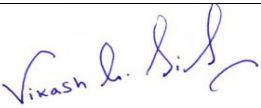


**Verification and certification report form for
programme of activities**

BASIC INFORMATION

Title and GS reference number of the programme of activities (PoA)	GS 1247 Improved Kitchen Regimes Multi-Country PoA GS ID: 1247
Version number(s) of the PoA-DD(s) to which this report applies	Version 3.0 dated 24/05/2013
GS ID (s) of the VPAs	GS7153(VPA164), GS7318(VPA173), GS7317(VPA174), GS7345(VPA175)
Version number of the verification and certification report	1.0
Completion date of the verification and certification report	23-09-2022
Monitoring period number and duration of this monitoring period	Second Monitoring period VPA 164 - 01/10/2020 to 30/04/2022(including both days) VPA 173, VPA 174, VPA 175 -15/03/2021 to 30/04/2022 (including both days)
Version number of the monitoring report to which this report applies	VPA164 Version 04 (Dated: 30/04/2022) VPA173 Version 04 (Dated: 30/04/2022) VPA175 Version 04 (Dated: 30/04/2022) VPA174 Version 03 (Dated: 30/04/2022)
Activity Requirements applied	Community Services Activities
Product Requirements applied	GHG Emission Reduction & Sequestration
Coordinating/managing entity (CME)	Co2balance UK Ltd and BioLite, Inc. have Joint Authority for the VPA
Host Country	Uganda
Applied methodologies and standardized baselines	Gold Standard Methodology Technologies and Practices to Displace Decentralized Thermal Energy Consumption Version 1.0
Mandatory sectoral scopes	3: Energy demand
Conditional sectoral scopes, if applicable	Not applicable

Name and UNFCCC reference number of the VVB	E-0052: Carbon Check (India) Private Ltd.
Name, position, and signature of the approver of the verification and certification report	 Vikash Kumar Singh, Compliance Officer

SECTION A. Executive summary

>>

Introduction:

The Co-ordinating Managing Entity/Project Participant has appointed the VVB, Carbon Check (India) Private Ltd. (CC IPL) to perform independent verification of the GS Programme of Activities, "GS 1247 Improved Kitchen Regimes Multi-Country PoA" in Uganda (hereafter referred to as "Programme of Activities or PoA") for the VPAs titled "GS7153(VPA164), GS7318(VPA173), GS7317(VPA174), GS7345(VPA175) EcoZoom Improved Stove Programme, Uganda VPA No.164,173,174,175, (GS ID – GS 1247)".

The PoA involves the replacement of less efficient three-stone cooking stoves with improved energy-efficient cooking stoves which are more efficient. The activity involves selling and maintaining domestic and non-domestic fuel-efficient stoves (FES) manufactured by EcoZoom at an attractive price. The improved cookstoves sold under VPA are more efficient in transferring heat from the fuel (wood or charcoal) to the pot when compared to the three-stone stove typically used in the baseline. The PoA will save on wood biomass consumption by replacing inefficient stoves and reducing GHG emissions.

The VPAs are designed to generate emission reductions through the distribution of fuel-efficient cook stoves. The fuel-efficient cook stoves are replacing the less efficient baseline stoves in common use (baseline scenario). The CME and VPA implementer are responsible for the collection of data in accordance with the monitoring plan and reporting GHG emissions reductions from the component project activities.

This report summarises the verification findings of the project, performed on the basis of Procedures, and GS4GG methodology requirements, as well as on the basis of given criteria for consistent project operations, monitoring, reporting, and the subsequent decisions by the Gold Standard Secretariat. Verification is required for all registered GS project activities intending to confirm their achieved emission reductions and proceed with a request for issuance of VERs. This report contains the findings and resolutions from the verification along with a certification statement for the certified emission reductions.

Objective:

Verification is the process of periodic independent review and ex-post determination of both quantitative and qualitative information by a VVB. In verification, the monitored reductions in GHG emissions that have occurred because of the registered GS project activity during a defined monitoring period are to be verified.

Certification is the written assurance by a VVB that, during a specific period, a project activity achieved the emission reductions as verified.

The duration of this monitoring period is VPA 164 - 01/10/2020 to 30/04/2022(including both days) and VPA 173, VPA 174, VPA 175 -15/03/2021 to 30/04/2022 (inclusive of both dates). The objective of this verification was to verify and certify the Emission Reductions and SDG benefits achieved for the period of VPA 164 - 01/10/2020 to 30/04/2022 (including both days) and VPA 173, VPA 174, VPA 175 -15/03/2021 to 30/04/2022 (inclusive of both the dates) reported for the "EcoZoom Improved Stove Programme" in the host country "Uganda".

The purpose of verification is to review the monitoring results and verify that the monitoring was implemented according to the monitoring methodology and the monitoring plan given in the PoA VPAs and to confirm that the reductions in anthropogenic emissions by sources, are sufficient,

definitive, and presented in a concise and transparent manner. CCIPL's objective is to perform a thorough, independent assessment of the implementation of the registered program of activities VPA-DDs.

In particular, the monitoring plan, monitoring report, and the project's compliance with relevant UNFCCC, GS, and host Party criteria are verified to confirm that the component project/s has/have been implemented in accordance with the previously registered/included component project design with conservative assumptions, as documented. Also, it is confirmed that if the monitoring plan is following the registered/included VPA-DDs and the approved monitoring methodology.

Scope:

The scope of the verification is:

- To verify the project implementation and operation with respect to the registered/included VPA-DDs.
- To verify the implemented monitoring plan with the registered/included VPA-DDs or approved revised VPA-DDs 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 are free from material misstatement.
- To verify that reported GHG emission data are sufficiently supported by evidence.

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

The verification comprises a review of the monitoring report covering the monitoring period from VPA 164 - 01/10/2020 to 30/04/2022(including both days) VPA 173, VPA 174, VPA 175 -15/03/2021 to 30/04/2022 (inclusive of both dates) and based on the registered/included VPA-DDs including the monitoring plan, emission reduction calculation spreadsheet, monitoring methodology, and all related evidence/data/documents provided by the project participant.

The verification team assigned by the VVB concludes that the PoA GS1247 (Version 3.0, dated 24/05/2013), GS7153(VPA164), GS7318(VPA173), GS7317(VPA174), GS7345(VPA175) meet all relevant requirements of the GS4GG requirements and UNFCCC for CDM project activities including article 12 of the Kyoto Protocol and paragraph 62 of CDM M&P, the modalities, and procedures for CDM (Marrakesh Accords) and the subsequent decisions by the COP/MOP and CDM Executive Board and Gold Standard Secretariat. The verification has been conducted in line with the GS4GG requirements and CDM VVS for PoAs requirements Version 3.0

The voluntary project activities were correctly implemented according to the selected monitoring methodology, monitoring plan, and the approved revised VPA-DD/s. The monitoring system was implemented, and maintained in a proper manner, while collected monitoring data allowed for the verification of the amount of achieved GHG emission reductions. Through the review of documents and information shared by the CME, the verification team confirms that the PoA has resulted in emission reductions during the second monitoring period for each VPA is as follows:

SR.NO	VPA Reference No.	VERs	Monitoring Period
1.	VPA 164	15,286 VERs	01/10/2020 to 30/04/2022

2.	VPA 173	11,310 VERs	15/03/2021 to 30/04/2022
3.	VPA 174	8078 VERs	15/03/2021 to 30/04/2022
4.	VPA 175	6089 VERs	15/03/2021 to 30/04/2022

CC IPL, as a VVB, is therefore pleased to issue a positive verification opinion expressed in the attached Certification statement.

SECTION B. Verification team

B.1. Verification team, technical reviewer, and approver¹

Carbon Check (India) Private Ltd. has appointed a competent team as per the UNFCCC Accreditation Standard, GS4GG requirements and CC IPL's internal procedures. Further details regarding team competence can be found in Appendix 2. The team is outlined below:

Sr. No.	Role	Type of resource	Last name	First name	Affiliation (e.g. name of central or other office of VVB or outsourced entity)
1.	Team Leader/Technical Expert	IR	Agarwalla	Sanjay Kumar	CC IPL
2.	Team member/Technical expert	IR	Sharma	Harish	CC IPL
3.	Trainee Assessor	IR	Bankar	Siddhant	CC IPL
4.	Technical Reviewer	IR	C.	Indumathi	CC IPL
5.	Approver	IR	Singh	Vikash Kumar	CC IPL

SECTION C. Application of materiality in conducting the verification

C.1. Consideration of materiality in planning the verification

No.	Risk that could lead to material errors, omissions or misstatements	Assessment of the risk		Response to the risk in the verification plan and/or sampling plan
		Risk level	Justification	
1.	Human Error: Recording and reporting of the information in the ER spreadsheet.	Medium	All the input data in the ER spreadsheet including sales database, determination of	The risk was mitigated by training the personnel involved in the data capture, calculation and by following the monitoring

¹ Confirming to the GS requirements of paragraph 2.2 of RU 2020 PR - PR, V1.2 (validation and verification by same VVB), VVB confirms that it was not involved in any kind of validation activity of the project.

			parameters for efficiency testing including data calculation. This includes all the parameters to be monitored ex-post as per the PoA-DD/VPA-DDs	responsibilities. The training records were reviewed. Verification team, based on the above, confirms that the risk is appropriately mitigated.
2.	Information System: Use of spreadsheets without adequate controls related to data changes/updates, version tracking, traceability, security	Medium	The data is recorded in the spreadsheets based on the raw data collected during the field visits. The access to the spreadsheets for calculation of ERs, monitoring and sales database, and Stove efficiency testing records is controlled.	The identified risk was mitigated by managing access to the records. It was confirmed by the CME that the raw data is collected by the field personnel and then transmitted and stored electronically to the CME's office. The organogram of the organization for the data collection and record-keeping was reviewed and found satisfactory. The data quality control is maintained by the CME.
3.	Accuracy of the measuring equipment	Low	Check the calibration records for the measurement equipment used for the efficiency test.	The risk due to the accuracy of the measuring equipment was ensured by planning to check the calibration certificates of the measuring equipment used for stove efficiency (KPT).
4.	Competence of personnel involved in conducting standardized tests viz., KPT	Low	Interview of the personnel involved and check the training records/accreditation certificates (applicable in case of institutions) involved in conducting such tests.	The risk was mitigated by reviewing the training records of the personnel involved in conducting such tests and by following the monitoring responsibilities. For institutions involved in conducting such tests, their accreditation certificates were checked to establish their competence for conducting such tests. The training records and certificates were reviewed which were also confirmed during the verification.
5.	Sample	Medium	The sample size is not suitable or the surveyed stoves at the VPA level are not random.	Cross-check the procedure to identify the sample size against the sampling guideline and standard and

				confirm the sample size is calculated correctly.
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C.2. Consideration of materiality in conducting the verification

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The project is a Micro-scale, project activity achieving total emission reductions of >10,000 tons of CO₂e per year; as such, a 10 percent materiality threshold is applied. The threshold of materiality was evaluated based on of Guideline “Application of materiality in verifications” Version 1.0 and §326 of CDM VVS for PoAs, version 3.0. It was concluded that the materiality threshold applicable to the project activity based on actual emission reductions achieved is 10% of 40763 tCO₂e² which is equal to 4076.3 tCO₂e.

In planning the verification, the verification team took cognizance of §11 of the “Guideline: Application of materiality in verifications” Version 02.0. A materiality threshold of 4076.3 tCO₂e is determined in line with §326 (e) of “CDM validation and verification standard for project activities”, version 3.0.

Based on the above information, a risk analysis is carried out in the following activities:

1. Monitoring system including the data input procedure (including relevant personnel and applicable template forms used)
2. Copy of the agreement between household and Project Participant (s) (origin of data)
3. Stove unique ID system
4. ER sheet (application of data)
5. Data flow
6. Data control procedures
7. Monitoring survey records
8. Kitchen performance test (KPT) records

In conducting the verification, VVB took cognizance of §13 of the guideline “Application of materiality in verifications” Version 02.0 and based on the input of data from different sources checked through a sampling of records. Data flow was checked through a comparison of data in hand-written forms, electronic databases, and ER sheets. The competence of the personnel involved in conducting the stove efficiency testing, recording of data, and calculation of the emission reduction data has been checked by the verification team by means of a review of the training documents.

The risks identified can be mitigated through cross check with all sets of documents. The verification team performed the following checks to mitigate the effects of the above-identified sources of error:

Mitigation of Human error risks: The verification team mitigated the risk by checking the training records of the personnel and assessing their competencies, skills, monitoring/testing procedure followed, understanding of the monitoring survey forms, protocol and testing procedure, etc. Further, data was crosschecked with the ER calculation spreadsheet and the sample raw data.

Mitigation due to error in the Information system: Verification team by conducting interviews with the personnel responsible for such activities mitigated the risk due to errors in an information system. It was confirmed through interviews that the raw data is collected by the field personnel and then transmitted and stored electronically at CME’s office. The data quality control is maintained by the CME.

Accuracy of the measuring equipment: The risk due to inaccuracy in measurements was mitigated by reviewing the calibration certificates of all the project equipment.

