


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

BASIC INFORMATION

Title and UNFCCC reference number of the programme of activities (PoA)	Energy Efficient Stoves Program GS ID reference number - 11146
Version number(s) of the PoA-DD(s) to which this report applies	Version 4.0 dated 14/11/2022
GS ID (s) of the VPAs	GS11147, GS11148, GS11149
Version number of the verification and certification report	02
Completion date of the verification and certification report	24/11/2023
Monitoring period number and duration of this monitoring period	Second Monitoring Period 01/01/2022 to 31/12/2022 (both the days included)
Version number of the monitoring report to which this report applies	Version 2.0 (Dated: 01/11/2023)
Activity Requirements applied	Community Services Activities
Product Requirements applied	GHG Emission Reduction & Sequestration
Coordinating/managing entity (CME)	World Vision Australia
Host Country	Federal Democratic Republic of Ethiopia
Applied methodologies and standardized baselines	AMS-II.G: "Energy efficiency measures in thermal applications of non-renewable biomass" (Version 05.0)
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

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Introduction:

The Co-ordinating Managing Entity/Project Representative has appointed the VVB, Carbon Check (India) Private Ltd. (CC IPL) to perform an independent verification of the second (2nd) monitoring period for the GS Programme of Activities, “Energy Efficient Stoves Program” in Ethiopia (hereafter referred to as “Programme of Activities or PoA”) for the VPAs titled, “Energy Efficient Stoves Program - VPA 1”, “Energy Efficient Stoves Program - VPA 2” and, “Energy Efficient Stoves Program - VPA 3”.

The PoA involves distribution and installation of fuel-efficient cooking stoves to rural households in the Federal Democratic Republic of Ethiopia using firewood for cooking. The PoA saves greenhouse gas emissions by replacing baseline stoves with improved cookstoves.

The PoA is implemented by World Vision Australia who is the co-ordinating/managing entity (hereafter referred to as “CME”) and the VPA implementer for the three VPAs. The CME works with various implementing partners including the VPA implementer, World Vision Ethiopia. All the three VPAs disseminate two types of domestic improved stoves in a household: the ‘Tikikil’ stove, which is a metal ‘rocket stove’ type design, designed for general cooking, and the ‘Mirt’ stove, a cement stove designed for cooking the large, pancake-like ‘Injera’, the staple food in Ethiopia. The Tikikil stove design is based on a traditional rocket stove, which achieves efficient combustion of fuel at a high temperature by ensuring that there is a good air draft into the fire, controlled use of fuel, complete combustion of volatiles, and efficient use of the resultant heat. The Mirt stove was designed in response to the need for an improved stove that could cook the staple Ethiopian food of Injera along with the secondary needs of roasting grain. The Mirt stove is made of cement and pumice (a volcanic ash) that binds well with cement and is a good insulator.

The three small-scale VPAs involve the distribution of energy efficient cooking stoves to households in Ethiopia. Each household received one Mirt (used for traditional Injera baking) and one Tikikil (rocket stove) cook stove.

The VPAs are designed to generate emission reductions by distribution of the fuel-efficient wood / charcoal 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 the reporting of GHG emissions reductions from the component project activities.

This report summarises the findings of the verification of the project, performed on the basis of paragraph 62 of the CDM Modalities & Procedures /B01-c/ and GS4GG requirements /B08/ as well as criteria given to provide for consistent project operations, monitoring and reporting and the subsequent decisions by the CDM Executive Board and Gold Standard Secretariat. Verification is required for all registered GS project activities/programme of activities intending to confirm their achieved emission reductions and proceed with request for issuance of VERs. This report contains the findings and resolutions from the verification and a certification statement for the certified emission reductions.

Objective:

Verification is the periodic independent review and ex-post determination of both quantitative and qualitative information by a VVB of the monitored reductions in GHG emissions that have occurred as a result of the registered GS project activity during a defined monitoring period.

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

The objective of this verification was to verify and certify emission reductions reported for the GS PoA “Energy Efficient Stoves Program” in the host country Ethiopia for the period 01/01/2022 to 31/12/2022 (inclusive of both the dates).

The purpose of verification is to review the monitoring results and verify that the monitoring was implemented according to the monitoring methodology AMS-II.G (Version 05.0) and the monitoring plan in the TRF-PoA /VPAs /B04/ and used 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 PoA-DD/VPA-DDs /B04/.

In particular, the monitoring plan, monitoring report and the project’s compliance with relevant UNFCCC and host Party criteria are verified in order to confirm that the component project/s has/have been implemented in accordance with the previously registered/included component project design and conservative assumptions, as documented. It is also confirmed if the monitoring plan is in compliance with the registered/included VPA-DDs and the approved monitoring methodology, AMS-II.G (Version 05.0).

Scope:

The scope of the verification is:

- To verify the project implementation and operation with respect to the registered/included VPA-DDs /B04/.
- To verify the implemented monitoring plan with the registered PoA-DD/included VPA-DDs or approved revised VPA-DDs /B04/ and applied baseline and monitoring methodology, AMS-II.G (Version 05.0) /B02/.
- To verify that the actual monitoring systems and procedures are in compliance with the monitoring systems and procedures described in the monitoring plan.
- To evaluate the GHG emission reduction data and express a conclusion with a reasonable level of assurance about whether the reported GHG emission reduction data is free from material misstatement.
- To verify that reported GHG emission data is sufficiently supported by evidence.

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

Verification process:

The verification comprises a review of the monitoring report covering the monitoring period from 01/01/2022 to 31/12/2022 and based on the registered/included VPA-DDs including the monitoring plan, emission reduction calculation spreadsheet, monitoring methodology and all related evidence provided by project participant.

Conclusion:

The verification team assigned by the VVB concludes that the TRF PoA-DD (Version 4.0, dated 14/11/2022) /B04/, VPA 1, VPA 2 and VPA 3 (GS11147, GS11148 and GS11149) as described in the TRF VPA-DDs (Version 04.0 dated 14/11/2022) /B04/ and the monitoring report (version 1.0; dated 12/09/2023) /1/, meet all relevant requirements of the GS4GG requirements /B08/ 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 /B08/ and CDM VVS for PoAs requirements Version 03.0 /B01/.

The voluntary project activities were correctly implemented according to selected monitoring methodology, monitoring plan and the approved revised PoA-DD/VPA-DD/s. The monitoring system was implemented, maintained in a proper manner, while collected monitoring data allowed for the verification of the amount of achieved GHG emission reductions. Through the review and on-site inspection and interviews, the verification team confirms that the PoA has resulted in 100,525 tCO₂e (34,705 tCO₂e for VPA 1, 33,055 tCO₂e for VPA 2 and 32,765 tCO₂e for VPA 3) emission reductions during the GS first monitoring period.

CCIPL, 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 CCIPL's internal procedures. Further details regarding team competence can be found in Appendix 2. The team is outlined below:

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	CCIPL
2.	Team Member	IR	Halder	Manas	CCIPL
3.	Trainee Assessor	IR	Ghosh	Tarpan	CCIPL
3.	Local Expert	ER	Areaya	Temesgen Zereabruk	CCIPL
4.	Technical Reviewer	IR	C	Indumathi	CCIPL
5.	Approver	IR	Singh	Vikash Kumar	CCIPL

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.	<i>Medium</i>	All the input data in the ER spreadsheet including sales database, determination of	The risk was mitigated by the training of the personnel involved in the data capture, calculation and by following

			parameter for efficiency testing including data calculation. This includes all the parameters to be monitored ex-post as per the PoA-DD/VPA-DDs /B04/.	the monitoring responsibilities. The training records were reviewed which were also confirmed during the on-site visit interviews. Verification team, based on the above, confirms that the risk is appropriately mitigated.
2.	<i>Information System: Use of spreadsheets without adequate controls related to data changes/updates, version tracking, traceability, security</i>	<i>Medium</i>	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 through interviews that the raw data is collected by the field personnel and then transmitted and stored electronically to the CME's office. The data quality control is maintained by the CME.
3.	<i>Accuracy of the measuring equipment</i>	<i>Low</i>	Check the calibration records for the measurement equipment used for efficiency test.	The risk due to accuracy of the measuring equipment was ensured by planning to check calibration certificates of the measuring equipment used for stove efficiency (water boiling tests).
4.	<i>Competence of personnel involved in conducting standardized tests viz., WBT, CCT, monitoring survey, usage survey and other quality test etc.</i>	<i>Medium</i>	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 the 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 also confirmed during the interviews.
5.	<i>Sample</i>	<i>Medium</i>	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.

