification as per finding)</i>	<p>The spreadsheet has been updated to be clearer. The 7,197 cookstoves have been distributed to 6,144 households.</p> <p>Signatures have been made accessible</p>

VVB Assessment #1

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.

1. As per the latest spreadsheet provided, details of 6,174 households has been included. The same is not consistent with the above statement. PP is requested to clarify the same.
2. As mentioned, 7,197 cookstoves have been distributed to 6,144 households. It should be mentioned in the JPD&MR wherever required.
3. From the data base VVB is observed that few of the households has been distributed 2 and 3 cookstoves. The serial numbers provided in such households are repeating with the factor 'ET'. And the same is considered in the total ICS distributed, PP is requested to clarify the same. If the ICS are repaired or replaced, it should not be counted again. PP is requested to provide the details for the repaired/replaced if any.
4. From the database VVB observed that the details of end-user agreement is not mentioned, only signature is provided in the link. PP is requested to provide the Distribution Form with carbon Transfer along with the signature. Some link for the signature and photographs in database is blank, few serial numbers are as follows:
 - 1) 5840,5821,5827,5828,5829.
5. From the database VVB has observed some more duplication of serial numbers. The following are few examples:

Finding	CL 02										
	<table border="1" data-bbox="841 306 1073 947"> <tr><td>TTB2300022</td></tr> <tr><td>TTB2300001</td></tr> <tr><td>AWF2300120</td></tr> <tr><td>Ttb2300062</td></tr> <tr><td>Awf2300188</td></tr> <tr><td>TTB2300114</td></tr> <tr><td>Awf2300033</td></tr> <tr><td>TTB2300096</td></tr> <tr><td>TTB2300071</td></tr> <tr><td>TTB2300114</td></tr> </table> <p data-bbox="841 1087 1263 1121">PP is requested to clarify the same.</p> <p data-bbox="841 1205 1101 1239">Hence ,CL 02 is open.</p>	TTB2300022	TTB2300001	AWF2300120	Ttb2300062	Awf2300188	TTB2300114	Awf2300033	TTB2300096	TTB2300071	TTB2300114
TTB2300022											
TTB2300001											
AWF2300120											
Ttb2300062											
Awf2300188											
TTB2300114											
Awf2300033											
TTB2300096											
TTB2300071											
TTB2300114											

Corrective Action or clarification #1

(PP shall write a detailed and clear corrective action or further information for clarification as per finding)

1. The number of households has been updated from 6144 to 6174, which is consistent with the database. A typo was made when 6144 was entered.
2. The 6174 households that the 7197 ICS were distributed to have been added to all relevant sections (apart from equations in section 6.2 where PP deemed they were not appropriate).
3. On the database 'et' is the French word for and. The database was later updated to give space for more than one cookstove to be added to a household, so the et/and was no longer required. This has now been removed from the from the database, ensuring any duplicate information has been removed.
4. The PP is unable to provide 6174 individual forms on the excel database the VVB was provided with 10 sample forms. The signature is proof that the end user agreement was signed by the client.
 - 2) There are 7 end user agreements, of the 6174 households, on the database that the links for the signature are not working. This is due to an issue with the software. All end user agreements must be signed in order for the software to submit the forms, therefore this is a technical issue.
 - 3) At the start of the project, we created a database that only include a field for client signatures, and no field for client photos. This was updated after the first 223 households. There for the first 223 household do not have a client photo.
5. The duplication of serial numbers has now been addressed. All serial numbers have been updated and the formal process for updating serial numbers on the ICS will be followed.

Finding	CL 02
<p>VVB Assessment #1</p> <p><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></p>	<p>PP has revised the database as mentioned above. Further PP has submitted the end user agreements. The justification provided w.r.t to signatures and the revisions made on the JPD&MR is found to be appropriate. Hence, CL 02 is closed.</p>
<p>Conclusion</p> <p><i>Tick the appropriate checkbox</i></p>	<p><input type="checkbox"/> To be checked during the next periodic verification</p> <p><input type="checkbox"/> Outstanding finding (not closed)</p> <p><input checked="" type="checkbox"/> The finding is closed</p>

Finding	CL 03
Classification	<input type="checkbox"/> CAR <input checked="" type="checkbox"/> CL <input type="checkbox"/> FAR
Description of finding (VVB)	<p>In accordance with the requirement of § 3.8 of VCS standard, version 04.5 The project start date of a non-AFOLU project is the date on which the project began generating GHG emission reductions or removals.</p> <p>As per the provided document named “Distribution List, Carbon Transfer and Training Declaration” the earliest distribution date the ICS distributed is 2023-04-25, the same is not consistent with the start date provided in the PD. PP is requested to clarify the same.</p>
Corrective Action or clarification #1 <i>(PP shall write a detailed and clear corrective action or further information for clarification as per finding)</i>	<p>The final version of this document has now been submitted to the VVB</p>
<p>VVB Assessment #1</p> <p><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></p>	<p>As per the shared latest distribution list, only 6144 ICS details has been provided. PP is requested to provide all the details of ICS distribution.</p> <p>The link provided in the column- client signature and client photo is unable to access, PP is requested to provide the access. Hence CL 03 is open.</p>

Finding	CL 03
<p>Corrective Action or clarification #1 <i>(PP shall write a detailed and clear corrective action or further information for clarification as per finding)</i></p>	<p>The spreadsheet has been updated to be clearer. The 7,197 cookstoves have been distributed to 6,144 households.</p> <p>Signatures have been made accessible</p>
<p>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></p>	<p>The CL will close subject to closure of CL 02.</p>
<p>Corrective Action or clarification #1 <i>(PP shall write a detailed and clear corrective action or further information for clarification as per finding)</i></p>	<p>Please see information provided for CL02</p>
<p>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></p>	<p>PP has revised the database and the same found to be appropriate, hence CL 03 is closed.</p>
<p>Conclusion <i>Tick the appropriate checkbox</i></p>	<p><input type="checkbox"/> To be checked during the next periodic verification</p> <p><input type="checkbox"/> Outstanding finding (not closed)</p> <p><input checked="" type="checkbox"/> The finding is closed</p>

Finding	CL 04
Classification	<input type="checkbox"/> CAR <input checked="" type="checkbox"/> CL <input type="checkbox"/> FAR
Description of finding (VVB)	<p>In section 1.12 description of the project activity, PP is requested to Describe the project activity or activities (including the technologies or measures employed) and how it/they will achieve the GHG emission reductions or carbon dioxide removals. Describe the implementation schedule of project activity or activities.</p>
<p>Corrective Action or clarification #1 <i>(PP shall write a detailed and clear corrective action or further information for clarification as per finding)</i></p>	<p>The missing information outlined above has now been added to section 1.12</p>