Competence of personnel involved in conducting standardized tests: Verification team has reviewed the abilities, qualifications, and recognition of involved personnel and institutions of the measuring team. The tests/procedures have been carried out by well-trained personnel. The training certificate of the personnel has been provided to the verification team in this respect. The training content has also been provided to the verification team.

Mitigation due to error in Sampling: The verification team mitigated the risk by checking the ER sheet for VPAs, list of random samples generated for monitoring surveys for VPAs, and the sample size calculation sheet.

In conducting the verification, VVB took cognizance of §13-17 of the Guideline: “Application of materiality in verifications” (version 2.0) and based on the input of data from different sources checked through sampling records.

Based on the assessment carried out, CCIPL confirms with a reasonable level of assurance that the claimed emission reductions are free from material errors, omissions, or misstatements.

SECTION D. Means of verification

D.1. Desk/document review

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The verification was performed primarily based on the review of the Monitoring report and the supporting documentation. This process included a review of data and information presented to verify their completeness and a review of the monitoring plan and monitoring methodology. Documents reviewed or referenced during the verification are listed in Appendix 3 below.

D.2. On-site inspection

In line with the guideline of GS4GG for microscale projects, the on-site visit is not necessary within three years of the last visit of the objective observer. Hence, in line with the requirement, the last objective observer report has been taken as the reference for the verification.

The collection of data for the sampling and survey of IES was done by the Biolite. The verification of data collection is done by the verification team as per the requirement of methodology and guidelines.

D.3. Interviews

Interviews of IES user was taken by a trained team of Biolite, interview records, and questionnaires were checked for reference. All surveys were conducted in person and photos and GPS coordinates were recorded. Submitted photos and snapshots were checked by verification team to confirm.

D.4. Sampling approach

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As assessed in the above sections, emission reductions for VPAs, GS7153(VPA164), GS7318(VPA173), GS7317(VPA174), GS7345(VPA175) is being claimed for this monitoring period and the total population of the stoves under this VPA is as below:

Sl. No.	VPA Reference No.	Number of FES Distributed	Monitoring Period
1.	GS7153(VPA164)	3186	01/10/2020 to 30/04/2022
2.	GS7318(VPA173)	3611	15/03/2021 to 30/04/2022
3.	GS7317(VPA174)	2357	15/03/2021 to 30/04/2022
4.	GS7345(VPA175)	1875	15/03/2021 to 30/04/2022

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

1. Quantity of wood fuel that is consumed in project scenario p during year y ($P_{p,y}$)
2. Quantity of charcoal fuel that is consumed in project scenario p during year y ($P_{p,y}$)
3. Usage rate in project scenario p during year y ($U_{p,y}$)
4. Leakage in project scenario p during year y ($LE_{p,y}$)
5. Number of coughing bouts per day in scenario p during year y, as self-reported by the user ($S_{p,y}$)
6. Number of coughing bouts per day in scenario b during year y, as self-reported by the user ($S_{b,y}$)
7. Number of minutes per day used collecting wood in scenario b during year y, as self-reported by the user ($T_{b,y}$)
8. Number of minutes per day used in collecting wood in scenario p during year y, as self-reported by the user ($T_{p,y}$)

As per the 'Guideline: Sampling and surveys for CDM project activities and programmes of activities, version 04.0', paragraph 4. Sampling requirements point no 10 states² Where there is no specific guidance in the applicable methodology, project proponents shall use 90/10 confidence/precision as the criteria for the reliability of sampling efforts for small-scale project activities².

As per paragraph 4 project participants or the coordinating/managing 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.

The results of sampling surveys for this monitoring period are verified by the VVB by relying on acceptance sampling of the last objective observer report which includes 23 samples, this is in line with the requirement of the micro-scale project by GS4GG.

Furthermore, the sampling plan implemented by the CME is in accordance with the applied approved monitoring methodology and the PoA-DD/VPA-DDs /B04/. The CME has appropriately performed the Sampling procedure in line with the applied methodology and PoA-DD / VPA-DDs.

The necessary confidence/precision of 90/10 for each of the parameters is met. This has been cross verified by the verification team from the supporting documents submitted. During this monitoring exercise.

The kitchen performance test (KPT), referred to in the Gold Standard methodology as the Project Fuel Test (PFT) was performed by a random sampling approach selected to ensure the sample size satisfied the 90/30 precision level. The verification team verified the KPTs and PFTs records provided by the Boilite and shared snapshots for the random sampling as proof was checked by verification team.

² https://cdm.unfccc.int/Reference/catalogue/document?doc_id=000003360#_Toc362602343

SECTION E. Verification findings

E.1. General

E.1.1. Compliance of the monitoring report with the monitoring report form

Means of verification	Document Review, Interview
Findings	-
Conclusion	CME has used the GS4GG template Monitoring Report, version 1.1. The verification team confirms that the latest available version of the monitoring report template has been used by the CME and the MR is in compliance with the monitoring report form and related template guide Monitoring Report, version 1.1. This confirms compliance with the §336 and §337 of CDM VVS for PoAs, version 3.0 and GS4GG requirements.

E.1.2. Remaining forward action requests from validation and/or previous verifications

Forward Action Requests (FARs) for VPAs - 173,174,175

Remaining FARs from validation and/or previous verification

FAR ID	01	Section no.	N/A	Date: 05/08/2022
Description of FAR				
The weighted average across all models of stoves being credited in the VPA is not to exceed 3.46 tons CO ₂ e/yr.				
CME response				Date: 18/08/2022
The weighted averages across all models of stoves being credited in VPAs 173, 174 and 175 during this monitoring period did not exceed 3.46 Tons CO₂eq. VPA 173 – 3.31 tCO₂e/hh-yr (Cell F40 of the Assumptions tab in the ER calculator) VPA 174 – 3.45 tCO₂e/hh-yr (Cell W33 of the Assumptions tab in the ER Calculator) VPA 175 - 3.46 tCO₂e/hh-yr (Cell W32 of the Assumptions tab in the ER calculator)				
Documentation provided by the CME				
- BioLite GS VER calculator_VPA175 Uganda_MP2-Version 2 - Sales summary_VPA 175_MP2-Version 2 - Summary sheet_175_MP2-Version 2 - BioLite GS VER calculator_VPA173 Uganda_MP2-Version 02 - Sales summary_VPA 173_MP2-Version 02 - Summary sheet_VPA 173_MP2-Version 02 - BioLite GS VER calculator_VPA174 Uganda_MP2-Version 02 - Sales summary_VPA 174_MP2-Version 02 - Summary sheet_174_MP2-Version 02				
GS VVB assessment				Date: 16/09/2022
The weighted average is less than or equal to 3.46 tCO ₂ e/hh-yr. The required condition to address the FAR has been complied.				

FAR ID	02	Section no.	N/A	Date: 05/08/2022
Description of FAR				
To ensure transparency of sampling process, the PP shall use the online number generator or other traceable techniques. The PP shall maintain the screenshots of random number generation/evidence for the random selection of households for monitoring surveys. All evidence shall be submitted together with the following request for issuances. PD shall also transparently report on households interviewed versus randomly selected.				
Project participant response				Date: 18/08/2022
All surveyed households were randomly selected using the excel random number function – 'RAND()*(x-y) +y'. The random number function assigned random numbers to all end users in the project database. The random number column was then sorted in ascending order and users were contacted following the sorted list until the sample size was attained for the monitoring. Snapshots of the random sampling have been submitted with this response.				
Documentation provided by project participant				
Biolite Charcoal Stoves Uganda-Random Sampling screen shot				
GS VVB assessment				Date: 16/09/2022
The required condition to address the FAR has been complied.				

FAR ID	03	Section no.	N/A	Date: 05/08/2022
Description of FAR				
For future MPs, PD shall take into account all 3 objective usage signs as well as the current definition of usage "A stove was considered in use if it was being used on a daily basis" All 3 objective signs must be positive.				
Project participant response				Date: 18/08/2022
Observations such as if the stove was warm to the touch; if there were ashes in the stove or if the stove appeared to have recently been used were recorded during the household usage surveys. Responses to these observations can be seen in columns 'R', 'S' and 'T' of Usage survey spreadsheet. A stove was considered in use if all the three responses were positive.				
Documentation provided by project participant				
Usage Survey data 2021 - Final-Version 02				
GS VVB assessment				Date: 16/09/2022
The survey outcome has been analysed and found to be in compliance with the FAR.				

FAR ID	04	Section no.	N/A	Date: 05/08/2022
Description of FAR				
PD to describe how stove age is defined in future monitoring reports, showing how it complies with the methodology (please use 'additional comment').				
Project participant response				Date: 18/08/2022

Sampling covered stoves that had been in use on average at least 0.5 years prior to the start of the year for which they took part in the project as required by the methodology. During this monitoring period, stove age calculation was based on the date the household purchased the stove and the date when the household was surveyed. This therefore meant the age of the project technology was the time the stove had been in use from when it was purchased by the household until the time of surveying for this monitoring. 30 samples for each of the 4 age cohorts were sampled during this monitoring period. This was added in Section D of the MRs as 'additional comment' for monitored Parameter U(p,y). The calculation for the age groups could be seen on column E in the 'Age Group' Tab of the Usage Survey data 2021 – Final-Version 02.xlsx

Documentation provided by project participant

Usage Survey data 2021 - Final-Version 02

GS VVB assessment

Date: 16/09/2022

The response has been updated in the MR. Furthermore, data related to survey and cookstove age has also been submitted and found in line with the requirement of prescribe monitoring plan. The condition for the FAR is satisfied.

E.2. Programme of activities

E.2.1. Compliance of the program implementation with the registered program design document

Means of verification	Document Review, Interview
Conclusion	CC IPL by means of on-site interviews records provided by the CME and document review, assessed that all physical features (technology, project equipment, and monitoring equipment) of the included VPAs in the PoA are in place and that the coordinating/managing entity has operated the PoA and the VPAs as per the PoA and the VPAs. There are no deviations or proposed or actual changes in the implementation or operation of the PoA and the included VPAs. The verification team confirms the actual operation of the VPA and PoA implementation and operation in compliance with the PoA / VPA in order to confirm the compliance of § 338, § 339 and § 340 of CDM VVS for PoA, Version 03.0 and GS4GG requirements.

E.2.2. Implementation and operation of the management system

Means of verification	Document Review, Interview
Conclusion	The PoA management system including the record-keeping system has been explained in the PoA. During verification, the verification team based on a review of provided documents and telephonic discussion has assessed this management system. The verification team evaluated the management systems in place to implement the monitoring of the project activity. This included the roles and responsibilities of the monitoring staff, data collection, transfer and aggregation procedures, data storage and archiving procedure for the monitoring system.

	Monitoring surveys were conducted by in house team of Biolite & EcoZoom. To ensure the completeness and accuracy of monitoring information, an electronic database is operated and maintained by the VPA implementer. This information is further maintained by the CME. The data is further periodically checked by the CME to ensure there is no double counting. This provision for the avoidance of double counting as outlined in the PoA management system has been verified by means of review records of the sales database and on-site interviews during the course of verification. The responsibilities and authorities for monitoring and reporting are in accordance with the responsibilities and authorities stated in the monitoring plan. The details about the monitoring system have been provided in the Monitoring report. The verification team confirms that the monitoring management system of the CDM PoA is in place, with the responsibilities properly identified and in place. This confirms the compliance of § 338 (a) and § 345 (b) (iv) of CDM VVS PoA. Version 03.0 and GS4GG requirements.
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E.3. Voluntary project activities

E.3.1. Compliance of the VPA implementation with the included VPA design document

Means of verification	Document Review, Interview														
Conclusion	The implementation status of the PoA and the voluntary project activities is: <table border="1"> <tr> <td>Project Participants:</td><td>Biolite</td></tr> <tr> <td>Title of PoA:</td><td>GS1247 Improved Kitchen Regimes Multi-Country PoA</td></tr> <tr> <td>GS Reference No:</td><td>PoA – GS1247 GS7153(VPA164), GS7318(VPA173), GS7317(VPA174), GS7345(VPA175)</td></tr> <tr> <td>Applied Baseline and monitoring methodology:</td><td>Gold Standard Methodology Technologies and Practices to Displace Decentralized Thermal Energy Consumption Version 1.0</td></tr> <tr> <td>Project Scale:</td><td>Microscale</td></tr> <tr> <td>Location of the project activity:</td><td>Uganda</td></tr> <tr> <td>Reported monitoring Period verified in this verification:</td><td>VPA 164 - 01/10/2020 to 30/04/2022 (inclusive of both days) VPA 173, VPA 174, VPA 175 -15/03/2021 to 30/04/2022 (inclusive of both dates)</td></tr> </table> The VPAs include the selling of fuel-efficient stoves. The VPA implementer is EcoZoom The fuel-efficient cook stoves (FES) under the VPAs use wood and charcoal as fuel. These FESs are efficient in transferring heat from the fuel to the pot, thus saving fuel (Wood and charcoal) compared the traditional stoves.	Project Participants:	Biolite	Title of PoA:	GS1247 Improved Kitchen Regimes Multi-Country PoA	GS Reference No:	PoA – GS1247 GS7153(VPA164), GS7318(VPA173), GS7317(VPA174), GS7345(VPA175)	Applied Baseline and monitoring methodology:	Gold Standard Methodology Technologies and Practices to Displace Decentralized Thermal Energy Consumption Version 1.0	Project Scale:	Microscale	Location of the project activity:	Uganda	Reported monitoring Period verified in this verification:	VPA 164 - 01/10/2020 to 30/04/2022 (inclusive of both days) VPA 173, VPA 174, VPA 175 -15/03/2021 to 30/04/2022 (inclusive of both dates)
Project Participants:	Biolite														
Title of PoA:	GS1247 Improved Kitchen Regimes Multi-Country PoA														
GS Reference No:	PoA – GS1247 GS7153(VPA164), GS7318(VPA173), GS7317(VPA174), GS7345(VPA175)														
Applied Baseline and monitoring methodology:	Gold Standard Methodology Technologies and Practices to Displace Decentralized Thermal Energy Consumption Version 1.0														
Project Scale:	Microscale														
Location of the project activity:	Uganda														
Reported monitoring Period verified in this verification:	VPA 164 - 01/10/2020 to 30/04/2022 (inclusive of both days) VPA 173, VPA 174, VPA 175 -15/03/2021 to 30/04/2022 (inclusive of both dates)														

The number of stoves deployed under each VPAs have been confirmed by the monitoring database and as stated below:

Sl. No.	VPA No.	Reference	Number of FES Distributed	Monitoring Period
1.	GS7153(VPA164)		3186	01/10/2020 to 30/04/2022
2.	GS7318(VPA173)		3611	15/03/2021 to 30/04/2022
3.	GS7317(VPA174)		2357	15/03/2021 to 30/04/2022
4.	GS7345(VPA175)		1875	15/03/2021 to 30/04/2022

It was confirmed that Biolite is the Coordinating/Managing Entity for the PoA. The actual voluntary project activity/ies are in line with the VPAs. EcoZoom is the VPA implementer for the VPAs.