C.2. Consideration of materiality in conducting the verification

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The threshold of materiality was evaluated based on §13 of "Guideline: Application of materiality in verifications" Version 02.0 and §306 of CDM VVS for PoAs, version 03.0 /B01/. It was concluded that the materiality threshold applicable to the project activity based on actual emission reductions achieved is 5% of 100,525 tCO_{2e} which is equal to 5,026 tCO_{2e}.

In planning the verification, the verification team took cognizance of §11 and 12 of the “Guideline: Application of materiality in verifications” Version 02.0. A materiality threshold of 5,026 tCO_{2e} is determined in line with §306 (d) of CDM VVS for PoAs, version 03.0 /B01-a/.

Based on the above, activities in which risks were assessed were:

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. Stove efficiency test (WBT) 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 sampling of records during on-site visit. Data flow was checked through comparison of data in hand-written forms, electronic database and ER sheet /2/. The competence of the personnel involved in conducting the stove efficiency testing, recording of data and calculation of the emission reductions data has been checked by the verification team by means of on-site visit interviews.

The risks identified can be mitigated through cross check with all sets of documents. The verification team performed the following checks in order 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 form / WBT protocol and testing procedure etc. during the on-site visit interviews. Further, data was crosschecked with the ER calculation spreadsheet /2/ and the raw data.

Mitigation due to error in Information system: Verification team by conducting interviews with the personnel responsible for such activities mitigated the risk due to error in 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 calibration certificates of all the project equipment.

Competence of personnel involved in conducting standardized tests viz., WBT and CCT: Verification team has reviewed the abilities, qualifications and recognition of involved personnel and institutions of the measuring team involved in the WBT. The WBT has been carried by MWE. The WBT has been carried out by the well-trained personnel and training certificate of the personnel has been provided to the verification team in this respect /5/. The training content /5/ has also been provided to the verification team. The verification team based on on-site visit interviews and review of competency documents /13/ and training records /5/ confirms that the team was qualified to carry out the WBT in line with the protocol.

Mitigation due to error in Sampling: The verification team mitigated the risk by checking the ER sheet /2/ for each VPAs, list of random samples /9/ generated for monitoring surveys for VPAs and sample size calculation sheet /2/ and interviews with personnel responsible for the same.

In conducting the verification, VVB took cognizance of §13-17 of the “Guideline: Application of materiality in verifications” (version 02.0) and based on the input of data from different sources checked through sampling of records during on-site visit interviews.

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 /1/ and the supporting documentation. This process included review of data and information presented to verify their completeness and review of the monitoring plan and monitoring methodology /B02/. Documents reviewed or referenced during the verification are listed in Appendix 3 of this report.

D.2. On-site inspection

The verification team has carried out on-site inspection and interviews in order to assess the information included in the monitoring report and monitoring measurement procedures adopted during the monitoring period. During the desk review, the relevant monitoring records were checked. Previous periodic monitoring reports and verification reports (for CDM/GS), photographs of the instruments used for WBT, soft copy of original survey records and WBT records were used to cross check consistency of information.

Through the review of validation reports, previous verification reports, comparing the relevant evidence and interview with the CME’s representatives, CCIPL has confirmed that the project is implemented in line with the PoA-DD / VPA-DDs during the monitoring period. There is no change of the project design, operation and monitoring plan.

On-site inspection and interviews were performed by verification team according to Site Visit and remote audit requirements and procedures (Version 2.0) in order to assess the following:

On-site inspection and interviews: 02/10/2023 to 04/10/2023				
No.	Activities performed on-site	Site location	Date	Team member
1.	Opening Meeting and brief project description by the PP; check the project data base / sales records / end user agreement for the total number of stoves distributed under the VPAs.	VPA implementer’s office	02/10/2023	Manas Halder, Tarpan Ghosh, Temesgen Zereabruk Areaya
2.	Compliance of Monitoring plan with the applied methodology and registered monitoring plan; project implementation and operation as per the PoA-DD/VPA-DDs.	VPA implementer’s office	02/10/2023	Manas Halder, Tarpan Ghosh, Temesgen Zereabruk Areaya

3.	Discussion on the monitoring survey and WBT/CCT process; review of QA/QC process (such as related to instruments utilized for carrying out such standardized tests for e.g., WBT/CCT) including interview/competency assessment (abilities, qualifications, training and recognition of involved personnel and institutions of the measuring team) of person/institution responsible for conduction of survey/WBTs; Review of monitored data, Discussion on Monitoring report and ER calculation spread sheets	VPA implementer's office	04/10/2023	Manas Halder, Tarpan Ghosh, Temesgen Zereabruk Areaya
4.	Physical site visit (to check project implementation and operation and sample households from CME/PP's survey samples)	End user house visit	02/10/2023 to 04/10/2023	Manas Halder, Tarpan Ghosh, Temesgen Zereabruk Areaya
5.	Discussion on OSV findings and Closing meeting.	VPA implementer's office	04/10/2023	Manas Halder, Tarpan Ghosh, Temesgen Zereabruk Areaya

D.3. Interviews

No	Interviewee			Date	Subject	Team member
	Last name	First name	Affiliation			
1.	Bhatta	Anil	Carbon & Clean Energy Solutions Pty Ltd	02/10/2023 to 04/10/2023	Project implementation and operation, monitoring procedure, data and information flow, Quality Assurance – Management and operating system, Monitoring records, MR and ER calculation	Manas Halder, Tarpan Ghosh, Temesgen Zereabruk Areaya
2.	Dorati	Silvio	World Vision Australia	02/10/2023 to 04/10/2023	Project implementation and operation, monitoring procedure, data and information flow, Quality Assurance – Management and operating system, Monitoring records, MR and ER calculation	Manas Halder, Tarpan Ghosh, Temesgen Zereabruk Areaya
3.	Regassa	Kebede	World Vision Ethiopia	02/10/2023 to 04/10/2023	Project implementation and operation, monitoring procedure, data and information flow, Quality Assurance – Management and operating system, Monitoring records, MR and ER calculation	Manas Halder, Tarpan Ghosh, Temesgen Zereabruk Areaya

4.	Menjye	Tariku	World Vision Ethiopia	02/10/2023	Project implementation and operation, monitoring procedure, data and information flow, Quality Assurance – Management and operating system, Monitoring records, MR and ER calculation	Manas Halder, Tarpan Ghosh, Temesgen Zereabruk Areaya
5.	Thomas	Habtamu	MWE	03/10/2023	Project implementation and operation, monitoring procedure, data and information flow, Quality Assurance – Management and operating system, Monitoring records, MR and ER calculation.	Manas Halder, Tarpan Ghosh, Temesgen Zereabruk Areaya
6.	Seboka	Yishak	Rural Energy Technology Design and Testing Desk head	04/10/2023	Discussion on the WBT/CCT process; review of QA/QC process (such as related to instruments utilized for carrying out such standardized tests for e.g., WBT/CCT) including competency assessment (abilities, qualifications and recognition of involved personnel and institutions of the measuring team) of person/institution responsible for conduction of WBTs/CCTs	Manas Halder, Tarpan Ghosh, Temesgen Zereabruk Areaya
7.	Belete	Lake	RETDTD Senior Expert	04/10/2023	Discussion on the WBT/CCT process; review of QA/QC process (such as related to instruments utilized for carrying out such standardized tests for e.g., WBT/CCT) including competency assessment (abilities, qualifications and recognition of involved personnel and institutions of the measuring team) of person/institution responsible for conduction of WBTs/CCTs	Manas Halder, Tarpan Ghosh, Temesgen Zereabruk Areaya
8.	Mehamed	Menur	End user (VPA 1) – POSG, Stove ID:	02/10/2023	On-site monitoring survey	Manas Halder, Tarpan

			T - EESP2GT14026 M - EESP1GM1159 9			Ghosh, Temesgen Zereabruk Areaya
9.	Mare	Abu	End user (VPA 1) – POSG, Stove ID: T- EESP1GT16998 M- EESP1GM1001 4	02/10/2023	On-site monitoring survey	Manas Halder, Tarpan Ghosh, Temesgen Zereabruk Areaya
10.	Mosa	Akimel	End user (VPA 1) – POSG, Stove ID: T- EESP1GT15311 M- EESP2GM1191 5	02/10/2023	On-site monitoring survey	Manas Halder, Tarpan Ghosh, Temesgen Zereabruk Areaya
11.	Alemu	Ketema	End user (VPA 1) – POSG, Stove ID: T- EESP1GT15113 M- EESP2GM1134 3	02/10/2023	On-site monitoring survey	Manas Halder, Tarpan Ghosh, Temesgen Zereabruk Areaya
12.	Abido	Nurbege	End user (VPA 1) – POSG, Stove ID: T- EESP1GT15086 M- EESP2GM1142 2	02/10/2023	On-site monitoring survey	Manas Halder, Tarpan Ghosh, Temesgen Zereabruk Areaya
13.	Aman	Amru	End user (VPA 2) – POSG, Stove ID: T- EESP3GT18156 M- EESP3GM1343 8	02/10/2023	On-site monitoring survey	Manas Halder, Tarpan Ghosh, Temesgen Zereabruk Areaya
14.	Endale	Andualem	End user (VPA 2) – POSG, Stove ID: T- EESP3GT16160 M- EESP3GM1352 6	02/10/2023	On-site monitoring survey	Manas Halder, Tarpan Ghosh, Temesgen Zereabruk Areaya
15.	Bereda	Berga	End user (VPA 2) – POSG, Stove ID: T- EESP3GT14429	02/10/2023	On-site monitoring survey	Manas Halder, Tarpan Ghosh, Temesgen