Finding	CL 04
<p>VVB Assessment #1</p> <p><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></p>	<p>PP has Describe the project activity or activities (including the technologies or measures employed) and how it/they will achieve the GHG emission reductions, PP is requested to cite the statements wherever required in the section 1.12 of the JPD&MR. hence CL 04 is open.</p>
<p>Corrective Action or clarification #1</p> <p><i>(PP shall write a detailed and clear corrective action or further information for clarification as per finding)</i></p>	<p>The citation has now been added to the bottom of section 1.12</p>
<p>VVB Assessment #1</p> <p><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></p>	<p>PP has provided the citation in the section 1.12 of JPD&MR, the same found to be appropriate. Hence, CL04 is closed.</p>
<p>Conclusion</p> <p><i>Tick the appropriate checkbox</i></p>	<p><input type="checkbox"/> To be checked during the next periodic verification</p> <p><input type="checkbox"/> Outstanding finding (not closed)</p> <p><input checked="" type="checkbox"/> The finding is closed</p>

Finding	CL 05		
Classification	<input type="checkbox"/> CAR	<input checked="" type="checkbox"/> CL	<input type="checkbox"/> FAR

Finding	CL 05
<p>Description of finding (VVB)</p>	<p>CL being raised for the clarifying the following;</p> <ul style="list-style-type: none"> • PP is requested to Justify that the project activity is included under the scope of the VCS Program and not excluded under Table 2.1 of the VCS Standard in section 1.4.1 of the JPD&MR and discuss the scope the VCS Program as per the section 2.1.1 of the VCS standard. • PP is requested to demonstrate VCS Standard Eligibility Criteria in section 1.4.1 of the JPD&MR. Refer section 3.6.10 to 3.6.18 and 3.6.22 of the VCS standard V4.5. • As per the section 1.12 of JPD&MR filling guidelines, “Include a list and the arrangement of the main manufacturing/production technologies, systems and equipment involved. Include in the description information about the age and average lifetime of the equipment based on manufacturer’s specifications and industry standards, and existing and forecast installed capacities, load factors and efficiencies”. PP is requested to provide the technical specification in detail such as age and average lifetime of the equipment, capacities, efficiencies, manufacturer, height, diameter etc.
<p>Corrective Action or clarification #1 <i>(PP shall write a detailed and clear corrective action or further information for clarification as per finding)</i></p>	<p>The above details have now been added</p>

Finding	CL 05
<p>VVB Assessment #1</p> <p><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></p>	<p>PP has provided list and the arrangement of the main manufacturing/production technologies, systems and equipment in the section 1.12 of the JPD&MR, the same found to be appropriate.</p> <ol style="list-style-type: none"> 1. PP has not to Justified that the project activity is included under the scope of the VCS Program and not excluded under Table 2.1 of the VCS Standard in section 1.4.1 of the JPD&MR. 2. PP has not demonstrated VCS Standard Eligibility Criteria in section 1.4.1 of the JPD&MR. Refer section 3.6.10 to 3.6.17 of the VCS standard. <p>PP is requested to provide the same, hence CL 05 is open.</p>
<p>Corrective Action or clarification #1</p> <p><i>(PP shall write a detailed and clear corrective action or further information for clarification as per finding)</i></p>	<ol style="list-style-type: none"> 1. A justification for the project activity is included in section 1.4.1 of the JPD&MR. 2. A demonstration VCS Standard Eligibility Criteria has been added to section 1.4.1
<p>VVB Assessment #1</p> <p><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></p>	<p>The criterion mentioned in the 1.4.1 of the JPD&MR is not consistent with the VCS standard version 6. PP is requested to refer the paragraph 3.6.10 to 3.6.17 of latest version and revise the section accordingly.</p> <p>PP has not to Justified that the project activity is included under the scope of the VCS Program and not excluded under Table 1 of the paragraph 2.1 of the VCS Standard in section 1.4.1 of the JPD&MR</p> <p>hence CL 05 is open.</p>

Finding	CL 05
<p>Corrective Action or clarification #1 <i>(PP shall write a detailed and clear corrective action or further information for clarification as per finding)</i></p>	<p>Section 1.4.1 has been revised to include the relevant criteria, as outlined in paragraphs 3.6.10 to 3.6.17 of VCS Standard 4.5</p>
<p>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></p>	<p>PP has revised the section 1.4.1 of the JPD&MR the same found to be appropriate. Hence CL05 is closed.</p>
<p>Conclusion <i>Tick the appropriate checkbox</i></p>	<p> <input type="checkbox"/> To be checked during the next periodic verification <input type="checkbox"/> Outstanding finding (not closed) <input checked="" type="checkbox"/> The finding is closed </p>

Finding	CL 06		
Classification	<input type="checkbox"/> CAR	<input checked="" type="checkbox"/> CL	<input type="checkbox"/> FAR

Finding	CL 06
<p>Description of finding (VVB)</p>	<p>Following discrepancies are observed in section 1.18.2, Table 1 (Sustainable Development contributions):</p> <ol style="list-style-type: none"> 1. For SDG target 5.4, PP has stated that “ especially for women and children by saving time spent in collecting fuel wood and cooking, considered at an average of 1 hour/day default factor, per household, for rural areas using an open fire or similar traditional cook stove.” PP needs to provide basis of this assumption. 2. For SDG target 1.4, PP has stated that “These stoves cook faster and more efficiently than baseline 3 stone fires used in the baseline scenario”. PP needs to provide basis of this assumption. 3. For SDG target 1.1, PP has stated that “58.8% of people living in rural Togo live below the poverty line (\$1.25/day” PP needs to provide basis of this assumption. 4. For SDG target 13.0, PP states that, “ Contribute to GHG emission reduction through an estimated reduction of ~3,430,000 tCO₂e over 10 years of crediting period.” PP needs to provide basis for this estimation and the estimated emission reduction calculated per stove. 5. For SDG target 15.2 and 15.1, the PP states, “ Contribute an estimated reduction in removal of woody biomass of ~1.7t of per household per year” PP needs to provide basis for this assumption.
<p>Corrective Action or clarification #1 <i>(PP shall write a detailed and clear corrective action or further information for clarification as per finding)</i></p>	<p>Section 1.18.2, Table 1 has been updated to reflect the findings above</p>
<p>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></p>	<p>PP has revised the Table 1 of section 1.18.2, and the same found to be appropriate. Hence CL06 is closed.</p>

Finding	CL 06
Conclusion <i>Tick the appropriate checkbox</i>	<input type="checkbox"/> To be checked during the next periodic verification <input type="checkbox"/> Outstanding finding (not closed) <input checked="" type="checkbox"/> The finding is closed

Finding	CL 07
Classification	<input type="checkbox"/> CAR <input checked="" type="checkbox"/> CL <input type="checkbox"/> FAR
Description of finding (VVB)	In section 6.2 of the JPD&MR, PP needs to clarify how the annual stove loss rate is taken into account while determining the number of ICS operating during year y.
Corrective Action or clarification #1 <i>(PP shall write a detailed and clear corrective action or further information for clarification as per finding)</i>	Clarification has been added
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>	PP is requested to detailly provide where it is added and clarify how it is determined. Hence CL 07 is open.
Corrective Action or clarification #1 <i>(PP shall write a detailed and clear corrective action or further information for clarification as per finding)</i>	Number of project devices of type I and batch j operating during year y – has been added to section 6.2 of the JDMR