The information (including data and variables) provided in the MR is in line with the details provided in the VPAs.

CC IPL's verification team considers the project description of the project contained in the PoA and the VPAs to be complete and accurate. The VPAs comply with the relevant methodology, tools, forms, and guidance.

In accordance with §340 (c) of CDM VVS for PoAs, version 03, the verification team confirms that there is no information (data and variables) in the current monitoring period that are different from that stated in the approved revised VPA-DDs which has caused an increase in the estimates of GHG emission reductions.

The verification team has assessed the project to check any proposed or actual changes to the project design in accordance with §267 of CDM VVS for PoAs, Version 3.0. In the opinion of CC IPL, there is no change to the project design. After reviewing the data shared by CME, CC IPL's verification team confirms that the VPAs are implemented within the boundary of the PoA as described in the PoA-DD.

In the opinion of CC IPL, there is no change to the project design. CC IPL's verification team confirms that the VPAs are implemented within the boundary of the PoA as described in the PoA and the implementation and operation of the project activity have been conducted in accordance with the description contained in the PoA and VPA.

The verification team took cognizance of § 338, § 339, and § 340 of the CDM VVS for PoA, version 03. The § 339 of CDM VVS for PoA states that If an on-site inspection is not conducted, the DOE shall justify the rationale of the decision. In line with the guideline of GS4GG for microscale projects, the site verification site visit is not necessary within three years of the last visit of the objective observer. Hence, in line with the requirement, the last objective observer report has been taken as the reference for the verification.

E.3.2. Compliance with the registered monitoring plan with applied methodologies and standardized baselines

Means of verification	Document Review, Interview
Conclusion	The verification team can confirm that the monitoring plan contained in the VPAs is in accordance with the approved methodology applied by the project activity, i.e., Gold Standard Methodology Technologies and Practices to Displace Decentralized Thermal Energy Consumption Version 1.0 The monitoring plan is in accordance with the approved methodology, The Gold Standard Methodology Technologies, and Practices to Displace Decentralized Thermal Energy Consumption Version 1.0 is applied by the component project activities and as provided in the VPA. The verification took cognizance of § 341 to § 343 of CDM VVS for PoAs, Version 03.0 and GS4GG requirements.

E.3.3. Compliance of monitoring activities with the registered monitoring plan

The monitoring has been carried out in accordance with the monitoring plan contained in the VPAs. This conclusion has been made based on the assessment below.

E.3.3.1. Data and parameters fixed ex-ante or at the renewal of crediting period

Means of verification	Document Review, Interview
Conclusion	The verification team confirms that the Data and parameters fixed ex-ante are in compliance with the VPAs and the monitoring plan. Please refer to Appendix 5 for a detailed analysis of the ex-ante parameters. The verification took cognizance of § 344 of CDM VVS for PoAs, Version 03.0 and GS4GG requirements.

E.3.3.2. Data and parameters monitored

Means of verification	Document Review, Interview
Conclusion	The Verification team confirms that the Data and parameters monitored are in compliance with the VPAs and the monitoring plan. A complete assessment of each of the monitored parameters has been provided in Appendix 6 of the verification report. The verification took cognizance of § 344, § 345(c), §356 and §357 of CDM VVS for PoAs, Version 03.0 GS4GG Requirements.

E.3.3.3. Implementation of sampling plan

Means of verification	Document Review, Interview
Conclusion	Monitoring surveys were conducted during the current monitoring period. The total population of the stoves covering the VPAs (VPA 173, VPA 174, VPA 175 and VPA 164) is 11029. The monitoring parameters required to be monitored through the sampling plan are: 1. Quantity of wood fuel that is consumed in project scenario p during year y(Pp,y) 2. Quantity of charcoal fuel that is consumed in project scenario p during year y(Pp,y)

3. Usage rate in project scenario p during year y (Up,y)
4. Leakage in project scenario p during year y ($LE_{p,y}$)
5. Number of coughing bouts per day in scenario p during year y, as self-reported by the user ($S_{p,y}$)
6. Number of coughing bouts per day in scenario b during year y, as self-reported by the user ($S_{b,y}$)
7. Number of minutes per day used collecting wood in scenario b during year y, as self-reported by the user (Tb,y)
8. Number of minutes per day used in collecting wood in scenario p during year y, as self-reported by the user (Tp,y)

Across VPA random sampling was applied for the VPAs by CME for selection of the monitoring samples with 90/30 confidence/precision for the following three parameters for annual monitoring which is deemed acceptable as per the PoA and VPAs

1. Quantity of fuel consumed in baseline scenario (Pb,y)
2. Quantity of fuel consumed in project scenario (Pp,y)
3. Usage rate in project scenario (Up,y)

Applying the random number generator, the FES were randomly picked from the defined population up to the required sample size as calculated by the CME. The verification team confirms that the applied method for sample size calculation is in accordance with the PoA-DD / VPA-DDs.

Thermal efficiency of the stoves is not considered as a monitoring parameter because the project proponent assume that any improvements to the current design will not involve significant changes in combustion technology or changes in thermal efficiency of +/- 5%, and hence will not entail a new project scenario KPT (Kitchen performance tests)/PFT (Project fuel test) are carried out during the survey-by-survey team from EcoZoom and boilite and KPT/PFT reports were submitted to verification team as per methodology from GS4GG for micro-scale.

The verification team has assessed and found that for all the parameters the confidence/precision of 90/10 was met.

The sampling plan implemented by the CME is in accordance with the applied approved monitoring methodology and the PoA-DD/ VPAs. The CME has appropriately performed the Random Sampling procedure in line with the applied methodology and is best suited for this type of project. As the PoA mentions the option for a Random Sampling procedure, it is acceptable to the verification team.

The necessary confidence/precision of 90/30 for each of the parameters is met. This has been cross verified by the verification team from the supporting documents submitted.

The verification took cognizance of 'Guideline: Sampling and surveys for CDM project activities and programs of activities, version 04.0', paragraph 4. Sampling requirements point no.10.

E.3.4. Compliance with the calibration frequency requirements for measuring instruments

Means of verification	Document Review, Interview
Conclusion	KPT (Kitchen performance tests) / PFT (Project fuel test) are carried out during the survey-by-survey team from EcoZoom and Boilite reports were submitted to the verification team as per methodology from GS4GG of Gold Standard Methodology Technologies and Practices to Displace Decentralized Thermal Energy Consumption Version 1.0. As proof calibration certificates were submitted for the measuring instruments used for KPT / PFT by CME.

E.3.5. Emission Reduction Quantification

Assessment of data and calculation of emission reductions or net removals In line with the requirement of Gold Standard Methodology Technologies and Practices to Displace Decentralized Thermal Energy Consumption Version 1.0 the verification team has reviewed the Monitoring report and ER spreadsheets to check the arithmetic calculation of the emission reductions. The equation used for the calculation is compared with those provided in the VPA and The Gold Standard Methodology Technologies and Practices to Displace Decentralized Thermal Energy Consumption Version 1.0.

E.3.5.1. Calculation of baseline GHG emissions or baseline net GHG removals by sinks

Means of verification	Document Review, Interview												
Conclusion	When the baseline fuel and the project fuel are different and/or the emission factors are different, the overall GHG reductions achieved by the project activity in year y are calculated as follows: $ER_y = \sum_{b,p} (N_{p,y} * U_{p,y} * P_{p,b,y} * NCV_{b,fuel} * (f_{NRB,b,y} * EF_{fuel,CO2} + EF_{fuel,nonCO2})) - \sum LE_{p,y}$ Where: <table> <tr> <td>$\sum_{b,p}$</td><td>Sum over all relevant (baseline b/project p) couples</td></tr> <tr> <td>$N_{p,y}$</td><td>Cumulative number of project technology days included in the project database for project scenario p against baseline scenario b in year y</td></tr> <tr> <td>$U_{p,y}$</td><td>Usage rate for project cookstoves in year y, based on adoption rate and drop off rate revealed by usage surveys (fraction)</td></tr> <tr> <td>$f_{NRB,b,y}$</td><td>Fraction of biomass, used in year y for baseline scenario, which can be established as non- renewable. The project proponents shall estimate project specific national/ regional value⁴ or apply the default fNRB value provided by the CDM Executive</td></tr> <tr> <td>$EF_{b,fuel,CO2}$</td><td>CO2 emission factor of fire wood that is substituted or reduced. (Default value for wood fuel 1.747 tCO2/ton of wood)</td></tr> <tr> <td>$EF_{b,fuel,non_CO2}$</td><td>Non-CO2 emission factor of fire wood that is substituted or reduced. (Default value for wood fuel 0.455 tCO2/ton of wood)</td></tr> </table>	$\sum_{b,p}$	Sum over all relevant (baseline b/project p) couples	$N_{p,y}$	Cumulative number of project technology days included in the project database for project scenario p against baseline scenario b in year y	$U_{p,y}$	Usage rate for project cookstoves in year y, based on adoption rate and drop off rate revealed by usage surveys (fraction)	$f_{NRB,b,y}$	Fraction of biomass, used in year y for baseline scenario, which can be established as non- renewable. The project proponents shall estimate project specific national/ regional value ⁴ or apply the default fNRB value provided by the CDM Executive	$EF_{b,fuel,CO2}$	CO2 emission factor of fire wood that is substituted or reduced. (Default value for wood fuel 1.747 tCO2/ton of wood)	$EF_{b,fuel,non_CO2}$	Non-CO2 emission factor of fire wood that is substituted or reduced. (Default value for wood fuel 0.455 tCO2/ton of wood)
$\sum_{b,p}$	Sum over all relevant (baseline b/project p) couples												
$N_{p,y}$	Cumulative number of project technology days included in the project database for project scenario p against baseline scenario b in year y												
$U_{p,y}$	Usage rate for project cookstoves in year y, based on adoption rate and drop off rate revealed by usage surveys (fraction)												
$f_{NRB,b,y}$	Fraction of biomass, used in year y for baseline scenario, which can be established as non- renewable. The project proponents shall estimate project specific national/ regional value ⁴ or apply the default fNRB value provided by the CDM Executive												
$EF_{b,fuel,CO2}$	CO2 emission factor of fire wood that is substituted or reduced. (Default value for wood fuel 1.747 tCO2/ton of wood)												
$EF_{b,fuel,non_CO2}$	Non-CO2 emission factor of fire wood that is substituted or reduced. (Default value for wood fuel 0.455 tCO2/ton of wood)												

	$P_{p,b,y}$	Specific fuel savings for an individual technology of project p against an individual technology of baseline b in year y, in tons/day, as derived from the statistical analysis of the data collected from the field tests									
	$NCV_{b,fuel}$	Net calorific value of the fuel that is substituted or reduced (IPCC default for wood fuel, 0.015 TJ/ton)									
	$LE_{p,y}$	Leakage for project scenario p in year y (tCO ₂ e/yr)									
	<i>Determination of quantity of biomass saved (Py):</i> Quantity of fire wood that is saved (P,y) is estimated as follows:										
	$B_{b,y} = N_{p,y} * P_{b,y}$										
	Where:										
	$\eta_{p,y}$	Project technology-days in the project database for project scenario p through year y									
	$P_{b,y}$	Specific fuel consumption for an individual technology in baseline scenario b during year y converted to tons/day									
	From the above equation and the parameter values, emission reductions for the period VPA 164 - 01/10/2020 to 30/04/2022(including both days) and VPA 173, VPA 174, VPA 175 -15/03/2021 to 30/04/2022 (inclusive of both dates) are calculated as:										
	<table><tr><th>Specific-case VPA reference number</th><th>Emission Reductions (tCO₂e)</th></tr><tr><td>GS7153(VPA164)</td><td>15,286</td></tr><tr><td>GS7318(VPA173)</td><td>11,310</td></tr><tr><td>GS7317(VPA174)</td><td>8,078</td></tr><tr><td>GS7345(VPA175)</td><td>6,089</td></tr></table>		Specific-case VPA reference number	Emission Reductions (tCO ₂ e)	GS7153(VPA164)	15,286	GS7318(VPA173)	11,310	GS7317(VPA174)	8,078	GS7345(VPA175)
Specific-case VPA reference number	Emission Reductions (tCO ₂ e)										
GS7153(VPA164)	15,286										
GS7318(VPA173)	11,310										
GS7317(VPA174)	8,078										
GS7345(VPA175)	6,089										

The verification team confirms that the calculation of baseline emission and emission reductions is in accordance with the applied methodological equation and the VPAs. Calculations have been checked and confirmed from the ER spreadsheet.