			M- EESP3GM1246 2			Zereabruk Areaya
16.	Zirgiye	Wagish	End user (VPA 2) – POSG, Stove ID: T- EESP3GT14695 M- EESP3GM1254 5	02/10/2023	On-site monitoring survey	Manas Halder, Tarpan Ghosh, Temesgen Zereabruk Areaya
17.	Kasa	Birzu	End user (VPA 2) – POSG, Stove ID: T- EESP3GT17492 M- EESP3GM1387 6	02/10/2023	On-site monitoring survey	Manas Halder, Tarpan Ghosh, Temesgen Zereabruk Areaya
18.	A/Bulgu	Amelu	End user (VPA3) – POSG, Stove ID: T- EESP4ST6053 M- EESP4SM3025	03/10/2023	On-site monitoring survey	Manas Halder, Tarpan Ghosh, Temesgen Zereabruk Areaya
19.	Awol	Zahidat	End user (VPA 2) – POSG, Stove ID: T - EESP3GT18509 M - EESP3GM6616	03/10/2023	On-site monitoring survey	Manas Halder, Tarpan Ghosh, Temesgen Zereabruk Areaya
20.	Abdela	Zara	End user (VPA3) – POSG, Stove ID: T- EESP4ST7576 M- EESP4SM4584	03/10/2023	On-site monitoring survey	Sanjay Manas Halder, Tarpan Ghosh, Temesgen Zereabruk Areaya
21.	A/Gisa	Gano	End user (VPA3) – POSG, Stove ID: T- EESP4ST6468 M- EESP4SM3153	04/10/2023	On-site monitoring survey	Manas Halder, Tarpan Ghosh, Temesgen Zereabruk Areaya
22.	A/bor	H/jafer	End user (VPA3) – POSG, Stove ID: T- EESP4ST6952 M- EESP4SM3957	04/10/2023	On-site monitoring survey	Manas Halder, Tarpan Ghosh, Temesgen Zereabruk Areaya

23.	Sultan	NaZifa	End user (VPA3) – POSG, Stove ID: T- EESP4ST8032 M- EESP4SM5040	04/10/2023	On-site monitoring survey	Manas Halder, Tarpan Ghosh, Temesgen Zereabruk Areaya
24.	Temesgen	Aster	End user (VPA1) – POSG, Stove ID: T- EESP2ET16010 M- EESP2EM8307	03/10/2023	On-site monitoring survey	Manas Halder, Tarpan Ghosh, Temesgen Zereabruk Areaya
25.	Awole	Sergade	End user (VPA1) – POSG, Stove ID: T- EESP2ET14658 M- EESP2EM7201	03/10/2023	On-site monitoring survey	Manas Halder, Tarpan Ghosh, Temesgen Zereabruk Areaya
26.	Adersay	Kebu	End user (VPA1) – POSG, Stove ID: T- EESP2ET17468 M- EESP2EM7314	03/10/2023	On-site monitoring survey	Sanjay Manas Halder, Tarpan Ghosh, Temesgen Zereabruk Areaya
27.	Wold	Busaye Tekel	End user (VPA3) – POSG, Stove ID: T- EESP4SHT884 1 M- EESP4SHM495 4	04/10/2023	On-site monitoring survey	Manas Halder, Tarpan Ghosh, Temesgen Zereabruk Areaya
28.	Abdo	Ababa	End user (VPA3) – POSG, Stove ID: T- EESP4SHT950 0 M- EESP4SHM568 1	04/10/2023	On-site monitoring survey	Manas Halder, Tarpan Ghosh, Temesgen Zereabruk Areaya
29.	Nebi	Hajo	End user (VPA2) – POSG, Stove ID T- EESP3SHT840 0	03/10/2023	On-site monitoring survey	Manas Halder, Tarpan Ghosh, Temesgen

			M- EESP3 SHM43 87			Zereabruk Areaya
30.	Debelu	Tsehay Asefa	End user (VPA2) – POSG, Stove ID: T- EESP3DT9906 M- EESP3DM5611	04/10/2023	On-site monitoring survey	Manas Halder, Tarpan Ghosh, Temesgen Zereabruk Areaya
31.	Tori	Abebeche	End user (VPA2) – POSG, Stove ID: T- EESP3ET13474 M- EESP3EM8672	03/10/2023	On-site monitoring survey	Manas Halder, Tarpan Ghosh, Temesgen Zereabruk Areaya
32.	Nida	Zeritu	End user (CCT) – PESG, Stove ID: EESP2EM 8260	02/10/2023	Stove efficiency testing	Manas Halder, Tarpan Ghosh, Temesgen Zereabruk Areaya
33.	Shafi	Shirtu	End user (CCT) – PESG, Stove ID: EESP2 EM 7868	02/10/2023	Stove efficiency testing	Manas Halder, Tarpan Ghosh, Temesgen Zereabruk Areaya
34.	Terega	Atelach	End user (WBT) – PESG, Stove ID: EESP1GT14030	02/10/2023	Stove efficiency testing	Manas Halder, Tarpan Ghosh, Temesgen Zereabruk Areaya
35.	Abishiro	Yemerga	End user (WBT) – PESG, Stove ID: EESP1GT16468	02/10/2023	Stove efficiency testing	Manas Halder, Tarpan Ghosh, Temesgen Zereabruk Areaya
36.	Kereye	Mulunesh	End user (WBT) – PESG, Stove ID: EESP1GT19050	02/10/2023	Stove efficiency testing	Manas Halder, Tarpan Ghosh, Temesgen Zereabruk Areaya
37.	Awol	Bedewi	End user (WBT) – PESG,	02/10/2023	Stove efficiency testing	Sanjay Manas

			Stove ID: EESP1GT15340			Halder, Tarpan Ghosh, Temesgen Zereabruk Areaya
38.	Senbeto	La'o	End user (CCT) – PESG, Stove ID: EESP1GT15340	03/10/2023	Stove efficiency testing	Manas Halder, Tarpan Ghosh, Temesgen Zereabruk Areaya
39.	Adem	Medina	End user (WBT) – PESG, Stove ID: EESP3SHT844 7	03/10/2023	Stove efficiency testing	Manas Halder, Tarpan Ghosh, Temesgen Zereabruk Areaya
40.	Koroso	Ashu	End user (WBT) – PESG, Stove ID: EESP3 SHT 8203	03/10/2023	Stove efficiency testing	Manas Halder, Tarpan Ghosh, Temesgen Zereabruk Areaya
41.	Tefera	Sada	End user (WBT) – PESG, Stove ID: EESP3 SHT 8203	03/10/2023	Stove efficiency testing	Manas Halder, Tarpan Ghosh, Temesgen Zereabruk Areaya
42.	Mahamed	Radina	End user (CCT) – PESG, Stove ID: EESP4TM TM11765	03/10/2023	Stove efficiency testing	Manas Halder, Tarpan Ghosh, Temesgen Zereabruk Areaya
43.	Shamele	Zahiwode	End user (CCT) – PESG, Stove ID: EESP2 EM7221	03/10/2023	Stove efficiency testing	Manas Halder, Tarpan Ghosh, Temesgen Zereabruk Areaya
44.	Debu	Werke	End user (WBT) – PESG, Stove ID: EESP3TM1185 3	04/10/2023	Stove efficiency testing	Manas Halder, Tarpan Ghosh, Temesgen Zereabruk Areaya
45.	Debu	Werke	End user (WBT) – PESG,	04/10/2023	Stove efficiency testing	Manas Halder, Tarpan Ghosh,

			Stove ID: EESP3TM1185 3			Temesgen Zereabruk Areaya
46	Mahamad	Halo	End user (CCT) – PESG, Stove ID: EESP3TM1185 3	04/10/2023	Stove efficiency testing	Manas Halder, Tarpan Ghosh, Temesgen Zereabruk Areaya
47	Adam	Hindi	End user (CCT) – PESG, Stove ID: EESP3TM1170 1	04/10/2023	Stove efficiency testing	Manas Halder, Tarpan Ghosh, Temesgen Zereabruk Areaya
48	Awel	Kenzi	End user (CCT) – PESG, Stove ID: EESP4 SM 4694	04/10/2023	Stove efficiency testing	Manas Halder, Tarpan Ghosh, Temesgen Zereabruk Areaya