Finding	CL 07
<p>VVB Assessment #1</p> <p><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></p>	<p>PP has revised the parameter “Number of project devices of type I and batch j operating during year y” of JPD&MR, the same found to be appropriate.</p> <p>But PP has not included the parameters such as Efficiency of stove, Annual quantity of woody biomass used by improved cookstoves and life span in the section 6.2 of the JPD&MR.</p> <p>In section PP has not discussed Adjustment to account for any continued use of pre-project devices during the year y.</p> <p>PP is requested to clarify the same.</p> <p>The Parameters which is identified in the section 6.2 -data and parameters monitored should be monitored for the entire crediting period. The parameters provided in the section6.2 and 7.1 of the JPD&MR is not consistent. PP is requested to identify all the monitoring parameters in the section 6.2 and provide the monitoring details in the section 7.1.</p> <p>Hence CL 07 is open.</p>
<p>Corrective Action or clarification #1</p> <p><i>(PP shall write a detailed and clear corrective action or further information for clarification as per finding)</i></p>	<p>Sections 6.1, 6.2 and 7.1 have been revised as per requirements outlined above.</p>
<p>VVB Assessment #1</p> <p><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></p>	<p>PP has revised section 6.1,6.2 &6.3 of the JPD&MR, the same found to be appropriate. Hence CL07 is closed.</p>
<p>Conclusion</p> <p><i>Tick the appropriate checkbox</i></p>	<p><input type="checkbox"/> To be checked during the next periodic verification</p> <p><input type="checkbox"/> Outstanding finding (not closed)</p> <p><input checked="" type="checkbox"/> The finding is closed</p>

Finding	CL 08		
Classification	<input type="checkbox"/> CAR	<input checked="" type="checkbox"/> CL	<input type="checkbox"/> FAR
Description of finding (VVB)	<p>During the review of the ICS Distribution database, we have observed that there are many same names and ICS ID which are repeating. For example,</p> <p>ICS id</p> <p>TTB2300038- Serial number- 11 &20</p> <p>TTB2300032- Serial number- 25 & 111</p> <p>TTB2300019- Serial number- 36 & 107</p> <p>IA2301925- Serial number- 5551 & 5963</p> <p>Names</p> <p>Noukafo Ama- Serial number- 4069 & 4245</p> <p>Vidza Mélanie- Serial number- 3092 & 4073</p> <p>KANYI Ami- Serial number- 61 & 2729</p> <p>Akakpo adjo- Serial number- 46,203,1079,2014 & 5472</p> <p>in many cases district and villages are also same for the repeating names.</p> <p>PP is requested to clarify how each ICS will be traced back uniquely to its end users to prevent double counting.</p>		

<p>Corrective Action or clarification #1 <i>(PP shall write a detailed and clear corrective action or further information for clarification as per finding)</i></p>	<p>Duplicated Serial Numbers:</p> <p>TTB2300038- Serial number- 11 &20</p> <p>TTB2300032- Serial number- 25 & 111</p> <p>TTB2300019- Serial number- 36 & 107</p> <p>IA2301925- Serial number- 5551 & 5963</p> <p>It seems that the issue with the records is related to duplicated serial numbers in the Improved Cook Stove (ICS) database, rather than discrepancies in village names and client signatures. Upon checking the database, it was discovered that 4 ICS serial numbers have been duplicated, leading to errors in record-keeping.</p> <p>To address this issue, a team member will be tasked with visiting the beneficiaries within the next 14 days to rectify the duplicated serial numbers appropriately. Here's how the team member will handle the situation during the visit:</p> <ol style="list-style-type: none"> 1. Verify the identity of the beneficiary associated with the duplicated serial number. 2. Cross-reference the information in the database to identify any discrepancies or inconsistencies. 3. Update one of the duplicated serial numbers to ensure each beneficiary has a unique identifier. 4. Document the changes made and any additional information gathered during the visit for accurate record-keeping. 5. Communicate with the beneficiary to explain the reason for the serial number update and ensure their understanding and cooperation. <p>Maintaining accurate and distinct serial numbers is crucial for the integrity of the program, as it helps avoid confusion and ensures proper tracking of the stoves distributed to beneficiaries.</p>
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	<p>To address and rectify issues related to duplicated serial numbers and names, our procedures have been enhanced. Moving forward, the team member responsible for visiting beneficiaries will ensure that updated records incorporate a photo of each beneficiary alongside their cookstove.</p> <p>Duplicated Names</p> <p>Noukafo Ama- Serial number- 4069 & 4245</p> <p>Vidza Mélanie- Serial number- 3092 & 4073</p> <p>KANYI Ami - Serial number- 61 & 2729</p> <p>Akakpo adjo- Serial number- 46,203,1079,2014 & 5472</p> <p>All names were cross referenced in the data base and the following data was found:</p> <p>Noukafo Ama appears twice in our records, each associated with a distinct village and featuring a different photo. As a result, we can confidently confirm that there are no discrepancies or issues with these records.</p> <p>Vidza Mélanie appears twice in our records, each associated with a distinct village and featuring a different photo. As a result, we can confidently confirm that there are no discrepancies or issues with these records.</p> <p>KANYI Ami appears twice in our records, each associated with a distinct village and featuring a different photo. As a result, we can confidently confirm that there are no discrepancies or issues with these records.</p> <p>Upon thorough examination of our records, we observed that Akakpo Adjo appears four times. Two of these entries are linked to separate</p>
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Finding	CL 08
	<p>villages and display different photos, confirming the accuracy of these records without any discrepancies.</p> <p>For the remaining two entries for Akakpo Adjo, although they share the same village name, they were distributed on different dates and feature distinct photos. Based on this detailed verification, we can confidently affirm that there are no discrepancies or issues with any of the Akakpo Adjo records.</p>
<p>VVB Assessment #1</p> <p><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></p>	<p>Will close subject to closure of findings CL 02.</p>
<p>Corrective Action or clarification #1</p> <p><i>(PP shall write a detailed and clear corrective action or further information for clarification as per finding)</i></p>	<p>Please see CL02</p>
<p>VVB Assessment #1</p> <p><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></p>	<p>PP has revised the database as mentioned in the CL 02 and the same found to be appropriate, hence CL 08 is closed.</p>
<p>Conclusion</p> <p><i>Tick the appropriate checkbox</i></p>	<p><input type="checkbox"/> To be checked during the next periodic verification</p> <p><input type="checkbox"/> Outstanding finding (not closed)</p> <p><input checked="" type="checkbox"/> The finding is closed</p>