The verification took cognizance of § 356 of CDM VVS for PoA, version 03.0 and GS4GG requirements.

E.3.5.2. Calculation of project GHG emissions or actual net GHG removals by sinks

NA

E.3.5.3. Calculation of leakage GHG emissions

Means of verification	Document Review, Interview
Conclusion	As per para 6 of the applied methodology, the CME has conducted the survey to analyse the applicability of leakage emissions. It is found that the project activity doesn't qualify any of the criteria for considering the leakage emission. Hence, leakage emission deemed to be zero.

E.3.5.4. Summary of calculation of GHG emission reductions or net GHG removals by sinks

Means of verification	Document Review, Interview
Conclusion	The verification team confirms that all parameters are used correctly in the calculations, all results are verifiable and transparent, all assumptions are described and based on verifiable evidence, and calculations are done in accordance with the pre-defined formulae from VPA/s. The total number of ERs achieved during the monitoring period for VPA164 is 15,286 VERs & for VPA173,VPA174 & VPA 175 is 25,477 VERs . In summary, the verification team confirms that the actual emission reduction is lower than the estimate of the VPAs for the monitoring period. The verification took cognizance of § 356 of CDM VVS PoAs, version 03 and GS4GG requirements.

Title and UNFCCC reference number of the VPA	Baseline emissions or baseline net GHG removals by sinks (tCO ₂ e)	Project emissions or actual net GHG removals by sinks (tCO ₂ e)	Leakage (tCO ₂ e)	GHG emission reductions or net GHG removals by sinks (tCO ₂ e)			
				Amount achieved from 1 Oct 2020 to 31 Dec 2020	Amount achieved from 1 Jan 2021 to 31 Dec 2021	Amount achieved from 1 Jan 2022 to 30 April 2022	Amount achieved in the monitoring period
GS7153 (VPA164)	-	-	-	2422	9681	3183	15,286
					Amount achieved from 15 Mar 2021 to 31 Dec 2021		
GS7318 (VPA173)	-	-	-	-	7859	3451	11,310
GS7317 (VPA174)	-	-	-	-	5725	2353	8078
GS7345 (VPA175)	-	-	-	-	4234	1855	6089

E.3.5.5. Comparison of actual GHG emission reductions or net GHG removals by sinks with estimates in included VPA

Means of verification	Document Review
Findings	-
Conclusion	Comparison of the actual GHG emission reductions with the estimates in the included specific VPAs is given in the below table. The verification team took cognizance of § 356 of CDM VVS for PoAs, version 03 and GS4GG requirements.

Title and UNFCCC reference number of the VPA	Monitoring Period	Actual values achieved by the VPAs during this monitoring period	Value estimated in ex-ante calculation in the included VPA-DD(s)
GS7153(VPA164)	01/10/2020 to 30/04/2022	15,286	15,806
GS7318(VPA173)	15/03/2021 to 30/04/2022	11,310	11,287
GS7317(VPA174)	15/03/2021 to 30/04/2022	8,078	11,287
GS7345(VPA175)	15/03/2021 to 30/04/2022	6,089	11,287

E.3.5.6. Remarks on difference from estimated value in included VPA

Means of verification	Document review
Findings	-
Conclusion	The actual emission reductions are less than the ex-ante estimated values for all VPAs except VPA173 for which the actual emission reductions are 0.2% more than the estimated one. The difference of 23 VERs is there which is insignificant considering the materiality threshold. Also, the increase don't breach the threshold count for the microscale projects.

E.3.6. Assessment of reported sustainable development co-benefits

Means of verification	Document Review, Interview
Findings	-
Conclusion	The Verification team confirms that the data and parameters monitored related to sustainable development co-benefits are in compliance with the VPAs and the monitoring plan. A complete assessment of each of the monitored parameters has been provided in Appendix 6 of the verification report. The verification took cognizance of § 359 - §361 of CDM VVS for PoAs, Version 03.0 GS4GG Requirements

SECTION F. Internal quality control

>>

The final verification report passed a technical review. A technical reviewer qualified in accordance with the CCIPL's qualification scheme for CDM validation and verification has performed the technical review.

SECTION G. Verification opinion

>>

Carbon Check (India) Private Ltd. has performed the third verification of the GS Programme of Activities" GS 1247 Improved Kitchen Regimes Multi-Country PoA" in the Uganda (hereafter referred to as "Programme of Activities or PoA") for the VPAs GS7153(VPA164),GS7318(VPA173), GS7317(VPA174), GS7345(VPA175).

The verification team assigned by the VVB concludes that the PoA (Version 3.0, dated 24/05/2013), VPAs GS7153(VPA164),GS7318(VPA173), GS7317(VPA174), GS7345(VPA175)as described in

the VPA and the Monitoring report (Version 3 for VPA 173, VPA174, VPA 175 and Version 4 For VPA164, dated 30/06/2022,) meet all relevant GS4GG requirements and requirements of the UNFCCC for CDM project activities including article 12 of the Kyoto Protocol and paragraph 62 of CDM M&P, the modalities and procedures for CDM (Marrakesh Accords) and the subsequent decisions by the COP/MOP and CDM Executive Board.

Verification methodology and process:

The Verification team confirms the contractual relationship signed on 26/07/2022 between the VVB, Carbon Check (India) Private Ltd. And SustainCert the entity authorised by Co-ordinating Managing Entity/ Project Participant, (Biolite). The team assigned to the verification meets the Carbon Check (India) Private Ltd.'s internal procedures including the UNFCCC and GS requirements for team composition and competence. The verification team has conducted a thorough contract review as per UNFCCC and Carbon Check's procedures and requirements.

The verification was performed as per the requirements described in the CDM VVS for PoAs, version 3.0, and GS4GG requirements and constitutes the review and completion of the following steps:

- Reviewing the PoA (Version 3, date 24/05/2013 the VPAs for GS7153(VPA164), GS7318(VPA173), GS7317(VPA174), GS7345(VPA175)) including the monitoring plan and the corresponding validation report.
- Previous verification and certification reports and the monitoring reports for the previous monitoring periods.
- Desk review of the validation report, MR, and other relevant documents including documents related to the project activities in emission reductions
- Review of the applied monitoring methodology (Gold Standard Methodology Technologies and Practices to Displace Decentralized Thermal Energy Consumption Version 1.0);
- Review of any CMP and EB decisions, clarifications, and guidance.
- Resolution of CARs and CLs raised during verification
- Issuance of Verification Report

The voluntary project activities were correctly implemented according to the selected monitoring methodology, monitoring plan, and VPA/s. The monitoring system was installed, and maintained in a proper manner, while collected monitoring data allowed for the verification of the amount of achieved GHG emission reductions. Through the review, the verification team confirms that the PoA has resulted in the 40,763tCO₂e of emission reductions for the VPA 164 - 01/10/2020 to 30/04/2022(including both days) and VPA 173, VPA 174, VPA 175 -15/03/2021 to 30/04/2022 (inclusive of both dates) during the second monitoring period for and achieved SDG benefits as detailed in Appendix 6 for the period.

Verified emission reductions:

Specific-case VPA reference number	Emission Reductions (tCO ₂ e)
GS7153(VPA164)	15,286
GS7318(VPA173)	11,310
GS7317(VPA174)	8,078
GS7345(VPA175)	6,089

CC IPL as a VVB is therefore pleased to issue a positive verification opinion in the attached Certification statement.

SECTION H. Certification statement

>>

Carbon Check (India) Private Ltd., the VVB, has performed the verification of the GS Programme of Activities, GS 1247, “Improved Kitchen Regimes Multi-Country PoA” in “Uganda”. The PoA involves the replacement of less efficient three-stone cooking stoves with improved energy-efficient cooking stoves which are more efficient. The activity involves distribution and maintenance of domestic and non-domestic fuel-efficient stoves (FES) through local implementation partners (IP). The fuel-efficient cookstoves distributed under VPAs are more efficient in transferring heat from the fuel to the pot when compared to the three-stone stove typically used in the baseline. By replacing inefficient stoves, the PoA will save on the consumption of woody biomass/charcoal and reduce the GHG emissions reduction.

The voluntary project activities of the Programme of Activities are designed to generate emission reductions by the distribution of fuel-efficient wood fuel-based cook stoves in Uganda. The CME and VPA implementer are responsible for the collection of data in accordance with the monitoring plan and reporting GHG emissions reductions from the voluntary project activity/ies. It is VVB’s responsibility to express an independent verification statement on the reported GHG emission reductions from the component project/s. The VVB does not express any opinion on the selected baseline scenario or on the validated and registered PoA-DD/VPA-DDs. The verification is carried out in line with the CDM VVS and GS4GG requirements.

The verification was performed to identify the compliance of the component project with implementation and monitoring requirements, and to verify the actual amount of emission reductions achieved by project, through obtaining evidences that included i) checking whether the provisions of the monitoring methodology and the monitoring plan were consistently and appropriately applied and ii) the collection of evidence supporting the reported data.

The verification is based on:

- PoA, Version 3.0 dated 24/05/2013;
- VPAs included in the PoA and its monitoring plan for the monitoring period is VPA 164 - 01/10/2020 to 30/04/2022(including both days) and VPA 173, VPA 174, VPA 175 -15/03/2021 to 30/04/2022 (inclusive of both dates).
- Approved GS monitoring methodology Gold Standard Methodology Technologies and Practices to Displace Decentralized Thermal Energy Consumption Version 1.0
- Validation report for the PoA and the VPA;
- Monitoring report Version 1 dated 30/06/2022

This statement covers the verification period from VPA 164 - 01/10/2020 to 30/04/2022(including both days) and VPA 173, VPA 174, VPA 175 -15/03/2021 to 30/04/2022 (inclusive of both dates).

The VVB had raised Zero (0) FAR, Five (5) clarification requests, Eleven (11) Corrective action requests and (4) Forward action request from previous verification which have been resolved by the CME.

The VVB considers it necessary to give reasonable assurance that reported GHG emission reductions were calculated correctly on the basis of the monitoring methodology and the monitoring plan contained in the VPAs are fairly stated.

The VVB, hereby certifies that the project activity, achieved emission reductions by sources of GHG equal to 40772tCO₂e for the period VPA 164 - 01/10/2020 to 30/04/2022(including both days) and VPA 173, VPA 174, VPA 175 -15/03/2021 to 30/04/2022 (inclusive of both dates).and achieved SDG benefits as detailed in Appendix 6 for the period VPA 164 - 01/10/2020 to 30/04/2022(including both days) and VPA 173, VPA 174, VPA 175 -15/03/2021 to 30/04/2022 (inclusive of both dates) and all monitoring requirements have been fulfilled and is substantiated by an audit trail that contains evidence and records.

Appendix 1. Abbreviations

Abbreviations	Full texts
AQL	Acceptable Quality Limit
CDM	Clean Development Mechanism
CER	Certified Emission Reduction
CAR	Corrective Action Request
CC IPL	Carbon Check (India) Private Ltd.
CER	Certified Emission Reduction
CL	Clarification Request
CME	Co-ordinating and Managing entity
VPA	Voluntary Project Activity
VPA-DD	Voluntary Project Activity Design Document
CO ₂	Carbon Dioxide
CO ₂ e	Carbon Dioxide Equivalent
DR	Document review
DVR	Draft Verification Report
EB	CDM Executive Board
EF	Emission Factor
EI	External individual
FA	Final Approval
FAR	Forward Action Request
FVR	Final verification Report
GACC	Global Alliance for Clean Cookstoves
GHG	Greenhouse gas(es)
GS4GG	Gold Standard for the Global Goals
GWh	Giga Watt Hour
I	Interview
IPCC	Intergovernmental Panel on Climate Change
IR	Internal resource
MP	Monitoring Period
MWh	Mega Watt Hour
MR	Monitoring Report
PoA	Programme of Activities
PoA-DD	Programme of Activities Design Document
PP	Project Participant
QC/QA	Quality control /Quality assurance
SDG	Sustainable Development Goal
TA	Technical Area
TR	Technical Review
PFT	Project Fuel Test
UNFCCC	United Nations Framework Convention on Climate Change
UQL	Unacceptable Quality Limit
VVS	Validation and Verification Standard
VVB	Validation & Verification Body
WBT	Water boiling test
FES	Fuel-Efficient Stoves
IP	Implementation partner
KPT	Kitchen Performance Test

Appendix 2.