D.4. Sampling approach

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As assessed in above sections, emission reductions for the three VPAs, (GS 11147, GS 11148 and GS 11149) are being claimed for this monitoring period and the total population of the stoves under these three VPAs are as below:

Sl. No.	VPA Reference No.	Number of ICS Distributed
1.	VPA 1 (GS11147)	18,402 (Tikikil) and 18,402 (Mirt)
2.	VPA 1 (GS11148)	15,903 (Tikikil) and 15,903 (Mirt)
3.	VPA 1 (GS11149)	15,844 (Tikikil) and 15,844 (Mirt)
Total households to which (both Mirt and Tikikil) stoves were distributed till the end of the monitoring period in the three VPAs		50,149

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

1. Number of stoves that are operating (both Mirt and Tikikil) – POSG parameter
2. Efficiency of the Tikikil stove (WBT) and Specific fuel consumption of the Mirt stove (CCT) – PESG parameter

To monitor the proportion of stoves which are still operating, Project Operationality Sample Group (POSG) has been monitored at VPA level annually with 90% confidence and 10% precision. For the monitoring of stove efficiency (WBT for Tikikil and CCT for Mirt), Project Efficiency Sample Group (PESG) has been monitored at the PoA level annually with 95% confidence and 10% precision. Simple random sampling was applied for POSG and Stratified random sampling for PESG by the CME. The sampling methodology adopted by the CME is deemed acceptable as per the approved revised and transitioned GS4GG PoA-DD /VPA-DDs /B04/ and the applied methodology /B02/. Please refer to the section E.3.3.3 of this report on detailed assessment on sampling plan opted by the CME.

As per §25 of the Sampling Standard, version 09 /B07/, the verification team has to verify whether the 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 POSG survey was conducted from 25/06/2023 to 06/07/2023. The PESG survey was conducted by the technical testing teams set up under the Ministry of Water and Energy, and the PESG survey was conducted from 26/07/2023 to 06/09/2023. The results of sampling surveys are verified by the VVB by using acceptance sampling during on-site interviews carried out on 02/10/2023 to 04/10/2023.

In line with §26 of the Sampling Standard, version 09 /B07/, the verification team has applied a sampling approach for on-site visits surveys as part of verification. Now as the CME had applied sampling approach, the verification team has chosen acceptance sampling in accordance with §28 of the sampling standard and accordingly steps listed in §29 of the sampling standard were followed.

VVB used sampling during verification for checking the CME's sample to check the POSG parameter and to check if the CCT/WBT tests have been done in the households. In accordance with §29 (a) of the Sampling Standard /B07/, the verification team took random samples from the CME's samples. Considering that Ethiopia is a Least Developed Country, applying §39 (c) of the sampling standard (version 09.0) /B07/, a sample size of 8 (with no discrepant records) was chosen. A sample size of 8 was required, based on an AQL of 1% and UQL of 20%, producer risk 10% and consumer risk 20%. Acceptance number (c) thus determined for the sample is 0. It was observed that out of the 24 samples (8 for each of the three VPAs), all the 24 stoves were found to be operational, as verified during the on-site interviews, which matched with the CME's records and hence no discrepant records were observed with the MR /1/ and ER sheet /2/ and thus $c=0$. Thus, CME's set of records has been accepted in line with §33 of the sampling standard (version 09.0) /B07/.

The sampling plan implemented by the CME is in accordance with the applied approved monitoring methodology /B02/ and the PoA-DD/VPA-DDs /B04/. The CME has appropriately performed Sampling procedure in line with the applied methodology and PoA-DD / VPA-DDs /B04/.

The following table illustrates the agenda covered during the acceptance sampling by the verification team, which is as per Table 1, §37 of the Sampling Standard (version 09.0) /B07/:

Parameter	How the CME conducted sampling surveys (to obtain the project participants' or the coordinating/managing entities' records)	How the VVB could obtain records for verification	Criteria for deciding what ultimately constitutes a discrepancy
% of improved cook stoves (ICS) in operation (POSG parameters : $N_{y,Mirt}$ and $N_{y,Tikikil}$)	Sampling based survey (questionnaire survey/interviews)	Cross-check of a sample of CME's samples (questionnaire operation surveys/interviews) including but not limited to following: <ul style="list-style-type: none"> • Consistency between the information as contained in Survey sheet and revealed from the on-site interviews • Baseline scenario of the household • Enquire/observe the pre-project/baseline stove/s and its 	VVB results, accounting for duly justified differences.

		operation during the project scenario. <ul style="list-style-type: none"> • Enquire/observe parallel use of any other stove and their fuel • Enquire/observe source /storage of fuelwood /charcoal or any other fuel • Enquire number of meals cooked (along with family size of household) on project cook stove or any other baseline and/or stoves utilizing other fuel/s. 	
Efficiency of improved cook stoves (ICS) (PESG parameter: $\eta_{new,Tikikil,y}$ and $SC_{new,Mirt,y}$)	Water Boiling Test / Controlled Cooking Test as the procedure allowed for efficient test prescribed by applied CDM methodology	Check the test reports/methods; check qualifications/ capabilities of testers	Whether conducted by qualified institutions/testers; Whether conducted in accordance with approved established international/national standards, procedures and test methods prescribed by applicable CDM methodologies.

Assessment of sampling for VPA 1, VPA 2 and VPA 3:

CME has done separate samplings for VPA 1, VPA 2 and VPA 3 for the POSG parameter for the current monitoring period (MP 1) and cross VPA sampling (all the three VPAs together) for PESG parameter. It is acceptable to the verification team since the make of ICS distributed under VPA 1, VPA 2 and VPA 3 are same i.e., Tikikil and Mirt type and also the geographical boundary is the host country Ethiopia for all the three VPAs. This is in accordance with the Standard: Sampling and surveys for CDM project activities and programmes of activities (version 09.0) /B07/.

Sample size: The CME has provided a sample size calculation spreadsheet for the POSG and PESG parameters which has been checked and found to be appropriate and further explained below /18/.

POSG: In line with the methodology AMS-II.G the proportion of operating Mirt and Tikikil cook stoves was monitored with 90% confidence and 10% precision as annual sampling was selected and as sampling was done separately for each VPA.

PESG: Annual sampling has been chosen for the PESG, and therefore the sample size (for groups of VPAs) has been calculated for obtaining results with 95% confidence and 10% precision, in line with the sampling guidelines.

The verification team confirms that the achieved precision level for all the POSG and PESG parameters were less than 10% (within the desired limit) for the monitoring period. This has been cross verified by the verification team from the supporting documents submitted.

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	CAR 01 has been raised. Refer appendix 4 for further details
Conclusion	<p>CME has used the GS4GG template Monitoring Report, version 1.1 /B03-a/. Verification team confirms that the latest available version of the monitoring report template /B03/ 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 /B03-b/.</p> <p>This confirms compliance with the §336 and §337 of CDM VVS for PoAs, version 03.0 /B01/and GS4GG requirements /B08/.</p>

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

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Not Applicable

E.2. Programme of activities

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

Means of verification	Document Review, Interview
Findings	-
Conclusion	<p>CC IPL by means of on-site interviews and document review, assessed that all physical features (technology, project equipment, and monitoring equipment) of the included VPAs in the TRF-PoA /B04/ are in place and that the coordinating/managing entity has operated the PoA and the VPAs as per the TRF-PoA /B04/ and the TRF-VPAs /B04/.</p> <p>There are no deviations or proposed or actual changes in the implementation or operation of the PoA and the included VPAs.</p> <p>The verification team confirms actual operation of the VPAs and PoA implementation and operation in compliance with the TRF-PoA / VPAs /B04/ in order to confirm the compliance of § 338, § 339 and § 340 of CDM VVS for PoAs, Version 03.0 /B01/ and GS4GG requirements /B08/.</p>

E.2.2. Implementation and operation of the management system

Means of verification	Document Review, Interview
Findings	-
Conclusion	<p>The PoA management system including the record-keeping system has been explained in the TRF-PoA /B04/. During the course of verification, verification team based on review of provided documents and on-site interviews has assessed the management system. 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.</p> <p>The PESG survey was conducted by the technical testing teams set up under the Ministry of Water and Energy.</p> <p>In order to ensure completeness and accuracy of monitoring information, electronic database is operated and maintained by the VPA implementer. This information is further maintained by the CME, who verifies the reported sales with the number of</p>