Finding	CL 09		
<p>Classification</p>	<input type="checkbox"/> CAR	<input checked="" type="checkbox"/> CL	<input type="checkbox"/> FAR
<p>Description of finding (VVB)</p>	<p>PP has uploaded only PD in the Verra site at the time of listing, the documents submitted to the VVB is JPD&MR for the review. PP is requested to clarify the same.</p>		

<p>Corrective Action or clarification #1 <i>(PP shall write a detailed and clear corrective action or further information for clarification as per finding)</i></p>	<p>Carbon Kind decided to change from separate validation and verification documents to a joint PD and MR, which was submitted to the VVB.</p> <p>I also contacted VERRA to let them know:</p> <p>Dear VERRA,</p> <p>Project ID: 3881</p> <p>Project name: Empowering Communities Through Improved Cookstoves</p> <p>Project country: Togo</p> <p>I'm writing to inform you that we are changing to a joint validation and verification.</p> <p>Initially we updated a Project Document to the VERRA register but we have now completed the most up to date joint Project Document and Monitoring Report PDMR, which will be submitted to the VVB and then to VERRA for a joint validation and verification.</p> <p>Do I need to follow any other procedures prior to submitting the Joint Validation and Verification Report?</p> <p>Many thanks, Vashti</p> <p>VERRA gave the following response:</p> <p>Hi Vashti,</p> <p>Thanks for the email. Once you submit the required documents (listed at the bottom of the Registry Setup Page) for the requested status, we will conduct the completeness check and then the technical review.</p>
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Finding	CL 09
	<p>Best,</p> <p>Luke</p>
<p>VVB Assessment #1</p> <p><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></p>	<p>The justification provided by the PP found to be appropriate and acceptable to the VVB. Hence CL09 is closed.</p>
<p>Conclusion</p> <p><i>Tick the appropriate checkbox</i></p>	<p><input type="checkbox"/> To be checked during the next periodic verification</p> <p><input type="checkbox"/> Outstanding finding (not closed)</p> <p><input checked="" type="checkbox"/> The finding is closed</p>

Finding	CL 10		
<p>Classification</p>	<input type="checkbox"/> CAR	<input checked="" type="checkbox"/> CL	<input type="checkbox"/> FAR
<p>Description of finding (VVB)</p>	<p>CL has been raised for the following:</p> <ul style="list-style-type: none"> • PP is requested to provide the calibration records for the monitoring equipment's. • PP is requested to clarify how the Quantity of woody biomass used by project devices is calculated. 		

Finding	CL 10
<p>Corrective Action or clarification #1 <i>(PP shall write a detailed and clear corrective action or further information for clarification as per finding)</i></p>	<p>1. The scales used to measure the amount of woody biomass were not calibrated because they were brand new and being used for the first time. A receipt has been provided as proof of purchase.</p> <p>2. The quantity of woody biomass used was determined through measurement campaigns conducted via sample surveys. These surveys relied solely on questionnaires or interviews, as the following conditions were met: (i) The baseline cookstoves have been completely decommissioned, and only improved cookstoves are used exclusively in the project households. Additionally, if multiple devices were used in the project, the quantity of firewood consumed by each device was clearly differentiated. The minimum sample size for each type (i) and batch (j) was determined in accordance with the latest version of the Standard for Sampling and Surveys for CDM Project Activities and Programme of Activities</p>
<p>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></p>	<p>The justification provided by the PP is found to be appropriate, Hence CL 10 is closed.</p>
<p>Conclusion <i>Tick the appropriate checkbox</i></p>	<p><input type="checkbox"/> To be checked during the next periodic verification <input type="checkbox"/> Outstanding finding (not closed) <input checked="" type="checkbox"/> The finding is closed</p>

Table 2 CARs from this verification

Finding	CAR 01		
Classification	<input checked="" type="checkbox"/> CAR	<input type="checkbox"/> CL	<input type="checkbox"/> FAR

Finding	CAR 01
<p>Description of finding (VVB)</p>	<p>CAR being raised for the clarifying the following;</p> <ol style="list-style-type: none"> 1. The Estimated GHG emission reductions provided in the PD is not consistent with the values provided in the ER calculation sheet. PP is requested to correct the same. 2. PP is requested the KML file which indicate the geographical boundaries of the host country. 3. The table demonstrated in the 1.18.2 of the JPD&MR is not consistent with the table-1 in JPD&MR filling guidelines, PP is requested to correct the same. 4)
<p>Corrective Action or clarification #1 <i>(PP shall write a detailed and clear corrective action or further information for clarification as per finding)</i></p>	<ol style="list-style-type: none"> 1. An updated ER calculation sheet has been provided to the VVB 2. KML files have been provided
<p>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></p>	<p>PP has provided revised PD and the KML file, the same found to be appropriate.</p> <p>PP has not responded to the 3rd observation in the CAR. Hence CAR 01 is open.</p>
<p>Corrective Action or clarification #1 <i>(PP shall write a detailed and clear corrective action or further information for clarification as per finding)</i></p>	<p>The table demonstrated in the 1.18.2 of the JPD&MR has now been updated and is consistent with table-1 in JPD&MR filling guidelines.</p>
<p>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></p>	<p>PP has revised the table provided in the section 1.18.2 of the JPD&MR, the same found to be appropriate. Hence, CAR 01 is closed.</p>
<p>Conclusion <i>Tick the appropriate checkbox</i></p>	<p><input type="checkbox"/> To be checked during the next periodic verification</p> <p><input checked="" type="checkbox"/> Outstanding finding (not closed)</p> <p><input type="checkbox"/> The finding is closed</p>

Finding	CAR 02
Classification	<input checked="" type="checkbox"/> CAR <input type="checkbox"/> CL <input type="checkbox"/> FAR
Description of finding (VVB)	<p>CAR being raised for the clarifying the following;</p> <ol style="list-style-type: none"> 1. As per section 2.1.2 of JPD&MR filling guidelines, “Summarize the discussion around consent to project design and implementation, risks, costs and benefits of the project, all relevant laws and regulations covering workers’ rights in the host country, the discussion of FPIC, and the VCS validation and verification process.”. PP is requested fill the column of Consultation outcome by complying to above requirement. 2. PP is requested Demonstrate and justify how the project activity(s) meets each of the applicability conditions of the methodology(s), tools, and modules applied by the project. Address each applicability condition separately. PP is requested to refer applied methodology and tools and demonstrate the same. 3. In section 3.3 of the JPD&MR, PP is requested to clearly mention whether the identified source is major or minor in the column “justification and explanation”
Corrective Action or clarification #1 <i>(PP shall write a detailed and clear corrective action or further information for clarification as per finding)</i>	<ol style="list-style-type: none"> 1. Section 2.1.2 has been updated to include the information outlined above. 2. Information on the applicability of applied methodologies and tools has been added. 3. Major and minor sources have been added