Competence of team members and technical reviewers


Carbon
 CHECK

Carbon Check (India) Private Ltd.

Mr. Sanjay Agarwalla

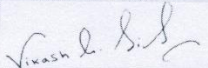
has been qualified as per CCIPL's internal qualification procedures, in accordance with requirements of Accreditation Standard (version 07.0):

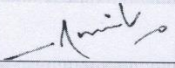
For following functions:

Validator	☒	Team Leader	☒	Technical reviewer	☒
Verifier	☒	Technical Expert	☒	Local Assessor ¹	☒

In the following Technical Areas:

TA 1.1	☒	TA 3.1	☒	TA 5.2	☒	TA 9.2	☒	TA13.2	☐
TA 1.2	☒	TA 4.1	☒	TA 8.1	☐	TA 10.1	☐	TA14.1	☐
TA 2.1	☒	TA 5.1	☒	TA 9.1	☒	TA 13.1	☒		


 Mr. Vikash Kumar Singh
 Compliance Officer


 Mr. Amit Anand
 CEO

Date of Approval
 24/12/2021

Valid Till
 23/12/2022

Revision History of the Document

01/03/2020 ²	Interim Revision for office address change
01/09/2020	Interim Revision for CCIPL logo change
24/12/2020	Annual Revision
24/12/2021	Annual Revision

¹ India

² Please refer to previous version of competency certificates for the revision history.

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Carbon Check (India) Private Ltd.

Mr. Harish Sharma

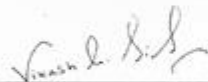
has been qualified as per CCIPL's internal qualification procedures, in accordance with requirements of Accreditation Standard (version 07.0):

For following functions:

Validator ☒ Team Leader ☒ Technical reviewer ☐
 Verifier ☒ Technical Expert ☒ Local Assessor¹ ☒

In the following Technical Areas:

TA 1.1	☒	TA 4.1	☐	TA 9.1	☐	TA 13.1	☒
TA 1.2	☒	TA 5.1	☐	TA 9.2	☐	TA 13.2	☐
TA 3.1	☒	TA 5.2	☐	TA 10.1	☐	TA 14.1	☐



Mr. Vikash Kumar Singh
Compliance Officer



Mr. Amit Anand
CEO

Date of Approval
23/06/2022

Valid Till
24/12/2022

Revision History of the Document

01/03/2020 ²	Interim Revision for office address change
01/09/2020	Interim Revision for CCIPL logo change
24/12/2020	Annual Revision
24/12/2021	Annual Revision
23/06/2022	Initial Joining

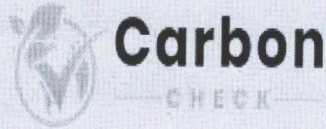
¹ India

² Please refer to previous version of competency certificates for the revision history.

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Corporate off: Unit No. 1701, Logix City Centre Office Tower, Plot No. BW-58, Sector-32 Noida, Uttar Pradesh
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Carbon Check (India) Private Ltd.

Ms. Indumathi. C

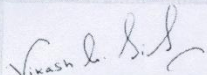
has been qualified as per CCIPL's internal qualification procedures, in accordance with requirements of Accreditation Standard (version 07.0):

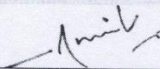
For following functions:

Validator	☐	Team Leader	☒	Technical reviewer	☒
Verifier	☐	Technical Expert	☒	Local Assessor ¹	☒

In the following Technical Areas:

TA 1.1	☒	TA 4.1	☐	TA 9.1	☐	TA 13.1	☒
TA 1.2	☒	TA 5.1	☐	TA 9.2	☐	TA 13.2	☒
TA 3.1	☒	TA 5.2	☐	TA 10.1	☐	TA 14.1	☐


 Mr. Vikash Kumar Singh
 Compliance Officer


 Mr. Amit Anand
 CEO

Date of Approval
 24/12/2021

Valid Till
 23/12/2022

Revision History of the Document

01/03/2020²
 01/09/2020
 24/12/2020
 24/12/2021

Interim Revision for office address change
 Interim Revision for CCIPL logo change
 Annual Revision
 Annual Revision

¹ India.

² Please refer to previous version of competency certificates for the revision history.

CARBON CHECK (INDIA) PRIVATE LIMITED
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Appendix 3. Documents reviewed or referenced

Sr. No:	Document
1.	VPA 164- Monitoring Report - MP2 EcoZoom Improved Stove Programme Uganda (GS 7153) -Ver 4.0.docx VPA 164- Monitoring Report - MP2 EcoZoom Improved Stove Programme Uganda (GS 7153) -Ver 4.0.docx VPA 174 Monitoring Report - MP2_EcoZoom Improved Stove Programme Uganda (GS 7317)- Ver 3.0.docx VPA 174 Monitoring Report - MP2_EcoZoom Improved Stove Programme Uganda (GS 7317)- Ver 3.0.docx
2.	VPA 164 Summary of SDG outcomes MP2-Version 3.0.xlsx VPA 164 Summary of SDG outcomes MP2-Version 3.0.xlsx VPA 164 Summary of SDG outcomes MP2-Version 3.0.xlsx VPA 164 Summary of SDG outcomes MP2-Version 3.0.xlsx
3.	Baseline KPT_Data_Analysis_BioLite Uganda_2016
4.	<u>Calibration Certificates Moisture meter</u> <u>Weigh Scale 1 Calibration Certificates</u> <u>Weighing scale 2 Calibration Certificate</u>
5.	Survey Scans
6.	Cookstove Photos
7.	Global Forest Resources Assessment, Country Report - Uganda, FAO 2005.pdf
8.	REDD and Sustainable Development - Perspective from Uganda.pdf
9.	<i>BioLite - EcoZoom Assignment and Termination Agreement_FINAL_SIGNED ALL.PDF</i>
10.	Summary sheet_VPA 164 MP2 Summary sheet_VPA 164 MP2 - AR4 GWP Summary sheet_VPA 164 MP2 - AR5 GWP Sales summary_VPA 164 MP2 - AR4 GWP Summary sheet_VPA 173_MP2 Sales summary_VPA 174_MP2 Summary sheet_175_MP2 Sales summary_VPA 175_MP2
11.	Baseline KPT_Data_Analysis_BioLite Uganda_2016 Biolite Homestove KPT_After Uganda 2020 MP2 Biolite Homestove Uganda Kitchen Survey Responses 2021 MP3 Biolite Homestove Uganda Usage Survey Responses 2021 MP3 Biolite Homestove Uganda VPA 138 Summary of SDG Impacts 2021 MP3 BioLite HomeStove Uganda_2016 monitoring survey report_final BioLite HomeStove Uganda_Baseline & Kitchen Survey Report 2015
12.	Carbon Baseline and Project Survey Report for the Biolite Homestove in Uganda 2022 Homestove product one pager-marketing material Surveyor Training_2021-2022 Monitoring Uganda_Carbon Baseline Kitchen Survey_2015 VPA 138 Homestove End User Database_Final

13.	Carbon Project Survey Report for EcoZoom cookstoves in Uganda_March 2022_Final
14.	Cookstove 'How to Use' Instructions EcoZoom Jiko Bora Stove Flier End User Database_BioLiteCharcoal Stoves_Uganda-Final Clean Kitchen Survey data 2021 – Final Surveyor Training_2021 Monitoring Uganda Kitchen Survey 2019_2020_Final Usage Survey data 2021 – Final
15.	Biolite Charcoal Stove Flier EcoZoom Jiko Bora Stove Flier Charcoal Stove Project Serial Numbers-Uganda.xlsx
16.	VPA 138 MP3 Random Number Outcome.pdf
17.	VPA 138 Homestove End User Database_Final.xlsx
18.	GS1247 GS6344_Internal Verification MP2 GS4GG_Final round@27102021 (5).docx
19.	Organizational Structure of Monitoring.docx

Appendix 4. Clarification requests, corrective action requests and forward action requests

Table 1 CLs from this verification

CL ID	01	Section no.	A.2	Date: 05/08/2022
Description of CL				
In comparison to GS certified VPA design document, a change in latitude and longitude values is observed. CME to clarify the change.				
Project participant response				Date: 17/08/2022
The latitude and longitude values have been updated in this section of the MRs to be consistent with eh GS certified VPA design document				
Documentation provided by project participant				
- VPA 164 - Monitoring Report - MP2_EcoZoom Improved Stove Programme Uganda (GS 7153) - Ver 3.0 - VPA 173 - Monitoring Report - MP2_EcoZoom Improved Stove Programme Uganda (GS 7318) - Ver 3.0 - VPA 174 - Monitoring Report - MP2_EcoZoom Improved Stove Programme Uganda (GS 7317) - Ver 2.0				

- VPA 175 - Monitoring Report - MP2_EcoZoom Improved Stove Programme Uganda (GS 7345) - Ver 3.0
- Biolite Homestoves Uganda VPA 138 Monitoring Report 2022 MP3_0308022 - Ver2.0

GS VVB assessment	Date: 16/09/2022
The latitude and longitude values have been updated and is now consistent with GS-certified VPA. Hence, CL is closed.	

CL ID	02	Section no.	A.1.	Date: 05/08/2022
Description of CL				
It is mentioned that Between 1990 and 2005 Uganda has lost 26.3% of its forest cover and has a current deforestation rate of over 2% per year. The CME has provided the source link for the information however, the methodology followed to establish the results and source of data are not clear. CME to justify the credibility of source data used to deduce the results.				
Project participant response				Date: 18/08/2022
The PP has updated the reference link for the reported statement. Please refer to page 10 section 2.2 of the 'REDD and Sustainable Development - Perspective from Uganda.pdf' document. Additional raw data to support the statement can be found in table 1.4.1 on page 10 of the 'Global Forest Resources Assessment, Country Report - Uganda, FAO 2005.pdf'				
Documentation provided by project participant				
• Global Forest Resources Assessment, Country Report - Uganda, FAO 2005.pdf • REDD and Sustainable Development - Perspective from Uganda.pdf				
GS VVB assessment				Date: 16/09/2022
The reference links have been updated in the MR. The information provided is reliable and credible. Hence, the CL is closed.				

CL ID	03	Section no.	B.1.	Date: 05/08/2022
Description of CL				
It is observed that the survey doesn't include the northern household/respondents. CME to clarify the reason for the omission of specific region in the survey.				
Project participant response				Date: 18/08/2022
During this monitoring period, households were randomly selected to participate in the surveys from the list of end users in the project database that covered all the 4 regions. From the Northern Region, 4 households in VPAs 164, 173, 174 & 175 and 8 Households in VPA 138 were surveyed in Usage surveys during this monitoring period. This was found to be representative of the household populations in each project.				
Documentation provided by project participant				
• Usage Survey data 2021 - Final-Version 02.xlsx • Biolite Homestove Uganda Usage Survey Responses 2021 MP3-Version 2.0				
GS VVB assessment				Date: 16/09/2022
"kitchen survey data 2021 – Final" includes responses from 116 respondents, however, the data doesn't include the northern household/respondents. CME to clarify the reason for the omission of specific region in the survey. CL is open.				
Project Participant Response				Date: 19/09/2022

During monitoring, end users, irrespective of the region they came from were randomly contacted from the list of end users in the project database based on the assigned random numbers. End users who agreed to participate in the surveys were sampled for the kitchen and usage surveys. In total, 143 surveys were conducted that covered end users from all the 4 regions of Uganda. Under the random sampling, the target population had an equal chance of being selected, thus the samples selected were deemed to be representative of the population. The first 116 surveys covered both the Kitchen and Usage survey and the remaining 27 surveys were exclusively Usage surveys. The first 116 surveys had users from the eastern, western and central regions and the remaining 27 surveys had users from all the 4 regions of Uganda.

Documentation provided by project participant

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GS VVB assessment

Date: 22/09/2022

Usage survey database consists of survey of population of total 143 users from which 116 are common for kitchen survey and rest 27 are specific for usage survey and consists of 4 respondents from Northern Region (LIRA-District). Hence, the CL is closed.

CL ID	4	Section no.	F	Date: 16/09/2022
Description of CL				
In certified VPA DD, the safeguarding principles are justified and reported. CME to clarify how section F of the monitoring reports is not applicable for the current monitoring period.				
Project participant response				Date: 19/09/2022
The 'Not Applicable' indication on the monitoring report is erroneous. The safeguard principals reported in the project design document are still applicable in this monitoring period. The PP has included the safeguard principals in this section of the MR. The updated MRs have been submitted with this response.				
Documentation provided by project participant				
- VPA 164 - Monitoring Report - MP2_EcoZoom Improved Stove Programme Uganda (GS 7153) - Ver 4.0 - VPA 173 - Monitoring Report - MP2_EcoZoom Improved Stove Programme Uganda (GS 7318) - Ver 4.0 - VPA 174 - Monitoring Report - MP2_EcoZoom Improved Stove Programme Uganda (GS 7317) - Ver 3.0 - VPA 175 - Monitoring Report - MP2_EcoZoom Improved Stove Programme Uganda (GS 7345) - Ver 4.0 - Biolite Homestoves Uganda VPA 138 Monitoring Report 2022 MP3_0308022 – Ver3.0				
GS VVB assessment				Date: 22/09/2022
The safeguarding principles are included in section F of the report. CL is closed.				