	<p>stoves produced by the manufacturer. 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 sales database and on-site interviews during the course of verification.</p> <p>It was confirmed during the on-site interviews and by checking the monitoring system that all the roles and responsibilities related to monitoring are fulfilled by representatives of CME and the VPA implementer.</p> <p>The responsibilities and authorities for monitoring and reporting are in accordance with the responsibilities and authorities stated in the monitoring plan /B04/.</p> <p>The details about monitoring system have been provided in the Monitoring report /1/. The data flow and management and reporting structure was also checked during the on-site interviews.</p> <p>The verification team confirms that the monitoring management system of the GS 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 PoAs. Version 03.0 /B01/ and GS4GG requirements /B08/.</p> <p>The Feedback/ grievance from the stakeholders were taken by CME continuously in process books which are kept at World Vision Ethiopia's Area program offices in the project areas. During the monitoring period, no inputs and grievances were received. There are few comments were received from the stakeholders during the stakeholder consultation feedback round; however, no need for further modifications to the project design was identified. VVB has assessed the documents claimed in MR and deemed appropriate.</p>
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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	
Findings	CL 01 and CL 02 have been raised. - Refer appendix 4 for further details.	
Conclusion	The implementation status of the PoA and the voluntary project activities is:	
	Project Participants:	World Vision Australia
	Title of PoA:	Energy Efficient Stoves Program
	GS Reference No:	PoA – GS 11146 GS 11147, GS 11148 and GS 11149
	Applied Baseline and monitoring methodology:	AMS-II.G, Version 05
	Project Scale:	Small scale
	Location of the project activity:	Ethiopia
	Reported monitoring Period verified in this verification:	01/01/2022 to 31/12/2022 (both days inclusive)
	As a part of the on-site interviews, the verification team was able to confirm that the Programme of activities and the voluntary project activities' implementation are in accordance with the project description contained in the TRF-PoA and included VPA-DDs /B04/.	

The VPAs include distribution of energy efficient improved cooking stoves. The VPA implementer is World Vision Ethiopia. The portable improved cook stoves (ICS) under the VPAs use charcoal/wood /3/ as fuel. These ICSs are efficient in transferring heat from the fuel to the pot, thus saving charcoal/wood fuel compared to the traditional stoves.

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

Sl. No.	VPA Reference No.	Number of ICS Distributed
1.	VPA 1 (GS11147)	18,402 (Tikikil) and 18,402 (Mirt)
2.	VPA 2 (GS11148)	15,903 (Tikikil) and 15,903 (Mirt)
3.	VPA 3 (GS11149)	15,844 (Tikikil) and 15,844 (Mirt)
Total no of households		50,149

The annual energy savings in GWh_{th} for the VPAs for the monitoring period were as follows:

VPA	GWh _{th}	Comment
GS 11147	155.45	In all the cases, energy savings is less than the small-scale threshold of 180 GWh _{th} for Type II small scale project activities
GS 11148	148.06	
GS 11149	146.76	

It was confirmed that World Vision Australia is the Coordinating/Managing Entity for the PoA. The actual voluntary project activity/ies are in line with the TRF-VPAs /B04/. World Vision Ethiopia is the VPA implementer for the VPAs.

The information (including data and variables) provided in the MR /1/ is in line with the details provided in the TRF-VPAs /B04/.

CCIPL's verification team considers the project description of the project contained in the TRF-PoA and the TRF-VPAs /B04/ 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 /B01/, 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 TRF VPA-DDs which has caused an increase in the estimates of GHG emission reductions.

Verification team has assessed the project in order to check any proposed or actual changes to the project design in accordance with §267 of CDM VVS for PoAs, Version 03.0. In the opinion of CCIPL, there is no change to the project design. CCIPL's verification team confirms that the VPAs are implemented within the boundary of the PoA as described in the TRF PoA-DD.

In the opinion of CCIPL, there is no change to the project design. CCIPL's verification team confirms that the VPAs are implemented within the boundary of the PoA as described in the TRF-PoA /B04/ and the implementation and operation of the project activity has been conducted in accordance with the description contained in the TRF-PoA and TRF-VPAs.

The verification team took cognizance of § 338, § 339 and § 340 of the CDM VVS for PoAs, version 03 /B01/ to conduct the verification and on-site interviews in accordance with the § 319 and 320 of the CDM VVS for PoAs, version 03 /B01/ and GS4 GG requirements /B08/.

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

Means of verification	Document Review, Interview
Findings	-
Conclusion	<p>The verification team is able to confirm that the monitoring plan contained in the TRF-VPAs is in accordance with the approved methodology applied by the project activity, i.e. AMS-II. G, version 05 /B02/.</p> <p>The monitoring plan is in accordance with the approved methodology, AMS-II. G, version 05 /B02/, applied by the voluntary project activities and as provided in the TRF-VPAs /B04/.</p> <p>The verification took cognizance of § 341 to § 343 of CDM VVS for PoAs, Version 03.0 /B01/ and GS4GG requirements /B08/.</p>

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 TRF-VPAs /B04/. This conclusion has been made based on assessment below.

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

Means of verification	Document Review, Interview
Findings	-
Conclusion	<p>Verification team confirms that the Data and parameters fixed ex ante are in compliance with the TRF-VPAs /B04/ and the monitoring plan. Please refer Appendix 5 for detailed analysis of the ex-ante parameters.</p> <p>The verification took cognizance of § 344 of CDM VVS for PoAs, Version 03.0 /B01/ and GS4GG requirements /B08/.</p>

E.3.3.2. Data and parameters monitored

Means of verification	Document Review, Interview
Findings	-
Conclusion	<p>The Verification team confirms that the Data and parameters monitored are in compliance with the TRF-VPAs and the monitoring plan /B04/. A complete assessment of each of the monitored parameters has been provided in Appendix 6 of the verification report.</p> <p>The verification took cognizance of § 344, § 345(b), §356 and §357 of CDM VVS for PoAs, Version 03.0 /B01/ GS4GG Requirements/B08/.</p>

E.3.3.3. Implementation of sampling plan

Means of verification	Document Review, Interview
Findings	-CL 03 has raised. Refer appendix 4 for further details
Conclusion	<p>Monitoring surveys were conducted during the current monitoring period. The total population of the stoves under the three VPAs considered for the monitoring period is 50,149. The monitoring parameters required to be monitored through the sampling plan are:</p> <ol style="list-style-type: none"> 1. Number of stoves that are operating (both Mirt and Tikikil) – POSG parameter 2. Efficiency of the Tikikil stove (WBT) and Specific fuel consumption of the Mirt stove (CCT) – PESG parameter <p>To monitor the proportion of stoves which are still operating, Project Operationality Sample Group (POSG) has been monitored at VPA level annually with 90% confidence and 10% precision. For the monitoring of stove efficiency (WBT for Tikikil stove and CCT for Mirt), Project Efficiency Sample Group (PESG) has been monitored at the PoA level, with 95% confidence and 10% precision. The CME has</p>

	<p>appropriately performed simple random sampling for POSG parameter and stratified random sampling for PESG parameters in line with the TRF PoA-DD and TRF VPA-DDs. The sampling methodology adopted by the CME is deemed acceptable as per the approved TRF PoA-DD and TRF VPA-DDs /B04/.</p> <p>The sampling survey for POSG has been carried out by the trained people in World Vision Ethiopia and the survey for PESG has been conducted by the technical testing teams set up under the Ministry of Water and Energy.</p> <p>CME has done separate samplings for VPA 1, VPA 2 and VPA 3 for the POSG parameter for the current monitoring period (MP 1) and cross VPA sampling (all the three VPAs together) for PESG parameter. It is acceptable to the verification team since the make of ICS distributed under VPA 1, VPA 2 and VPA 3 are same i.e., Tikikil and Mirt type and also the geographical boundary is the host country Ethiopia for all the three VPAs. This is in accordance with the Standard: Sampling and surveys for CDM project activities and programmes of activities (version 09.0) /B07/.</p> <p>The applied sample size by the CME for the POSG parameter for each of the three VPAs is 33 and for PESG parameter (across the PoA for three VPAs together) is 40 for Tikikil stove and 50 for Mirt stoves, which is more than the calculated / minimum sample required as per the approved revised PoA-DD /B04/. The calculation of sample size for the POSG and PESG parameters /18/ has been cross checked by the verification team and the verification team confirms the correctness of the sample size calculation which is in accordance with the approved revised TRF VPA-DDs /B04/ and the Guidelines: Sampling and surveys for CDM project activities and programmes of activities (version 04.0) /B06/ and Standard: Sampling and surveys for CDM project activities and Programme of Activities (version 07.0) /B07/.</p> <p>The necessary confidence / precision of 90/10 for POSG parameter (for each of the three VPAs) and 95/10 for PESG parameters (Mirt and Tikikil) is met. This has been cross verified by the verification team from the supporting documents submitted /18/.</p> <p>Verification team confirms that the sampling approach applied by the CME is in accordance with the approved TRF PoA-DD and the TRF VPA-DDs /B04/ including the Guidelines: Sampling and surveys for CDM project activities and programmes of activities (version 04.0) /B06/ and Standard: Sampling and surveys for CDM project activities and Programme of Activities (version 07.0) /B07/.</p> <p>The verification took cognizance of § 346 of CDM VVS for PoAs, Version 03.0 /B01/ and GS4GG Requirements /B08/.</p>
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E.3.4. Compliance with the calibration frequency requirements for measuring instrument