Finding	CAR 02
<p>VVB Assessment #1</p> <p><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></p>	<p>PP has mentioned and whether the source is major or minor in the column “justification and explanation”, the same found to be appropriate.</p> <ol style="list-style-type: none"> 1. <i>PP has not made any discussion on consent to project design and implementation, risks, costs and benefits of the project, all relevant laws and regulations covering workers’ rights in the host country, the discussion of FPIC, and the VCS validation and verification process.”. PP is requested fill the column of Consultation outcome by complying to above requirement in section 2.1.2 of the JPD&MR.</i> 2. <i>The demonstrated applicability conditions of the methodology(s), tools, and modules is not as per the actual version. Address each applicability condition separately. PP is requested to refer applied methodology, tool and address the same.</i> <p>Hence CAR 02 is open.</p>
<p>Corrective Action or clarification #1</p> <p><i>(PP shall write a detailed and clear corrective action or further information for clarification as per finding)</i></p>	<ol style="list-style-type: none"> 1. <i>A summary of the discussion around consent has now been added to Consultation outcome column in in section 2.1.2</i> 2. <i>The methodology(s), tools, and modules in section 3.1 has been updated to reflect the actual version</i>

Finding	CAR 02
<p>VVB Assessment #1</p> <p><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></p>	<p>summary of the discussion around consent has now been added in the section 2.1.2.</p> <p>The applicability conditions of the methodology provided in the JPD&MR is not consistent with the methodology, PP is requested to refer section 4 of the applied methodology and demonstrate the applicability conditions accordingly.</p> <p>The justification provided for the applicability criteria for tool 30 v4.0 is not found to be appropriate; PP is requested to mention which option has been selected for fNRB calculation. Further, PP is requested to demonstrate the paragraph 6 and 13 of the tool 30.</p> <p>Hence, CAR 02 is open.</p>
<p>Corrective Action or clarification #1</p> <p><i>(PP shall write a detailed and clear corrective action or further information for clarification as per finding)</i></p>	<p>The applicability conditions and demonstration have now been updated to be consistent with the methodology.</p> <p>The justification for Tool 30 has also been updated accordingly.</p>
<p>VVB Assessment #1</p> <p><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></p>	<p>PP has revised applicability conditions of the methodology and tool provided in the JPD&MR, the same found to be appropriate. Hence CAR 02 is closed.</p>
<p>Conclusion</p> <p><i>Tick the appropriate checkbox</i></p>	<p><input type="checkbox"/> To be checked during the next periodic verification</p> <p><input type="checkbox"/> Outstanding finding (not closed)</p> <p><input checked="" type="checkbox"/> The finding is closed</p>

Finding	CAR 03		
Classification	<input checked="" type="checkbox"/> CAR	<input type="checkbox"/> CL	<input type="checkbox"/> FAR
Description of finding (VVB)	<p>CAR being raised for the clarifying the following;</p> <ol style="list-style-type: none"> 1. As per JPD&MR filling guidelines, In section 3.3 PP is requested to Provide a diagram or map of the project boundary, clearly showing the physical locations of the various installations or management activities taking place as part of the project activity based on the description provided in Section 1.12 (Description of the Project Activity) above. 2. PP is requested to Identify and justify the baseline scenario, in accordance with the procedure set out in the applied methodology and any relevant tools. Where the procedure in the applied methodology involves several steps, describe how each step is applied and clearly document the outcome of each step. Explain and justify key assumptions, rationale, and methodological choices. Provide all relevant references. 		
Corrective Action or clarification #1 <i>(PP shall write a detailed and clear corrective action or further information for clarification as per finding)</i>	<ol style="list-style-type: none"> 1. A map of project boundaries has been added. 2. The baseline scenario has been demonstrated 		
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>	<ol style="list-style-type: none"> 1. PP has provided the diagram for the project boundary, the same found to be appropriate. 2. PP has revised the baseline scenario, but there is no any mention about the KPT/wood usage survey and PP is requested to provide the same. Further PP is requested to cite the statement with its source wherever required. <p>Hence CAR 03 is open.</p>		

Finding	CAR 03
<p>Corrective Action or clarification #1</p> <p><i>(PP shall write a detailed and clear corrective action or further information for clarification as per finding)</i></p>	<p>5)</p> <p>2) The following statement as been added: The project PP determined the quantity of renewable biomass consumed in the baseline scenario by referring to the default value specified in Tool33. Specifically, for a three-stone fire using firewood (not charcoal), or a cookstove without improved combustion air supply or flue gas ventilation (i.e., without a grate or chimney), the default value is 0.15. This value was utilized to assess the baseline consumption of renewable biomass.</p> <p>6)</p> <p>Citation has been added</p>
<p>VVB Assessment #1</p> <p><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></p>	<p>PP has revised the section 3.4 and the same found to be appropriate. Hence, CAR 03 is closed.</p>
<p>Conclusion</p> <p><i>Tick the appropriate checkbox</i></p>	<p><input type="checkbox"/> To be checked during the next periodic verification</p> <p><input type="checkbox"/> Outstanding finding (not closed)</p> <p><input checked="" type="checkbox"/> The finding is closed</p>

Finding	CAR 04		
Classification	<input checked="" type="checkbox"/> CAR	<input type="checkbox"/> CL	<input type="checkbox"/> FAR

Finding	CAR 04
<p>Description of finding (VVB)</p>	<p>As per the paragraph 32 of Tool 1 version 7, If the CDM project activity and the alternatives identified in Step 1 generate no financial or economic benefits other than CDM related income, then apply the simple cost analysis (Option I). Otherwise, use the investment comparison analysis (Option II) or the benchmark analysis (Option III).</p> <p>As stated in section 3.5.2 of the JPD&MR the ICS is distributed at a 80% subsidy to users. PP is requested to clarify how the same complied to above requirement and use the appropriate analysis method.</p>
<p>Corrective Action or clarification #1 <i>(PP shall write a detailed and clear corrective action or further information for clarification as per finding)</i></p>	<p>A cost analysis has been added to section 3.5.2</p>
<p>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></p>	<p>PP is requested to mention how the appropriate analysis method is determined in sub step 2a and detail the method in sub-step 2b.</p> <p>Is the PP used simple cost analysis for demonstrating additionality, it has been mentioned in the table of 3.5.2, PP is requested to clarify the same. Further PP is requested to share the Investment Comparison Analysis sheet to demonstrate how the calculation is done.</p> <p>PP is requested to clarify why the parameters such as inflation rate and Tax (VAT) is not considered in the analysis.</p> <p>If the PP has chosen Investment Comparison Analysis, then PP is requested to comply para 4.3.6. Sub-step 2d: of Tool 1 and demonstrate Sensitivity analysis for the project activity.</p> <p>Hence CAR 04 is open.</p>