CL Specific to VPA 164

CL ID	06	Section no.	B.1.	Date: 05/08/2022
Description of CL Specific to VPA 164				
The VPA DD has been certified for the use of following mentioned three types of cookstoves.				

1. Jiko Fresh 2. Jiko Bora 3. Jiko Bora Mama Yao CME to justify the inclusion of fourth type of cookstove "Jiko Malkia".	
Project participant response	Date: xx/xx/xxxx
Only the 3 certified cookstoves were distributed in VPA 164. The Jiko Malkia stove was certified for use in VPAs 173, 174 and 175 which have design similarities with VPA 164, nonetheless, since the Jiko Malkia was neither certified nor distributed in VPA 164, the PP has deleted any reference to the cookstove in this section of the monitoring report. The updated MR for VPA 164 has been submitted with this response.	
Documentation provided by project participant	
- VPA 164 - Monitoring Report - MP2_EcoZoom Improved Stove Programme Uganda (GS 7153) - Ver 3.0 - VPA 173 - PDD_EcoZoom Uganda_final.pdf	
GS VVB assessment	Date: 16/09/2022
As reference to "Jiko Malkia" cookstove has been removed, hence, the CL is closed.	

Corrective action required (CARs)

Table 2 CARs from this verification

CAR ID	01	Section no.	N/A	Date: 05/08/2022
Description of CAR				
Title of the programme under POA information should be consistent with GS Certified Design. Title should be consistent with GS1267, VPA 1. Extra information can be written using appropriate punctuation. Project title under Key project information should be consistent with GS Certified Design Document.				
Project participant response				Date: 11/08/2022
a. Title of the PoA has been updated in this section of the MRs to be consistent with GS certified design document. b. Title of GS1267, VPA1 has been updated in this section of the MRs to be consistent with GS certified design document. c. The project title under the Key Project Information has been corrected in this section of the MRs to be consistent with the GS certified design document				
Documentation provided by project participant				
- VPA 164 - Monitoring Report - MP2_EcoZoom Improved Stove Programme Uganda (GS 7153) - Ver 3.0 - VPA 173 - Monitoring Report - MP2_EcoZoom Improved Stove Programme Uganda (GS 7318) - Ver 3.0 - VPA 174 - Monitoring Report - MP2_EcoZoom Improved Stove Programme Uganda (GS 7317) - Ver 2.0 - VPA 175 - Monitoring Report - MP2_EcoZoom Improved Stove Programme Uganda (GS 7345) - Ver 3.0 - Biolite Homestoves Uganda VPA 138 Monitoring Report 2022 MP3_0308022 - Ver2.0				

GS VVB assessment	Date: 16/09/2022
The title of POA is still not consistent with the certified DD. CAR is open. The title of fully validated VPA i.e. GS1267, VPA 1 has been updated and is consistent with the certified VPA, hence, CAR is closed. Project title under Key project information is now consistent with GS Certified Design Document. Car is closed.	
Project participant response	Date: 19/09/2022
The title of PoA has been updated to be consistent with the certified PoA DD	
Documentation provided by project participant	
- VPA 164 - Monitoring Report - MP2_EcoZoom Improved Stove Programme Uganda (GS 7153) - Ver 4.0 - VPA 173 - Monitoring Report - MP2_EcoZoom Improved Stove Programme Uganda (GS 7318) - Ver 4.0 - VPA 174 - Monitoring Report - MP2_EcoZoom Improved Stove Programme Uganda (GS 7317) - Ver 3.0 - VPA 175 - Monitoring Report - MP2_EcoZoom Improved Stove Programme Uganda (GS 7345) - Ver 4.0 - Biolite Homestoves Uganda VPA 138 Monitoring Report 2022 MP3_0308022 – Ver3.0	
GS VVB assessment	Date: 22/09/2022
The POA title has been updated, CAR Closed.	

CAR ID	02	Section no.	N/A	Date: 05/08/2022
Description of CAR				
As round-up of fraction is not recommended, CME to round down the fraction to the nearest whole number for all SDG counts including number of VERs. Furthermore, the emission factors and ratios should be applied appropriately considering at least two decimal places.				
Project participant response				Date: 18/08/2022
All values for the SDG outcomes and ER calculations have been rounded down. The updated SDG files have been submitted with this response. Emission factors and ratios have been adjusted to reflect at least 2 decimal places.				
Documentation provided by project participant				
- Biolite Homestove Uganda VPA 138 Summary of SDG Impacts 2021 MP3-Version 2.0 - Biolite Homestoves Uganda VPA 138 Monitoring Report 2022 MP3_0308022 - Ver2.0 - VPA 164 - Summary of SDG outcomes_MP2-Version 2.0 - VPA 164 - Monitoring Report - MP2_EcoZoom Improved Stove Programme Uganda (GS 7153) - Ver 3.0 - VPA 173 - Monitoring Report - MP2_EcoZoom Improved Stove Programme Uganda (GS 7318) - Ver 3.0 - VPA 174 - Monitoring Report - MP2_EcoZoom Improved Stove Programme Uganda (GS 7317) - Ver 2.0				

VPA 175 - Monitoring Report - MP2_EcoZoom Improved Stove Programme Uganda (GS 7345) - Ver 3.0	
GS VVB assessment	Date: 16/09/2022
The values of ER have been rounded down for the commented sections only. However, the ER value need to be consistent throughout the MR.	
Project Participant response	Date: 19/09/2022
All calculated values have been rounded down throughout the MR. The ER values have been made consistent throughout the MR as well. The updated MRs have been submitted with this response.	
Documentation provided by project participant	
- VPA 164 - Monitoring Report - MP2_EcoZoom Improved Stove Programme Uganda (GS 7153) - Ver 4.0.doc - VPA 164 - Summary of SDG outcomes_MP2-Version 3.0.xlsx - VPA 173 - Monitoring Report - MP2_EcoZoom Improved Stove Programme Uganda (GS 7318) - Ver 4.0.doc - VPA 173 - Summary of SDG Outcomes_MP2-Version 3.0.xlsx - VPA 174 - Monitoring Report - MP2_EcoZoom Improved Stove Programme Uganda (GS 7317) - Ver 3.0.doc - VPA 174 - Summary of SDG Outcomes_MP2-Version 3.0.xlsx - VPA 175 - Monitoring Report - MP2_EcoZoom Improved Stove Programme Uganda (GS 7345) - Ver 4.0.doc - VPA 175 - Summary of SDG Outcomes_MP2-Version 3.0.xlsx - Biolite Homestoves Uganda VPA 138 Monitoring Report 2022 MP3_0308022 – Ver3.0.doc - Biolite Homestove Uganda VPA 138 Summary of SDG Impacts 2021 MP3-Version 3.0.xlsx	
GS VVB assessment	Date: 22/09/2022
The ER value has been updated and is consistent throughout the MR. CAR closed.	

CAR ID	03	Section no.	D.4.	Date: 05/08/2022
Description of CAR				
For the sampling, households were selected using random number generator. CME to submit the snapshot of the random number outcome.				
Project participant response				Date: 18/08/2022
The PP has shared the evidence for the random number sampling outcome for the 5 projects.				
Documentation provided by project participant				
- VPA 138 MP3 Random Number Outcome - VPA 164, 173, 174, 175 - Random Sampling screen shot				
GS VVB assessment				Date: 16/09/2022
The document is submitted, CAR Closed.				

CAR ID	04	Section no.	D.4.	Date: 05/08/2022
Description of CAR				

It is observed that the right of carbon credits by end user is transferred to Ecozoom. However, as per register VPA DD the right of VERs shall remain with BioLite. The authorization agreement between Ecozoom and BioLite to be submitted for review.	
Project participant response	Date: 18/08/2022
Biolite substantively owns Ecozoom. This includes Ecozoom's right, title and interest to all GHG emission reductions generated by use of Ecozoom products. This also includes all past, present and future legal and beneficial rights arising from the physical reduction of emission reductions by Ecozoom products. The PP has shared the authorization agreement document with this response. Please see page 1 and section 1 for language that cedes ownership of carbon credits from EcoZoom to BioLite.	
Documentation provided by project participant	
BioLite - EcoZoom Assignment and Termination Agreement_FINAL_SIGNED ALL.PDF	
GS VVB assessment	Date: 16/09/2022
The authorization agreement signed between Biolite and Ecozoom has been received. The CAR is closed.	

CAR ID	05	Section no.	B.1.	Date: 05/08/2022
Description of CAR				
Under section B.1, it has been mentioned' "We then cross referenced all stove serial numbers between all the VPAs we have implemented and found no duplicates". CME to provide the data of stove serial numbers of all such VPAs as a cross-check measure for double counting.				
Project participant response				Date: 18/08/2022
The PP has submitted a list of cookstove serial numbers registered and distributed in implemented VPAs as a reference for cross checking for double counting.				
Documentation provided by project participant				
- Biolite Uganda Homestove Serial Numbers.xlsx - Charcoal Stove Project Serial Numbers-Uganda.xlsx				
GS VVB assessment				Date: 16/09/2022
The data for the cross reference of other VPAs is received. No duplication is found. CAR closed.				

CAR ID	06	Section no.	D.4.	Date: 05/08/2022
Description of CAR				
In the sampling plan, it is mentioned that in select instances, insufficient samples could be attained from the target time period due to low sales in those specific time periods. In those cases, older samples were selected than these time periods in order to be conservative. CME to transparently mention period for which the sales were low and the periods for which the number of samples were increased/adjusted.				
Project participant response				Date: 18/08/2022
The time periods that were adjusted due to insufficient samples have been updated in this section of the MRs. The updated MRs has been shared with this response.				
Documentation provided by project participant				

• Biolite Homestoves Uganda VPA 138 Monitoring Report 2022 MP3_0308022 - Ver2.0 • VPA 164 - Monitoring Report - MP2_EcoZoom Improved Stove Programme Uganda (GS 7153) - Ver 3.0 • VPA 173 - Monitoring Report - MP2_EcoZoom Improved Stove Programme Uganda (GS 7318) - Ver 3.0 • VPA 175 - Monitoring Report - MP2_EcoZoom Improved Stove Programme Uganda (GS 7345) - Ver 3.0 • VPA 174 - Monitoring Report - MP2_EcoZoom Improved Stove Programme Uganda (GS 7317) - Ver 2.0	
GS VVB assessment	Date: 16/09/2022
For the age groups 1 to 2 and 2 to 3 years, insufficient samples were obtained. For those specific instances older stoves were sampled to ensure 30 samples for each time period. This is conservative and hence, CAR is closed.	

CAR ID	07	Section no.	D.4.	Date: 05/08/2022
Description of CAR				
In section D.4 of the monitoring report, columns referenced under "Household Usage Survey" need to be corrected. of "GPS coordinates" need to be corrected. under "Verification Checks" need to be corrected.				
Project participant response				Date:18/08/2022
The column references in these sections have been corrected. The updated Mrs have been submitted with this response.				
Documentation provided by project participant				
• Biolite Homestoves Uganda VPA 138 Monitoring Report 2022 MP3_0308022 - Ver2.0 • VPA 164 - Monitoring Report - MP2_EcoZoom Improved Stove Programme Uganda (GS 7153) - Ver 3.0 • VPA 173 - Monitoring Report - MP2_EcoZoom Improved Stove Programme Uganda (GS 7318) - Ver 3.0 • VPA 174 - Monitoring Report - MP2_EcoZoom Improved Stove Programme Uganda (GS 7317) - Ver 2.0 • VPA 175 - Monitoring Report - MP2_EcoZoom Improved Stove Programme Uganda (GS 7345) - Ver 3.0				
GS VVB assessment				Date: 16/09/2022
The column reference has been updated. Hence, the CAR is closed.				

CAR ID	8	Section no.	D.4.	Date: 05/08/2022
Description of CAR				
"Verdana" font to be used throughout the document.				
Project participant response				Date: 18/08/2022
Verdana font has been applied in the entire MR document. The updated MRs has been submitted with this response.				

Documentation provided by project participant	
• Biolite Homestoves Uganda VPA 138 Monitoring Report 2022 MP3_0308022 - Ver2.0 • VPA 164 - Monitoring Report - MP2_EcoZoom Improved Stove Programme Uganda (GS 7153) - Ver 3.0 • VPA 173 - Monitoring Report - MP2_EcoZoom Improved Stove Programme Uganda (GS 7318) - Ver 3.0 • VPA 174 - Monitoring Report - MP2_EcoZoom Improved Stove Programme Uganda (GS 7317) - Ver 2.0 • VPA 175 - Monitoring Report - MP2_EcoZoom Improved Stove Programme Uganda (GS 7345) - Ver 3.0	
GS VVB assessment	Date: 16/09/2022
The font is consistent, CAR closed.	