Means of verification	Document Review, Interview
Findings	-
Conclusion	<p>The stove efficiency testing has been determined by WBT / CCT conducted in line with the guidance provided by the CME in the VPA-DDs /B04/ /10/. The monitoring equipment used for conducting the stove efficiencies are thermocouples, moisture meter and weighing machines. All the monitoring equipment were duly calibrated and hence deemed acceptable /8/. The appropriate QA/QC procedures have been followed for the monitoring parameters.</p> <p>The verification took cognizance of section 10.2.6 of CDM VVS for PoAs, version 03 /B01/ and GS4GG requirements /B08/.</p>

E.3.5. Assessment of data and calculation of emission reductions or net removals

In line with the requirement of §356 and §357 of CDM VVS for PoAs, Version 03.0 /B01/, the verification team has reviewed the Monitoring report /1/ and ER spread sheets /2/ to check the arithmetic calculation of the emission reductions. The equation used for the calculation is compared with those provided in the TRF-VPAs /B04/ and the methodology AMS-II.G, Version 05 /B02/.

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

Means of verification	Document Review, Interview										
Findings	CL 04 has been raised. Refer appendix 4 for further details-										
Conclusion	<p>The equations for baseline emissions, as provided in the Monitoring report /1/ and confirmed with the TRF-VPAs /B04/ and the methodology AMS-II.G, Version 05 /B02/, are:</p> <p>SDG 13: Climate Action</p> $ER_y = \sum ER_{y,i}$ <p>Where:</p> <p>ER_y Emission reductions during year y in tCO_{2e}</p> <p>$ER_{y,i}$ Emission reductions by project device of type i during year y in tCO_{2e}</p> <p>As per equation 1 of AMS-II.G Version 05, the emissions reductions created by the Mirt and Tikikil project cook stoves implemented by the VPA are calculated as follows:</p> $ER_y = (B_{y,savings} \times N_y \times U_y) \times (f_{NRB,y} \times NCV_{biomass} \times EF_{projected_fossilfuel})$ <p>Where:</p> <p>ER_y =Emission reductions during the year y in tCO_{2e}</p> <p>$B_{y,savings}$ =Quantity of woody biomass that is saved in tonnes per appliance</p> <p>$f_{NRB,y}$ =Fraction of woody biomass saved by the project activity in period y that can be established as non-renewable biomass</p> <p>$NCV_{biomass}$ = Net calorific value of the non-renewable woody biomass that is substituted (IPCC default for wood fuel, 0.015 TJ/tonne)</p> <p>$EF_{projected_fossilfuel}$ = Emission factor for the substitution of non-renewable woody biomass by similar consumers (Default value of 81.6 tCO₂/TJ).</p> <p>N_y = Number of appliances of the type being deployed during the period y as part of the SSC-VPA</p> <p>From the above equation and the parameter values, emission reductions for the monitoring period 01/01/2022 to 31/12/2022 are calculated as:</p> <table border="1"> <thead> <tr> <th>Specific-case VPA reference number</th> <th>Emission Reductions (tCO_{2e})</th> </tr> </thead> <tbody> <tr> <td>VPA 1 (GS11147)</td> <td>34,705</td> </tr> <tr> <td>VPA 2 (GS11148)</td> <td>33,055</td> </tr> <tr> <td>VPA 3 (GS11149)</td> <td>32,765</td> </tr> <tr> <td>Total</td> <td>100,525</td> </tr> </tbody> </table> <p>The verification team confirms that the calculation of baseline emission and emission reductions is in accordance with the applied methodological equation and</p>	Specific-case VPA reference number	Emission Reductions (tCO _{2e})	VPA 1 (GS11147)	34,705	VPA 2 (GS11148)	33,055	VPA 3 (GS11149)	32,765	Total	100,525
Specific-case VPA reference number	Emission Reductions (tCO _{2e})										
VPA 1 (GS11147)	34,705										
VPA 2 (GS11148)	33,055										
VPA 3 (GS11149)	32,765										
Total	100,525										

	<p>the TRF-VPAs. Calculations have been checked and confirmed from the ER spread sheet /2/.</p> <p>The verification took cognizance of § 356 of CDM VVS for PoAs, version 03.0 /B01/ and GS4GG requirements /B08/.</p>
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E.3.5.2. Calculation of project GHG emissions or actual net GHG removals by sinks

Means of verification	Document Review, Interview
Findings	-
Conclusion	There are no project emissions identified in the monitoring methodology /B02/ and the TRF-VPAs /B04/ and GS4GG requirements/B08/.

E.3.5.3. Calculation of leakage GHG emissions

Means of verification	Document Review, Interview
Findings	-
Conclusion	<p>Net-to-gross adjustment factors for leakage (fixed default values of 0.95 as per AMS II.G. version 05) /B02/ was applied to the project activity to calculate Emission Reductions of this Monitoring Period.</p> <p>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 TRF-VPAs /B04/.</p>

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

Means of verification	Document Review, Interview
Findings	-
Conclusion	<p>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 TRF-VPAs. The total number of ERs achieved during the monitoring period is 100,525 tCO₂e.</p> <p>In summary, verification team confirms that actual emission reduction is lower than the estimate of the TRF-VPAs /B04/ for the current monitoring period.</p> <p>The verification took cognizance of § 356 of CDM VVS PoAs, version 03 /B01/ and GS4GG requirements /B08/.</p>

Title and GS4GG 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)		
				Up to 31/12/2012	From 01/01/2013	Total amount
VPA 1 (GS11147)	34,705	-	-	0	34,705	34,705
VPA 2 (GS11148)	33,055	-	-	0	33,055	33,055
VPA 3 (GS11149)	32,765	-	-	0	32,765	32,765
Total	100,525	0	0	0	100,525	100,525

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 /B01/ and GS4GG requirements /B08/.

Title and UNFCCC reference number of the VPA	Actual values achieved by the VPAs during this monitoring period (tCO _{2e})	Value estimated in ex ante calculation in the included VPA-DD(s) (tCO _{2e})
VPA 1 (GS11147)	34,705	40,183
VPA 2 (GS11148)	33,055	40,183
VPA 3 (GS11149)	32,765	40,183
Total	100,525	120,549

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 in the VPA-DDs.

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

Means of verification	Document Review, Interview
Findings	-
Conclusion	<p>The Verification team confirms that the data and parameters monitored related to sustainable development co-benefits are in compliance with the TRF-VPAs and the monitoring plan /B04/. A complete assessment of each of the monitored parameters has been provided in Appendix 6 of the verification report.</p> <p>The verification took cognizance of § 344, § 345(c), §356 and §357 of CDM VVS for PoAs, Version 03.0 /B01/ GS4GG Requirements/B08/.</p>

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 second verification of the GS Programme of Activities "Energy Efficient Stoves Program" in Ethiopia (hereafter referred to as "Programme of Activities or PoA") for the VPAs 1 to 3 (GS 11147 to 11149).

The verification team assigned by the VVB concludes that the TRF-PoA (Version 4.0, dated 14/11/2022), VPAs 1 to 3 (GS 11147 to 11149) as described in the TRF-VPAs /B04/ and the Monitoring report (Version 02, dated 01/11/2023) /01/, meet all relevant GS4GG requirements /B08/ and requirements of the UNFCCC for CDM project activities including article 12 of the Kyoto Protocol and §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. The verification has been conducted in-line with the CDM VVS for programme of activities requirements version 03.0 /B01/.