Finding	CAR 04
<p>Corrective Action or clarification #1 <i>(PP shall write a detailed and clear corrective action or further information for clarification as per finding)</i></p>	<p>Section 3.5.2 has been updated to include clarifications requested above. It includes a full NVP and sensitive analysis.</p>
<p>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></p>	<p>PP has revised section 3.5.2 of the JPD&MR, the same found to be appropriate.</p> <p>PP requested to provide source for all the input parameters such as inflation in the table, further PP is requested to submit all the supportive evidences for the parameters in NPV calculation such as discount rate based on bank of England, either submit the documents or cite the source if it is publicly available document.</p> <p>PP is also requested to provide the calculation in excel sheet for both the NPV calculation and sensitivity analysis.</p> <p>Hence, CAR 04 is open.</p>
<p>Corrective Action or clarification #1 <i>(PP shall write a detailed and clear corrective action or further information for clarification as per finding)</i></p>	<p>Sources for all parameters in the NPV have been added. Calculations for the NPV and sensitivity analysis have been added to the calculation sheet</p>
<p>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></p>	<p>PP has updated the Sources for all parameters in the NPV. Calculations for the NPV and sensitivity analysis have been added to the calculation sheet, the same found to be appropriate. Hence, CAR 04 is closed.</p>
<p>Conclusion <i>Tick the appropriate checkbox</i></p>	<p><input type="checkbox"/> To be checked during the next periodic verification</p> <p><input type="checkbox"/> Outstanding finding (not closed)</p> <p><input checked="" type="checkbox"/> The finding is closed</p>

Finding	CAR 05		
Classification	<input checked="" type="checkbox"/> CAR	<input type="checkbox"/> CL	<input type="checkbox"/> FAR
Description of finding (VVB)	PP is requested to provide the total planned ICS to be distributed, total number of ICS distributed, the date of first distribution, the dates of project survey conducted and how the sample size is determined in section 4.1 of the JPD&MR.		
Corrective Action or clarification #1 <i>(PP shall write a detailed and clear corrective action or further information for clarification as per finding)</i>	Distribution numbers and dates and survey details have been added to 4.1		
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>	<p>PP has provided the details of total planned ICS to be distributed, total number of ICS distributed, the date of first distribution, the dates of project survey conducted.</p> <p>PP has determined sample size as per section 4.3.3 of the Gold Standard methodology (TPDDTEC), how the same is applicable to VCS methodology. PP is requested to clarify the same.</p> <p>As per the given details, PP has performed simple random sampling, PP is requested to refer section 2.1.7 of the “Sampling and surveys for CDM project activities and programmes of activities” and perform the sampling accordingly.</p> <p>Hence CAR 05 is open.</p>		

Finding	CAR 05
<p>Corrective Action or clarification #1</p> <p><i>(PP shall write a detailed and clear corrective action or further information for clarification as per finding)</i></p>	<p>A sample size has been calculated using “Sampling and surveys for CDM project activities and programmes of activities” and has been added to relevant sections of the PDMR, using the following equation:</p> <p>2) wood usage surveys were carried out on the project ICSs. Using the following calculation. This</p> <p>7)</p> $B_{y,savings,i,j} = B_{y=1,new,i,j,survey} \times \left(\frac{\eta_{new,y,i,j}}{\eta_{old}} - 1 \right)$ $B_{y,savings,i,j} = 1.67 \times \left(\frac{0.313}{0.150} - 1 \right)$ $B_{y,savings,i,j} = 1.67 \times 1.087$ $B_{y,savings,i,j} = 1.82t$
<p>VVB Assessment #1</p> <p><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></p>	<p>PP has revised the section 6.3 and the determination of sample size has been demonstrated as per CDM guidelines Sampling and surveys for CDM project activities and programme of activities”, version 04. The same found to be appropriate.</p> <p>PP has demonstrated the calculation of $B_{y,savings,i,j}$ in ER sheet, the same found to be appropriate, PP is requested to provide the details of wood usage surveys carried out on the project ICSs, the same should be demonstrated in the monitoring sheet (excel sheet).</p> <p>Hence, CAR 05 is open.</p>

Finding	CAR 05
<p>Corrective Action or clarification #1 <i>(PP shall write a detailed and clear corrective action or further information for clarification as per finding)</i></p>	<p>Details of the wood usage survey have been provided and added to the calculation sheet.</p>
<p>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></p>	<p>Details of the wood usage survey have been provided, the same found to be appropriate. Hence, CAR 05 is closed.</p>
<p>Conclusion <i>Tick the appropriate checkbox</i></p>	<p> <input type="checkbox"/> To be checked during the next periodic verification <input type="checkbox"/> Outstanding finding (not closed) <input checked="" type="checkbox"/> The finding is closed </p>

Finding	CAR 06		
Classification	<input checked="" type="checkbox"/> CAR	<input type="checkbox"/> CL	<input type="checkbox"/> FAR
Description of finding (VVB)	<p>CAR has been raised for the following:</p> <ol style="list-style-type: none"> 1. PP has only demonstrated the equation for emission reduction, PP is requested to include all calculations in the emission reduction and removal calculation spreadsheet in the section 5.4. 2. PP is requested to clearly mention how the fNRB is calculated in ER calculation sheet and JPD&MR in section 5.4, if the value is sourced from any other source provide the reference link for the same. 8) 		
<p>Corrective Action or clarification #1 <i>(PP shall write a detailed and clear corrective action or further information for clarification as per finding)</i></p>	<ol style="list-style-type: none"> 1. Demonstration of Calculation has been added to 5.4 2. FnrB calculations have been added to section 5.4 		

Finding	CAR 06
<p>VVB Assessment #1</p> <p><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></p>	<p>PP has provided the emission reduction equation and fNRB calculation in the JPD&MR, the same found to be appropriate.</p> <p>PP is requested to provide the equation used for $\eta_{new,y,i,jj}$ calculation and demonstrate it in the section 5.4.</p> <p>PP is requested to demonstrate the fNRB calculation in the ER sheet.</p> <p>PP has stated “Leakage emissions are calculated as 5% of the net baseline emission reductions. This follows in accordance with Section 5.4 of AMS.II.G Version 13 where it is stated that a net to gross adjustment factor of 0.95 may be applied to reductions to account for leakages”</p> <p>As per the applied methodology, the adjustment leakage factor has already been included in the Net emission reduction equation, then how PP is calculated the leakage emission separately. PP is requested to clarify the same.</p> <p>Hence CAR 06 is open.</p>