CAR ID	9	Section no.	E.2.	Date: 05/08/2022
Description of CAR				
In project emission calculations the fraction (Up,y) is to be expanded up to two decimal places i.e. 87.79% instead of 88%(For percentage format) or 0.8779 to be used instead of 0.88.				
Project participant response				Date: XX/XX/XXXX
The fraction for (Up,y) has been expanded up to 2 decimal places and now reads 88.98% instead of 89% for VPA 138. Updates have been made on the MR, The ER calculator and the SDG impacts spreadsheet for VPA 138. Similar changes have been made for VPAs 164, 173, 174 and 175 by updating the value for (Up,y) from 88% to 87.79%. Updated ER calculators have been submitted together with the MRs and the SDG spreadsheets for all the 5 VPAs.				
Documentation provided by project participant				
• Biolite Homestoves Uganda VPA 138 Monitoring Report 2022 MP3_0308022 - Ver2.0 • Biolite Homestove Uganda VPA 138 Summary of SDG Impacts 2021 MP3-Version 2.0 • VPA 164 - Monitoring Report - MP2_EcoZoom Improved Stove Programme Uganda (GS 7153) - Ver 3.0 • VPA 164 - Summary of SDG outcomes_MP2-Version 2.0 • VPA 173 - Monitoring Report - MP2_EcoZoom Improved Stove Programme Uganda (GS 7318) - Ver 3.0 • VPA 173 - Summary of SDG Outcomes_MP2-Version 2.0 • VPA 174 - Monitoring Report - MP2_EcoZoom Improved Stove Programme Uganda (GS 7317) - Ver 2.0 • VPA 174 - Summary of SDG Outcomes_MP2-Version 2.0 • VPA 175 - Monitoring Report - MP2_EcoZoom Improved Stove Programme Uganda (GS 7345) - Ver 3.0 • VPA 175 - Summary of SDG Outcomes_MP2-Version 2.0				
GS VVB assessment				Date: 16/09/2022
The decimal expanded suitably; CAR closed.				

CAR ID	10	Section no.	E.4.	Date: 05/08/2022
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Description of CAR	
VER count is not consistent in the MR, moreover VER count should be consistent with the latest ER sheet.	
Project participant response	Date: 18/08/2022
VER count is consistent between the latest ER and the MR for VPA 138. Updated MRs and latest ER sheets have been submitted with this response for all the 5 VPAs.	
Documentation provided by project participant	
• Biolite Homestoves Uganda VPA 138 Monitoring Report 2022 MP3_0308022 - Ver2.0 • VPA 164 - Monitoring Report - MP2_EcoZoom Improved Stove Programme Uganda (GS 7153) - Ver 3.0 • VPA 173 - Monitoring Report - MP2_EcoZoom Improved Stove Programme Uganda (GS 7318) - Ver 3.0 • VPA 174 - Monitoring Report - MP2_EcoZoom Improved Stove Programme Uganda (GS 7317) - Ver 2.0 • VPA 175 - Monitoring Report - MP2_EcoZoom Improved Stove Programme Uganda (GS 7345) - Ver 3.0	
GS VVB assessment	Date: 16/09/2022
Refer CAR 2, CAR is open till the resolution of CAR 2.	
Project Participant Response	Date: 20/09/2022
VER count has been made consistent with the latest ER sheet. The updated MRs have been submitted with this response	

CAR specific to VPA 164

CAR ID	11	Section no.	N/A	Date: 05/08/2022
Description of CAR				
Indexing given in cover page need to be updated as per template.				
Project participant response				Date: 19/08/2022
Indexing on the cover page has been updated as per the MR template. The updated MR has been submitted with this response.				
Documentation provided by project participant				
VPA 164 - Monitoring Report - MP2_EcoZoom Improved Stove Programme Uganda (GS 7153) - Ver 3.0				
GS VVB assessment				Date: 16/09/2022
Updates are verified, CAR Closed				

Appendix 5. Data and parameters fixed ex-ante

SDG 13: Climate Action

Parameter	EF_{b, non-CO2}
Data unit:	tCO ₂ /TJ
Default values used:	8.692
Purpose of data	To calculate VERs
Source and Verification of the source	IPCC default value for wood

Parameter	EF_{p, non-CO2}
Data unit:	tCO ₂ /TJ
Default values used:	8.692
Purpose of data	To calculate VERs
Source and Verification of the source	IPCC default value for wood

Parameter	EF_{b, non-CO2}
Data unit:	tCO ₂ /TJ
Default values used:	9.887 = 8.263 + 1.624
Purpose of data	To calculate VERs

Source and Verification of the source	IPCC default value for charcoal.				
			EF (kg GHG/TJ)	GWP	EF (kgCO2e/TJ)
	Charcoal	CH4	330.5= (275+386)/2	25	8,263
	Charcoal	N2O	5.45= (1.6+9.3)/2	298	1,624
Source	-	2006 IPCC	IPCC	Calculated from	
		Guidelines for National Greenhouse Gas Inventories Volume 2, Table 2.9	Fourth Assessment Report	EF * GWP	

Parameter	EF _{p, non-CO2}				
Data unit:	tCO2/TJ				
Default values used:	9.887= 8.263 + 1.624				
Purpose of data	To calculate VERs				
Source and Verification of the source	IPCC default value for charcoal.				
			EF (kg GHG/TJ)	GWP	EF (kgCO2e/TJ)
	Charcoal	CH4	330.5= (275+386)/2	25	8,263
	Charcoal	N2O	5.45= (1.6+9.3)/2	298	1,624
	Source	-	2006 IPCC	IPCC	Calculated from
Guidelines for National Greenhouse Gas Inventories Volume 2, Table 2.9			Fourth Assessment Report	EF * GWP	

Parameter	EF_{p, CO2}
Data unit:	tCO ₂ /TJ
Default values used:	112
Purpose of data	To calculate VERs
Source and Verification of the source	IPCC default value for charcoal

Parameter	EF_{b, CO2}
Data unit:	tCO ₂ /TJ
Default values used:	112
Purpose of data	To calculate VERs
Source and Verification of the source	IPCC default value for charcoal

Parameter	$P_{b,y}$
Data unit:	ton/HH-y
Default values used:	0.00843
Purpose of data	Measurement of baseline fuel consumption
Source and Verification of the source	Carbon Baseline and Project Survey Report for Ecozoom Cookstoves in Uganda, BioLite, July 2020

Parameter	$P_{b,y}$
Data unit:	ton/HH-y
Default values used:	0.00015
Purpose of data	Measurement of baseline fuel consumption
Source and Verification of the source	Carbon Baseline and Project Survey Report for Ecozoom Cookstoves in Uganda, BioLite, July 2020

Parameter	$f_{NRB,I,y}$
Data unit:	Fraction
Default values used:	0.88
Purpose of data	To calculate VERs
Source and Verification of the source	UNFCCC, Methodology

Parameter	NCV_p
Data unit:	TJ/ton
Default values used:	0.0295
Purpose of data	To calculate VERs
Source and Verification of the source	IPCC default value for charcoal

Parameter	NCV_b
Data unit:	TJ/ton
Default values used:	0.015
Purpose of data	To calculate VERs
Source and Verification of the source	IPCC default value for wood

Parameter	NCV_b
Data unit:	TJ/ton
Default values used:	0.015
Purpose of data	To calculate VERs
Source and Verification of the source	IPCC default value for wood

SDG 3: Ensure healthy lives and promote well-being for all ages

	% HH reporting reduction in smoke/PM emissions while cooking on improved stove in baseline
Data unit:	%
Default values used:	0

Purpose of data	Baseline emissions calculation
Source and Verification of the source	The value of this parameter is fixed ex-ante.

SDG 7: Affordable and Clean Energy

Parameter	Access to affordable and clean energy (% of operating FES units under Baseline)
Data unit:	%
Default values used:	0
Purpose of data	Baseline emissions calculation
Source and Verification of the source	The value of this parameter is fixed ex-ante.

SDG 8: Promote sustained, inclusive and sustainable economic growth, full and productive employment

Parameter	Quantitative Employment and income generation (Number of person (male and female) hired under Baseline)
Data unit:	Number
Default values used:	0
Purpose of data	Baseline emissions calculation
Source and Verification of the source	The value of this parameter is fixed ex-ante.

Appendix 6. Data and parameters monitored

SDG 13 (climate action)

Indicator 13.a: Total project emissions reductions (ER Calcs)

Data/Parameter	$P_{p,y}$
Unit	ton/HH-y
Description	Quantity of wood fuel that is consumed in project scenario p during year y
Source of Data	Carbon Project Survey Report for Ecozoom Cookstoves in Uganda, BioLite, September 2021
Value(s) applied	0.0
Measurement methods and procedures	Kitchen performance test
Monitoring frequency	Updated every two years, or more frequently
QA/QC procedures	Transparent data analysis and reporting.
Purpose of data	Measurement of project fuel consumption
Additional comment	A single project fuel consumption parameter is weighted to be representative of project technologies of each age being credited in a given project scenario. Additional SDG Indicator: SDG 7 (Affordable and Clean Energy) Indicator 7.1: Number of improved cookstoves distributed (sales record), Reduction in Fuel Use (KPT)

SDG 13 (climate action)

Indicator13.a: Total project emissions reductions (ER Calcs)

Data/Parameter	$P_{p,y}$
Unit	ton/HH-y
Description	Quantity of charcoal fuel that is consumed in project scenario p during year y
Source of Data	Carbon Project Survey Report for Ecozoom Cookstoves in Uganda, BioLite, September 2021
Value(s) applied	0.005563
Measurement methods and procedures	Kitchen performance test
Monitoring frequency	Updated every two years, or more frequently
QA/QC procedures	Transparent data analysis and reporting.
Purpose of data	Measurement of project fuel consumption
Additional comment	A single project fuel consumption parameter is weighted to be representative of the quantity of project technologies of each age being credited in a given project scenario Additional relevant SDG Indicator: SDG 7 (Affordable and Clean Energy) Indicator 7.1: Number of improved cookstoves distributed (sales record), Reduction in Fuel Use (KPT)

SDG 13 (climate action)

Indicator13.a: Total project emissions reductions (ER Calcs)

Data/Parameter	$U_{p,y}$
Unit	Fraction
Description	Usage rate in project scenario p during year y
Source of Data	Annual usage survey

Value(s) applied	0.8779
Measurement methods and procedures	Usage survey in line with latest usage guidelines as stated on the Requirements and Guidelines for carrying out usage surveys for projects implementing improved cooking devices dated 23/08/2017. Specifically, the project will comply with Level A, mandatory requirements as well as Level B, good practice requirements.
Monitoring frequency	Annual or more frequently, in all cases on time for any request for issuance
QA/QC procedures	Transparent data analysis and reporting.
Purpose of data	Calculation of ERs
Additional comment	A single usage parameter is weighted to be representative of the number of project technologies of each age being credited in a given project scenario.

SDG 13 (climate action)

Indicator13.a: Total project emissions reductions (ER Calcs)

Data/Parameter	N_{p,y}
Unit	Project technologies credited (units)
Description	Technologies in the project database for project scenario p through year y
Source of Data	Total sales record
Value(s) applied	VPA164 – 3,186 VPA173 – 3611 VPA174 – 2357 VPA175 – 1875
Measurement methods and procedures	Continuous tracking, excel database
Monitoring frequency	Continuous
QA/QC procedures	Transparent data analysis and reporting.
Purpose of data	Calculation of ERs
Additional comment	The total sales record is divided based on project scenario to create the project database Additional relevant SDG Indicator: SDG 7 (Affordable and Clean Energy), Indicator 7.1: Number of improved cookstoves distributed (sales record), Reduction in Fuel Use (KPT)

SDG 13 (climate action)

Indicator13.a: Total project emissions reductions (ER Calcs)

Data/Parameter	LE_{p,y}
Unit	t CO ₂ e per year
Description	Leakage in project scenario p during year y
Source of Data	Baseline and monitoring surveys
Value(s) applied	0
Measurement methods and procedures	Kitchen survey and analysis
Monitoring frequency	Every two years
QA/QC procedures	Transparent data analysis and reporting.
Purpose of data	Calculation of ERs
Additional comment	Aggregate leakage can be assessed for multiple project scenarios, if appropriate

SDG 3 (Good Health and Well Being)

Indicator 3.9: Reduced incidence of smoke-related illnesses (Kitchen survey)

Data/Parameter	$S_{p,y}$
Unit	Bouts per day
Description	Number of coughing bouts per day in scenario p during year y, as self-reported by the user
Source of Data	Kitchen survey
Value(s) applied	0
Measurement methods and procedures	Kitchen survey and analysis
Monitoring frequency	Every year
QA/QC procedures	Transparent data analysis and reporting
Purpose of data	Reporting on health and well being
Additional comment	Sp,y

SDG 3 (Good Health and Well Being)

Indicator 3.9: Reduced incidence of smoke related illnesses (Kitchen survey)

Data/Parameter	$S_{b,y}$
Unit	Bouts per day
Description	Number of coughing bouts per day in scenario b during year y, as self-reported by the user
Source of Data	Kitchen survey
Value(s) applied	5
Measurement methods and procedures	Kitchen survey and analysis
Monitoring frequency	Every year
QA/QC procedures	Transparent data analysis and reporting.
Purpose of data	Reporting on health and well being
Additional comment	

Sustainable Development Contributions Achieved

VPA 164 :

Sustainable Development Goals Targeted	SDG Impact	Amount Achieved			Units/ Products
		Amount achieved from 1 Oct 2020 to 31 Dec 2020	Amount achieved from 1 Jan 2021 to 31 Dec 2021	Amount achieved from 1 Jan 2022 to 30 April 2022	
13 Climate Action (mandatory)	Climate Action	2,422	9,681	3,183	tCO ₂ (eq)
3 Good Health and Well Being	Good Health and Well Being		15,886		Reduced Coughing Bouts per

3.9 By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination.		4,015		5,222	household per day
7 Affordable and Clean Energy 7.1 By 2030, ensure universal access to affordable, reliable and modern energy services	Affordable and Clean Energy	884	3,508	1,153	Tons/hh per Year

VPA 173, VPA 174, VPA 175:

Sustainable Development Goals Targeted	SDG Impact	Amount Achieved			Units/ Products
		VPAs	Amount achieved from 15 Mar 2021 to 31 Dec 2021	Amount achieved from 1 Jan 2022 to 30 April 2022	
13 Climate Action (mandatory)	Climate Action	VPA173	7859	3451	tCO ₂ (eq)
		VPA174	5725	2353	
		VPA175	4234	1855	
3 Good Health and Well Being 3.9 By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination.	Good Health and Well Being	VPA173	14,444	5920	Reduced Coughing Bouts per household per day
		VPA174	9428	3863	
		VPA175	7336	3073	
7 Affordable and Clean Energy 7.1 By 2030, ensure universal access to affordable, reliable and modern energy services	Affordable and Clean Energy	VPA173	3181	1307	Tons/hh per Year
		VPA174	2076	853	
		VPA175	1615	678	

Furthermore, as per report of CME on-site interviews and objective observer's last visit, it was represented that no disputes, inputs and comments have been received via the Continuous Input and Grievance Mechanism during this monitoring period too.