Verification methodology and process:

The Verification team confirms the contractual relationship signed on 18/08/2023 between the VVB, Carbon Check (India) Private Ltd. and the Co-ordinating Managing Entity/Project Participant, (World Vision Australia) /17/. The team assigned to the verification meets the Carbon Check (India) Private Ltd.'s internal procedures including the UNFCCC and GS requirements for the 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 is being performed as per the requirements described in the CDM VVS for PoAs, version 03.0 /B01/ and GS4GG requirements and constitutes the review and completion of the following steps:

- Reviewing the TRF-PoA (Version 4.0, dated 14/11/2022), the TRF-VPAs for GS 11147 to GS 11149 /B04/, including the monitoring plan and the corresponding validation report/s /B04/;
- Previous CDM 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 (AMS-II.G, version 05);
- Review of any CMP and EB decisions, clarifications and guidance;
- On-site assessment interviews (02/10/2023 to 04/10/2023)
- 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 the TRF-VPAs. The monitoring system was installed, maintained in a proper manner, while collected monitoring data allowed for the verification of the amount of achieved GHG emission reductions. Through the review and on-site interviews, the verification team confirms that the PoA has resulted in the 100,525 tCO_{2e} emission reductions for the period 01/01/2022 - 31/12/2022 (inclusive of both the dates) during the first monitoring period for GS 11147 to GS 11149 and achieved SDG benefits as detailed in Appendix 6.

Verified emission reductions:

Specific-case VPA reference number	Emission Reductions (tCO _{2e})
VPA 1 (GS11147)	34,705
VPA 2 (GS11148)	33,055
VPA 3 (GS11149)	32,765
Total	100,525

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

SECTION H. Certification statement

>>

Carbon Check (India) Private Ltd., the VVB, has performed the verification of the GS Programme of Activities, GS 11146, “Energy Efficient Stoves Program” in Ethiopia. The aim of the PoA is to enhance the penetration of efficient cookstoves by offering cost-effective efficient stoves. The component project activities of the Programme of Activity are designed to generate emission reductions by distribution of the fuel-efficient cook stoves in Ethiopia. The fuel-efficient cook stoves are replacing the baseline fossil fuels-based stoves in common use (baseline scenario).

The voluntary project activities of the Programme of Activities are designed to generate emission reductions by distribution of the fuel-efficient charcoal / wood fuel-based cook stoves in Ethiopia. The CME and VPA implementer are responsible for the collection of data in accordance with the monitoring plan and the reporting of 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/ies with implementation and monitoring requirements, and to verify the actual amount of achieved emission reductions, through obtaining evidence and on-site interviews 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:

- TRF-PoA, (Version 4.0, dated 14/11/2022);
- TRF-VPAs included in the PoA and its monitoring plan for the monitoring period 01/01/2022 - 31/12/2022.
- Approved CDM monitoring methodology AMS-II.G “Energy efficiency measures in thermal applications of non-renewable biomass”, Version 05;
- Validation report for the PoA and the VPA/s;
- Monitoring report Version 2.0 dated 01/11/2023

This statement covers verification period from 01/01/2022 - 31/12/2022 (both dates included).

The VVB had raised four (04) clarification requests and one (01) corrective action request, which are resolved by the CME. No FAR was raised.

The VVB considers 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 TRF-VPAs are fairly stated.

The VVB, hereby certifies that the project activity, achieved emission reductions by sources of GHG equal to 100,525 tCO₂e for the period 01/01/2022 - 31/12/2022 (inclusive of both the dates) and achieved SDG benefits as detailed in Appendix 6 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
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
MWE	Ministry of Water and Energy
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
TRF	Transition Request Form
UNFCCC	United Nations Framework Convention on Climate Change
UQL	Unacceptable Quality Limit
VER	Verified Emission Reductions
VVS	Validation and Verification Standard
VVB	Validation & Verification Body
WBT	Water boiling test
WVA	World Vision Australia
WVE	World Vision Ethiopia

Appendix 2. Competence of team members and technical reviewers



Carbon Check (India) Private Limited

Certificate of Competency

Mr. Sanjay Agarwalla

has been qualified as per CCIPL's internal qualification procedures in accordance with the requirements of CDM AS (V7.0), ISO/IEC 14065:2020, ISO/IEC 17029:2019 and other applicable GHG programs:

for the following functions and requirements:

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

in the following Technical Areas:

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

Issue Date

1st January 2023

Expiry Date

31st December 2023



Mr. Vikash Kumar Singh
Compliance Officer



Mr. Amit Anand
CEO

CCIPL_FM 7.9 Certificate of Competency_V2.1_012023

**Carbon Check (India) Private Limited****Certificate of Competency****Mr. Manas Halder**

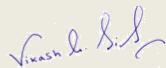
has been qualified as per CCIPL's internal qualification procedures in accordance with the requirements of CDM AS (V7.0), ISO/IEC14065:2020, ISO/IEC 17029:2019 and other applicable GHG programs:

for the following functions and requirements:

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

in the following Technical Areas:

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

Issue Date**1st January 2023****Expiry Date****31st December 2023**

Mr. Vikash Kumar Singh
Compliance Officer



Mr. Amit Anand
CEO



Carbon Check (India) Private Limited

Certificate of Competency

Temesgen Zereabruk Areaya

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

for the following functions and requirements:

- | | | | |
|---|---|--|---|
| <input type="checkbox"/> Validator | <input type="checkbox"/> Verifier | <input type="checkbox"/> Team Leader | <input type="checkbox"/> Technical Expert |
| <input type="checkbox"/> Technical Reviewer | <input type="checkbox"/> Health Expert | <input type="checkbox"/> Gender Expert | <input type="checkbox"/> Plastic Waste Expert |
| <input type="checkbox"/> SDG+ | <input type="checkbox"/> Social no-harm(S+) | <input type="checkbox"/> Environment no-harm(E+) | <input type="checkbox"/> CCB Expert |
| <input type="checkbox"/> Financial Expert | <input checked="" type="checkbox"/> Local Expert for Ethiopia | | |

in the following Technical Areas:

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

Issue Date

03rd May 2023

Expiry Date

02nd May 2024



Mr. Vikash Kumar Singh
Compliance Officer



Mr. Amit Anand
CEO

Appendix 3. Documents reviewed or referenced

No.	Title	References to the document	Provider
1	Monitoring report for first monitoring period	Version 1.0, dated 12/09/2023 Version 2.0, dated 01/11/2023	CME
2	Emission reduction calculation spread sheets for the three VPAs corresponding to /1/	-	CME
3	Evidence for the stove specifications for stove types Mirt and Tikikil distributed in the three VPAs of the PoA	-	CME
4	Cook stoves distribution / sales records for the three VPAs of the PoA Energy Efficient Stoves Program (EESP) PoA Reference Number 11146 (both Mirt and Tikikil type): 1. Energy Efficient Stoves Program - VPA 1 (11147) 2. Energy Efficient Stoves Program - VPA 2 (11148) 3. Energy Efficient Stoves Program - VPA 3 (11149)	-	CME
5	Training records of surveying personnel.	-	CME
6	Letter from Ministry of Water and Energy authorizing the WBT/CCT team for conducting the tests for World Vision project based on its expertise	-	CME
7	Monitoring survey questionnaire template and survey results with scanned copies of the surveys conducted.	-	CME
8	Calibration records status for all the monitoring equipment used during the monitoring period (WBT and CCT)	-	CME
9	Evidence of randomness of the sample taken for POSG and PESG parameters		CME
10	1. WBT and CCT reports for Tikikil and Mirt stoves respectively for the monitoring period (PESG) 2. WBT and CCT raw data sheets for Tikikil and Mirt stoves respectively for the monitoring period (PESG)		
11	Sample copy of contract with stove manufacturers	-	CME
12	CME monitoring manual /User Manual and Procedure for PoA Data Quality Check	-	CME
13	Competence of the persons who conducted WBT/CCT	-	CME
14	Copy of the WBT and CCT protocols for conducting WBTs and CCTs for the cook stoves	-	CME
15	Sample end user sales agreement/receipt cum carbon credit waiver copies	-	CME
16	Employee records	-	CME
17	Copy of engagement contract between CCIPL and World Vision Australia, dated 30/01/2023	-	CME
18	Sample size and precision level achieved calculator for the monitoring period		
19	Copy of contract in between CME and Carbon & Clean Energy Solutions Pty Ltd for the CDM CPA implementation (for CPAs 9769-0001, 9769-0002 and 9769-0003)		
20	Organization structure		
21	Evidence for VPA design certification date		
22	Stakeholder consultation report and grievance book		

B01	<ul style="list-style-type: none"> a) Validation and Verification Standard for PoAs, version 03 b) Project Standard for PoAs, version 03 c) Modalities and Procedures (Annex of Decision 3/CMP.1) 	http://cdm.unfccc.int/	Others
B02	Applied baseline and monitoring methodology, “AMS-II.G, version 05.0 “Energy efficiency measures in thermal applications of non-renewable biomass”	http://cdm.unfccc.int/	Others
B03	<ul style="list-style-type: none"> a) Template Monitoring Report, version 1.1 b) Template guide Monitoring Report, version 1.1 	www.goldstandard.org	Others
B04	Registered GS PoA-DD and VPA-DDs and corresponding Validation Reports	-	Others
B05	Websites: http://cdm.unfccc.int/ http://www.ipcc-nggip.iges.or.jp/ http://www.pciaonline.org/testing http://circodu.org.ug/	--	Others
B06	Guidelines: Sampling and surveys for CDM project activities and programmes of activities (version 04.0)	http://cdm.unfccc.int/	Others
B07	Standard: Standard for sampling and surveys for CDM project activities and Programme of Activities (version 09.0)	www.goldstandard.org	Others
B08	<ul style="list-style-type: none"> a) GS4GG “Principles & Requirements”, version 1.2 b) GS4GG “Programme of Activity Requirements”, version 1.2 c) GS4GG “Community Services Activity Requirements”, version 1.2 d) GS4GG “GHG Emissions Reduction & Sequestration Product Requirements, version 2.0 e) GS4GG “Safeguarding Principles & Requirements”, version 1.2 	--	Others
B09	Monitoring Reports and Verification Reports of the previous monitoring periods for the CDM PoA 9956	http://cdm.unfccc.int/	Others
B10	Site Visit and remote audit requirements and procedures (Version 2.0)	https://www.goldstandard.org/	Others

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

Table 1. Remaining FARs from validation and/or previous verification

Nil.