Finding	CAR 06
<p>Corrective Action or clarification #1</p> <p><i>(PP shall write a detailed and clear corrective action or further information for clarification as per finding)</i></p>	<p>The equation used for $\eta_{new,y,i,jj}$ calculation has been demonstrated in the section 5.4.</p> <p>The fNRB calculation in the ER sheet.</p> <p>Leakage has been removed from the table in section 7.5 as an adjustment for leakage has already been considered in the emission reduction equation.</p>
<p>VVB Assessment #1</p> <p><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></p>	<p>PP has revised the section 5.4 by revising leakage factor, PP has demonstrated fNRB calculation in ER sheet, PP is requested to provide the fNRB calculation sheet in the ER sheet(not the image) along with the sources and links wherever required</p> <p>Hence, CAR 06 is open.</p>
<p>Corrective Action or clarification #1</p> <p><i>(PP shall write a detailed and clear corrective action or further information for clarification as per finding)</i></p>	<p>The fnrb calculation has been added to the calculation sheet</p>
<p>VVB Assessment #1</p> <p><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></p>	<p>The fnrb calculation has been added to the calculation sheet, the found to be appropriate. Hence CAR 06 is closed.</p>
<p>Conclusion</p> <p><i>Tick the appropriate checkbox</i></p>	<p><input type="checkbox"/> To be checked during the next periodic verification</p> <p><input type="checkbox"/> Outstanding finding (not closed)</p> <p><input checked="" type="checkbox"/> The finding is closed</p>

Finding	CAR 07		
Classification	<input checked="" type="checkbox"/> CAR	<input type="checkbox"/> CL	<input type="checkbox"/> FAR

Finding	CAR 07
Description of finding (VVB)	PP is requested to clarify why the parameters such as Leakage Factor, CO2 emission factor for woody biomass is not demonstrated under section 6.1 of the JPD&MR, further PP is requested to use latest IPCC values available.
Corrective Action or clarification #1 <i>(PP shall write a detailed and clear corrective action or further information for clarification as per finding)</i>	<ol style="list-style-type: none"> 1. Leakage has been factored into 6.1 2. Default Co2 emission factors of 112 tCO2/TJ has been included in section 6.1
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>	<p>PP has included Leakage Factor, PP is requested to clarify CO2 emission factor for woody biomass is not demonstrated under section 6.1 of the JPD&MR.</p> <p>Hence, CAR 07 is open.</p>
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 CO2 emission factor for woody biomass as been clarified as 112 tCO2/TJ. This has been added to section 6.1
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>	The CO2 emission factor for woody biomass as been clarified as 112 tCO2/TJ in section 6.1 of the JPD&MR, the same found to be appropriate. Hence, CAR 07 is closed.
Conclusion <i>Tick the appropriate checkbox</i>	<input type="checkbox"/> To be checked during the next periodic verification <input type="checkbox"/> Outstanding finding (not closed) <input checked="" type="checkbox"/> The finding is closed

Finding	CAR 08		
Classification	<input checked="" type="checkbox"/> CAR	<input type="checkbox"/> CL	<input type="checkbox"/> FAR

Finding	CAR 08
<p>Description of finding (VVB)</p>	<p>CAR has been raised for the following:</p> <ol style="list-style-type: none"> 1. PP is requested to clarify why the parameters μ_y (Adjustment to account for any continued use of pre-project devices during the year y) not considered under data and parameters monitored. 2. In section 7.1 data and parameters monitored the parameter “Efficiency of project stove after first year” which is included in section 6.2 is not considered. PP is requested to clarify the same. Further PP is requested to monitor all the parameters which has been identified in the section 6.2 of the JPD &MR. 9) 3. In emission reduction sheet PP is requested to clearly demonstrate the ER calculation and source for all the parameters considered in the calculation.
<p>Corrective Action or clarification #1 <i>(PP shall write a detailed and clear corrective action or further information for clarification as per finding)</i></p>	<ol style="list-style-type: none"> 1. the parameters μ_y has now been added to section 6.2 2. efficiency has now been added to section 7.1 3. s
<p>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></p>	<p>PP has provided μ_y and the parameter “Efficiency of project stove after first year” has also been added in the JPD&MR.</p> <p>PP has only provided source for net ER calculation equation, PP is requested to demonstrate all the equation and its sourced used.</p> <p>Hence, CAR 08 is open.</p>
<p>Corrective Action or clarification #1 <i>(PP shall write a detailed and clear corrective action or further information for clarification as per finding)</i></p>	<p>Demonstrations of equations have been added to section 7.5</p>

Finding	CAR 08
<p>VVB Assessment #1</p> <p><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></p>	<p>The calculation for ER demonstrated is not clear, PP is requested to clearly demonstrate the emission reduction achieved in the monitoring period with equation and its sources.</p> <p>Hence, CAR 08 is open.</p>
<p>Corrective Action or clarification #1</p> <p><i>(PP shall write a detailed and clear corrective action or further information for clarification as per finding)</i></p>	<p>Section 7.5 has been updated in alignment with the methodology</p>
<p>VVB Assessment #1</p> <p><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></p>	<p>PP has revised section 7.5 of the JPD&MR, the same found to be appropriate. Hence CAR 08 is closed.</p>
<p>Conclusion</p> <p><i>Tick the appropriate checkbox</i></p>	<p><input type="checkbox"/> To be checked during the next periodic verification</p> <p><input type="checkbox"/> Outstanding finding (not closed)</p> <p><input checked="" type="checkbox"/> The finding is closed</p>

Finding	CAR 09		
Classification	<input checked="" type="checkbox"/> CAR	<input type="checkbox"/> CL	<input type="checkbox"/> FAR
Description of finding (VVB)	<p>PP is requested to Quantify the GHG emission reductions (reductions) and carbon dioxide removals (removals) for the monitoring period. Include all relevant equations.</p> <p>Complete the tables below by vintage period (calendar year). Note that the baseline or project emissions subtotals may be negative where sinks exceed emissions. Only specify the estimated VCUs for reductions and removals separately where the applied methodology provides procedures and equations to do so.</p>		
<p>Corrective Action or clarification #1</p> <p><i>(PP shall write a detailed and clear corrective action or further information for clarification as per finding)</i></p>	<p>The table in section 7.5 has been completed with ER details.</p>		

Finding	CAR 09
<p>VVB Assessment #1</p> <p><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></p>	<p>PP is requested to provide the values, units and source used for each parameter in the equation. And provide the total emission reduction achieved.</p> <p>PP is also requested to provide the monitoring sheet. Hence CAR 09 is open.</p>
<p>Corrective Action or clarification #1</p> <p><i>(PP shall write a detailed and clear corrective action or further information for clarification as per finding)</i></p>	<p>All equations have been added to section 7.5</p> <p>A monitoring sheet has been added to the ER calculator spreadsheet</p>
<p>VVB Assessment #1</p> <p><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></p>	<p>The calculation for ER demonstrated is not clear, PP is requested to clearly demonstrate the emission reduction achieved in the monitoring period with equation and its sources.</p> <p>The vintage table provided in the section 7.5 is not filled properly, PP is requested to fill all the column in the table and the explanation for the same.</p> <p>Hence, CAR 09 is open.</p>
<p>Corrective Action or clarification #1</p> <p><i>(PP shall write a detailed and clear corrective action or further information for clarification as per finding)</i></p>	<p>Section 7.5 has been updated in alignment with the methodology</p>
<p>VVB Assessment #1</p> <p><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></p>	<p>PP has revised section 7.5 of the JPD&MR, the same found to be appropriate. Hence CAR 08 is closed.</p>
<p>Conclusion</p> <p><i>Tick the appropriate checkbox</i></p>	<p><input type="checkbox"/> To be checked during the next periodic verification</p> <p><input type="checkbox"/> Outstanding finding (not closed)</p> <p><input checked="" type="checkbox"/> The finding is closed</p>