APPENDIX 7. Assessment of Safeguarding Principles

Safeguarding Principles	Assessment Questions/ Requirements	How Project will achieve Requirements through design, management or risk mitigation.	Verification team assessment
Principle 1. Human Rights	1. The Project Developer and the Project shall respect internationally proclaimed human rights and shall not be complicit in violence or human rights abuses of any kind as defined in the Universal Declaration of Human Rights	NA.	NA.
	2. The Project shall not discriminate with regard to participation and inclusion	NA.	NA.
Principle 2. Gender Equality	1. The Project shall not directly or indirectly lead to/contribute to adverse impacts on gender equality and/or the situation of women (a) Sexual harassment and/or any forms of violence against women – address the multiple risks of gender-based violence, including sexual exploitation or human trafficking.	Not relevant	This is not relevant for the project activity.
	(b) Slavery, imprisonment, physical and mental drudgery, punishment or coercion of women and girls.	Not relevant	This is not relevant for the project activity.
	(c) Restriction of women's rights or access to resources (natural or economic).	Not relevant	This is not relevant for the project activity.
	(d) Recognise women's ownership rights regardless of marital status –	Not relevant	This is not relevant for the project activity.

	adopt project measures where possible to support to women's access to inherit and own land, homes, and other assets or natural resources.		
	2. Projects shall apply the principles of non-discrimination, equal treatment, and equal pay for equal work: (a) Where appropriate for the implementation of a PoA/VPA, paid, volunteer work or community contributions will be organised to provide the conditions for equitable participation of men and women in the identified tasks/activities.	Not relevant	This is not relevant for the project activity.
	(b) Introduce conditions that ensure the participation of women or men in Project activities and benefits based on pregnancy, maternity/paternity leave, or marital status.	Not relevant	This is not relevant for the project activity.
	(c) Ensure that these conditions do not limit the access of women or men, as the case may be, to PoA/VPA participation and benefits.	Not relevant	This is not relevant for the project activity.
	3. The Project shall refer to the country's national gender strategy or equivalent national commitment to aid in assessing gender risks	No gender risks are envisaged in the PoA.	The PoA involves dissemination of improved cookstove which users are free to choose. There are no gender risks envisaged during the dissemination of cookstoves. No mitigation measure required. The validation team confirms that PoA fulfils the GS requirement outlined in the para 3.2.3 of the GS4GG safeguarding principles requirements version 1.2.

	4. (where required) Summary of opinions and recommendations of an Expert Stakeholder(s)	Not relevant	This is not relevant for the project activity.
Principle 3. Community Health, Safety and Working Conditions	The Project shall avoid community exposure to increased health risks and shall not adversely affect the health of the workers and the community	NA.	NA.
Principle 4.1 Sites of Cultural and Historical Heritage	Does the Project Area include sites, structures, or objects with historical, cultural, artistic, traditional or religious values or intangible forms of culture?	Not relevant	This is not relevant for the project activity.
Principle 4.2 Forced Eviction and Displacement	Does the Project require or cause the physical or economic relocation of peoples (temporary or permanent, full or partial)?	Not relevant	This is not relevant for the project activity.
Principle 4.3 Land Tenure and Other Rights	Does the Project require any change, or have any uncertainties related to land tenure arrangements and/or access rights, usage rights or land ownership?	Not relevant	This is not relevant for the project activity.
Principle 4.4 Indigenous People	Are indigenous peoples present in or within the area of influence of the Project and/or is the Project located on land/territory claimed by indigenous peoples?	Since this is a cookstove distribution project, there is no risk to land/territory claimed by indigenous peoples. Cookstoves will be distributed to all willing customers within the project boundary.	This is not relevant for the project activity.
Principle 5. Corruption	The Project shall not involve, be complicit in or inadvertently contribute to or reinforce corruption or corrupt Projects	NA.	NA.

Principle 6.1 Labour Rights	1. The Project Developer shall ensure that all employment is in compliance with national labour occupational health and safety laws and with the principles and standards embodied in the ILO fundamental conventions	NA.	NA.
	2. Workers shall be able to establish and join labour organisations	NA.	NA.
	3. Working agreements with all individual workers shall be documented and implemented and include: a. Working hours (must not exceed 48 hours per week on a regular basis), AND b. Duties and tasks, AND c. Remuneration (must include provision for payment of overtime), AND d. Modalities on health insurance, AND e. Modalities on termination of the contract with provision for voluntary resignation by employee, AND f. Provision for annual leave of not less than 10 days per year, not including sick and casual leave.	NA.	NA.
	4. No child labour is allowed (Exceptions for children working on their families' property requires an Expert Stakeholder opinion)	NA.	NA.

	5. The Project Developer shall ensure the use of appropriate equipment, training of workers, documentation and reporting of accidents and incidents, and emergency preparedness and response measures	NA.	NA.
Principle 6.2 Negative Economic Consequences	Does the project cause negative economic consequences during and after project implementation?	NA	NA.
Principle 7.1 Emissions	Will the Project increase greenhouse gas emissions over the Baseline Scenario?	The PoA reduces GHG emissions relative to baseline scenario	The project involves dissemination of improved cookstove which will reduce GHG emissions compared to the baseline scenario. This is not relevant for the project activity.
Principle 7.2 Energy Supply	Will the Project use energy from a local grid or power supply (i.e., not connected to a national or regional grid) or fuel resource (such as wood, biomass) that provides for other local users?	The project will reduce fuel resource consumption instead	The improved cookstove does not use energy from local grid or power supply. The cook stove requires fuel wood as an energy source. The project will reduce fuel resource consumption. The validation team confirms that PoA fulfils the GS requirement outlined in the para 3.7.2 of the GS4GG safeguarding principles requirements version 1.2.
Principle 8.1 Impact on Natural Water Patterns/Flows	Will the Project affect the natural or pre-existing pattern of watercourses, groundwater and/or the watershed(s) such as high seasonal flow variability, flooding potential, lack of aquatic connectivity or water scarcity?	Not applicable	This is not relevant for the project activity.
Principle 8.2 Erosion and/or Water Body Instability	Could the Project directly or indirectly cause additional erosion and/or water body instability or	The PoA shall result in reduction in demand of biomass fuel in the region putting less pressure of	The project involves dissemination of improved cookstove and does not in any way cause additional erosion and/or water body instability or disrupt the natural pattern of erosion. The PoA shall result in

	disrupt the natural pattern of erosion?	forests for deforestation and will hence indirectly avoid erosion associated with tree cutting/ felling.	reduction in demand of biomass fuel in the region putting less pressure of forests for deforestation and will hence indirectly avoid erosion associated with tree cutting/ felling. The validation team confirms that PoA fulfils the GS requirement outlined in the GS4GG safeguarding principles requirements version 1..
Principle 9.1 Landscape Modification and Soil	Does the Project involve the use of land and soil for production of crops or other products?	Not applicable	This is not relevant for the project activity.
Principle 9.2 Vulnerability to Natural Disaster	Will the Project be susceptible to or lead to increased vulnerability to wind, earthquakes, subsidence, landslides, erosion, flooding, drought or other extreme climatic conditions?	Not applicable	This is not relevant for the project activity.
Principle 9.3 Genetic Resources	Could the Project be negatively impacted by or involve genetically modified organisms or GMOs (e.g., contamination, collection and/or harvesting, commercial development, or take place in facilities or farms that include GMOs in their processes and production)?	Not applicable	This is not relevant for the project activity.
Principle 9.4 Release of pollutants	Could the Project potentially result in the release of pollutants to the environment?	Not applicable	This is not relevant for the project activity.
Principle 9.5 Hazardous and Non- hazardous Waste	Will the Project involve the manufacture, trade, release, and/ or use of hazardous and non-hazardous chemicals and/or materials?	Not applicable	This is not relevant for the project activity.

Principle 9.6 Pesticides & Fertilisers	Will the Project involve the application of pesticides and/or fertilisers?	Not applicable	Not applicable
Principle 9.7 Harvesting of Forests	Will the Project involve the harvesting of forests?	The PoA does not involve harvesting of forests. The PoA shall result in reduction in demand of biomass fuel in the region putting less pressure of forests for deforestation and will hence indirectly avoid erosion associated with tree cutting/felling.	The PoA involves in the reduction of fuel wood consumption therefore it will positively support the forest resources. The validation team confirms that PoA fulfils the GS requirement outlined in the GS4GG safeguarding principles requirements version 1.2.
Principle 9.8 Food	Does the Project modify the quantity or nutritional quality of food available such as through crop regime alteration or export or economic incentives?	Not applicable	This is not relevant for the project activity.
Principle 9.9 Animal husbandry	Will the Project involve animal husbandry?	Not applicable	This is not relevant for the project activity.
Principle 9.10 High Conservation Value Areas and Critical Habitats	Does the Project physically affect or alter largely intact or High Conservation Value (HCV) ecosystems, critical habitats, landscapes, key biodiversity areas or sites identified?	Not applicable	This is not relevant for the project activity.
Principle 9.11 Endangered Species	Are there any endangered species identified as potentially being present within the Project boundary (including those that may route through the area)? AND/OR	Not applicable	This is not relevant for the project activity.

	Does the Project potentially impact other areas where endangered species may be present through transboundary affects?		
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APPENDIX 8: Gold Standard Verification Protocol

CC IPL's Checklist question	Ref.	MoV ³	Findings, comments, references, data sources	Draft conclusion	Final conclusion
1. Sustainability Monitoring					
1.1 Have all non-neutral indicators been monitored as per the sustainability monitoring plan?		DR,	Yes, all the non-neutral indicators have been monitored as per the sustainability monitoring plan.	OK	OK
1.2 Have the methods to monitor data changed? And are they suitable to the project scale and type?		DR	Methods to monitor data have not changed as compared with the monitoring plan in the registered passport and monitoring plan.	OK	OK
1.3 Has the way of monitoring been followed? With the inclusion of dates and parameters?		DR	The sustainability monitoring plan has been followed as described in the Passport.	OK	OK

³ MoV = Means of Verification, DR = Document Review, I = Interview, www = internet search.

CC IPL's Checklist question	Ref.	MoV ³	Findings, comments, references, data sources	Draft conclusion	Final conclusion
1.4 Have mitigation measures been put in place to prevent the risk of the violation of the safeguarding principle of the "Do No Harm" assessment or to neutralize a Sustainable Development Indicator that is being monitored?		DR	The POA is the distribution of efficient cookstoves to the masses and doesn't involve any large set up or organization base that can be qualified as significant for a "Do Not Harm" procedures.	OK	OK
1.5 Has all the data in the Sustainability development matrix been verified and cross-checked against available sources of project data? Has it been described how sustainable development would be affected if a variance occurred?		DR	Yes, all data in the sustainability development matrix have been verified and cross-checked from the supporting documents/data and during the on-site audit.	OK	OK
2. Other					
2.1 Are there any issues from the previous validation/verification? (ie FARs, requests / approvals for RMP)		DR	No	OK	OK
2.2 Has the project ever received any requests for reviews or incompletes from the UNFCCC or GS Secretariat?		DR	No there are no requests for reviews or incomplete for the project.	OK	OK
2.3 The evaluation of the status of mitigation and compensation measures has been verified.		DR	Yes, the status of mitigation and compensation measures has been verified.	OK	OK