Table 3 FARs from this Joint validation & verification

Finding	FAR 01		
Classification	<input type="checkbox"/> CAR	<input type="checkbox"/> CL	<input checked="" type="checkbox"/> FAR
Description of finding (VVB)	VVB is requested to assess the applicability of the grouped project during the inclusion of the new project activity instances in Benin into the grouped project.		
Forward Action or clarification #1 <i>(PP shall write a detailed and clear corrective action or further information for clarification as per finding)</i>			
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>			
Conclusion <i>Tick the appropriate checkbox</i>	<input checked="" type="checkbox"/> To be checked during the next periodic verification <input type="checkbox"/> Outstanding finding (not closed) <input type="checkbox"/> The finding is closed		

APPENDIX 6: CERTIFICATE OF COMPETENCE



Carbon Check (India) Private Limited

Certificate of Competency

Mr. Mohammed Suhail K

has been qualified as per CCIPL's internal qualification procedures in accordance with the requirements of CDM AS (V7.0), ISO/IEC14065:2020, ISO/IEC 17029:2019 and other applicable GHG programs:

for the following functions and requirements:

<input checked="" type="checkbox"/> Validator	<input checked="" type="checkbox"/> Verifier	<input checked="" type="checkbox"/> Team Leader	<input checked="" type="checkbox"/> Technical Expert
<input type="checkbox"/> Technical Reviewer	<input type="checkbox"/> Health Expert	<input type="checkbox"/> Gender Expert	<input type="checkbox"/> Plastic Waste Expert
<input type="checkbox"/> CCB Expert	<input type="checkbox"/> Legal Expert	<input type="checkbox"/> Financial Expert	<input type="checkbox"/> Environmental, Health and Safety financial matters
<input type="checkbox"/> SDG+	<input type="checkbox"/> Social no-harm(S+)	<input type="checkbox"/> Environment no-harm(E+)	
<input checked="" type="checkbox"/> Local Expert for India			

in the following Technical Areas:

<input type="checkbox"/> TA 1.1	<input checked="" type="checkbox"/> TA 1.2	<input type="checkbox"/> TA 2.1	<input checked="" type="checkbox"/> TA 3.1	<input type="checkbox"/> TA 4.1
<input type="checkbox"/> TA 4. n	<input type="checkbox"/> TA 5.1	<input type="checkbox"/> TA 5.2	<input type="checkbox"/> TA 7.1	<input type="checkbox"/> TA 8.1
<input type="checkbox"/> TA 9.1	<input type="checkbox"/> TA 9.2	<input type="checkbox"/> TA 10.1	<input type="checkbox"/> TA 13.1	<input type="checkbox"/> TA 13.2
<input type="checkbox"/> TA 14.1	<input type="checkbox"/> TA 15.1	<input type="checkbox"/> TA 16.1		

<p>Issue Date</p> <p>30th January 2024</p> <p><i>Priya Suman</i></p> <hr/> <p>Ms. Priya Suman Compliance Officer</p>	<p>Expiry Date</p> <p>31st December 2024</p> <p><i>Sanjay Agarwalla</i></p> <hr/> <p>Mr. Sanjay Kumar Agarwalla Technical Director</p>
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Revision History of the document:

Revision date	Summary of changes
Dec 2023	Initial Adoption
Jan 2024	Amendment in Technical Area – 3.1

CCIPL_FM 7.9 Certificate of Competency_V4.0_112023
¹ Please refer to previous version of FM 7.9 for the revision history



Carbon Check (India) Private Limited

Certificate of Competency

Tornyedzi Allen

has been qualified as per CCIPL's internal qualification procedures in accordance with the requirements of CDM AS (V7.0), ISO/IEC14065:2020, ISO/IEC 17029:2019 and other applicable GHG programs:

for the following functions and requirements:

- Validator
- Verifier
- Team Leader
- Technical Expert
- Technical Reviewer
- Health Expert
- Gender Expert
- Plastic Waste Expert
- CCB Expert
- Legal Expert
- Financial Expert
- Environmental, Health and Safety financial matters
- SDG+
- Social no-harm(S+)
- Environment no-harm(E+)
- Local Expert for Togo

in the following Technical Areas:

- TA 1.1
- TA 1.2
- TA 2.1
- TA 3.1
- TA 4.1
- TA 4. n
- TA 5.1
- TA 5.2
- TA 7.1
- TA 8.1
- TA 9.1
- TA 9.2
- TA 10.1
- TA 13.1
- TA 13.2
- TA 14.1
- TA 15.1
- TA 16.1

Issue Date

1st December 2023

Expiry Date

31st December 2024

Priya Suman

Ms. Priya Suman
Compliance Officer

Sanjay Agarwalla

Mr. Sanjay Kumar Agarwalla
Technical Director

Revision History of the document:

Revision date	Summary of changes
May 2023	Initial Adoption
Dec 2023	Template changes to include additional functions and TA



Carbon Check (India) Private Limited

Certificate of Competency

Ms. Indumathi C

has been qualified as per CCIPL's internal qualification procedures in accordance with the requirements of CDM AS (V7.0), ISO/IEC14065:2020, ISO/IEC 17029:2019 and other applicable GHG programs:

for the following functions and requirements:

- Validator
- Verifier
- Team Leader
- Technical Expert
- Technical Reviewer
- Health Expert
- Gender Expert
- Plastic Waste Expert
- CCB Expert
- Legal Expert
- Financial Expert
- Environmental, Health and Safety financial matters
- SDG+
- Social no-harm(S+)
- Environment no-harm(E+)
- Local Expert for India and Sri Lanka

in the following Technical Areas:

- TA 1.1
- TA 1.2
- TA 2.1
- TA 3.1
- TA 4.1
- TA 4. n
- TA 5.1
- TA 5.2
- TA 7.1
- TA 8.1
- TA 9.1
- TA 9.2
- TA 10.1
- TA 13.1
- TA 13.2
- TA 14.1
- TA 15.1
- TA 16.1

Issue Date

5th December 2023

Expiry Date

31st December 2024

Priya Suman

Ms. Priya Suman
Compliance Officer

Sanjay Agarwalla

Mr. Sanjay Kumar Agarwalla
Technical Director

Revision History of the document:

Revision date	Summary of changes
2022 ¹	Annual revision
Jan 2023	Annual revision
Dec 2023	Change in the template due to revision in TA and function

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¹ Please refer to previous version of FM 7.9 for the revision history