Table 2. CAR from this verification

CAR ID	CAR 01	Section no.	E.1.1	Date: 20/10/2023
Description of CAR				
PP has not deleted the 'Key project Information guideline box' in MR as per the MR completing guidelines.				
Project participant response				Date: 01/11/2023
The guideline box in the MR has been deleted.				
Documentation provided by project participant				
MR Version 02				
VVB assessment				Date: 05/11/2023
PP has deleted the 'Key project Information guideline box' in MR. Hence CAR 01 is closed.				

Table 3. CLs from this verification

CL ID	CL 01	Section no.	E.3.1	Date: 20/10/2023
Description of CL				
In the ER spread sheets provided for the three VPAs, it is noted that in few of the cases even where the stoves are not replaced, but a new stove number have been provided. Clarification is requested.				
Project participant response				Date: 01/11/2023
The aforementioned instances occurred due to typographical errors found in "Column S" and "Column X" within the ER spreadsheets, which have since been rectified in the updated version of the ER spreadsheets.				
Documentation provided by project participant				
VPA 1_VER Calculation_MP2_301023 VPA 2_VER Calculation_MP2_301023 VPA 3_VER Calculation_MP2_301023				
VVB assessment				Date: 05/11/2023
PP has clarified that there were typographical errors in some cases which have now been rectified and columns 'S' and 'X' of the revised ER spreadsheets for each of the three VPAs now correctly reflect whether the stoves were replaced or not. Hence CL 01 is closed.				

CL ID	CL 02	Section no.	E.3.1	Date: 20/10/2023
Description of CL				
PP need to correct the term 'Mirt' to 'Tikikil' in cell F25 of "ER Calculation_VPA 1" Tab in ER sheet "VPA 1_VER Calculation_MP2_12923".				
Project participant response				Date: 01/11/2023
PP has corrected the term "Mirt" to "Tikikil" in cell F25 of the VPA 1 ER Spreadsheet.				
Documentation provided by project participant				
VPA 1_VER Calculation_MP2_301123				
VVB assessment				Date: 05/11/2023
PP has corrected the term 'Mirt' to 'Tikikil' in cell F25 of "ER Calculation_VPA 1" Tab in ER sheet "VPA 1_VER Calculation_MP2_301023". Hence CL 02 is closed.				

CL ID	CL 03	Section no.	E.3.3.3	Date: 20/10/2023
Description of CL				
CME is requested to provide evidence for random number generator for selecting samples for monitoring surveys.				
Project participant response				Date: 01/11/2023
The evidence of random number generator for selecting samples for monitoring surveys is provided in the spreadsheets outlined below.				
Documentation provided by project participant				
PESG_Mirt_Random number generator_15062023 PESG_Tikikil_Random number generator_15062023 POSG Random number generator_15062023				
VVB assessment				Date: 05/11/2023
PP has provided the evidence of random number generator for selecting samples for monitoring surveys and verification team has reviewed the documents and found those to be correct and acceptable. Hence CL 03 is closed.				

CL ID	CL 04	Section no.	E.3.5.1	Date: 20/10/2023
Description of CL				
The value of specific fuel consumption in the reliability test and sample size calculation excel sheet for CCT is inconsistent with CCT report. Similarly, the value of overall thermal efficiency in the reliability test and sample size calculation Excel sheet for WBT is inconsistent with WBT report. CME is requested to clarify this.				
Project participant response				Date: 01/11/2023
PP has corrected the CCT value in the spreadsheet, which is now in line with the CCT report. Similarly, PP has corrected the overall thermal efficiency values, which is now in line with the WBT report. These changes have resulted in a change in the final value of the ER, which has been updated in the revised ER spreadsheets.				
Documentation provided by project participant				
Reliability test_ and Sample Size Calculation_WBT and CCT_MP2_301023 VPA 1_VER Calculation_MP2_301023 VPA 2_VER Calculation_MP2_301023 VPA 3_VER Calculation_MP2_301023				
VVB assessment				Date: 05/11/2023
PP has corrected the CCT value in the spreadsheet and overall thermal efficiency values in the spreadsheet, which are now in line with the CCT and WBT reports. The verification team has reviewed the same and these changes have resulted in a change in the final value of the ER, which has been updated in the revised ER spreadsheets. Hence CL 04 is closed.				

Table 4. FARs from this verification

Nil.

Appendix 5. Data and parameters fixed ex ante

SDG 13: Climate Action

Parameter	Efficiency of the system being replaced (η_{old})
Data unit:	Percentage
Default values used:	10%
Purpose of data	Baseline emissions calculation
Source and Verification of the source	The value of this parameter is fixed ex-ante /B04/.

Parameter	Specific fuel consumption of the baseline devices (SC_{old})
Data unit:	g/kg
Default values used:	1,031
Purpose of data	Baseline emissions calculation
Source and Verification of the source	The value of this parameter is fixed ex-ante /B04/.

Parameter	Net to gross adjustment factor to account for leakages (L_y)
Data unit:	Fraction
Default values used:	0.95
Purpose of data	Baseline emissions calculation
Source and Verification of the source	The value of this parameter is fixed ex-ante /B04/.

Parameter	Net calorific value for biomass used as cooking fuel ($NCV_{biomass}$)
Data unit:	TJ/tonne
Default values used:	0.015
Purpose of data	Baseline emissions calculation
Source and Verification of the source	The value of this parameter is fixed ex-ante /B04/.

Parameter	Emission factor for the substitution of non-renewable woody biomass by similar consumers ($EF_{projected_fossil_fuel}$)
Data unit:	tCO ₂ /TJ
Default values used:	81.60
Purpose of data	Baseline emissions calculation
Source and Verification of the source	The value of this parameter is fixed ex-ante /B04/.

Parameter	Fraction of woody biomass saved by the project activity in year y that can be established as non-renewable biomass. ($f_{NRB,y}$)
Data unit:	%
Default values used:	76
Purpose of data	Baseline emissions calculation
Source and Verification of the source	The value of this parameter is fixed ex-ante /B04/.

Parameter	Average number of eaters (residents) per household ($N_{eaters,household}$)
Data unit:	-
Default values used:	6
Purpose of data	Baseline emissions calculation
Source and Verification of the source	The value of this parameter is fixed ex-ante /B04/.

Parameter	The proportion of household fuel wood consumed by stove type i ($FW_{proportion,Mirt}$)
Data unit:	%
Default values used:	49.91
Purpose of data	Baseline emissions calculation

Source and Verification of the source	The value of this parameter is fixed ex-ante /B04/.
---------------------------------------	---

Parameter	The proportion of household fuel wood consumed by stove type i ($FW_{proportion, Tikiki}$)
Data unit:	%
Default values used:	41.50
Purpose of data	Baseline emissions calculation
Source and Verification of the source	The value of this parameter is fixed ex-ante /B04/.

Parameter	Host country national fuel wood consumption in tonnes during year y ($HC_{fuelwood, usage, y}$)
Data unit:	Tonnes
Default values used:	55,325,475
Purpose of data	Baseline emissions calculation
Source and Verification of the source	The value of this parameter is fixed ex-ante /B04/.

Parameter	Host country national population in year y . ($HC_{population, y}$)
Data unit:	-
Default values used:	73,750,932
Purpose of data	Baseline emissions calculation
Source and Verification of the source	The value of this parameter is fixed ex-ante /B04/.

Appendix 6. Data and parameters monitored

SDG 13, SDG 7 & SDG 8:

Monitoring Parameter Requirement	Assessment/ Observation by the VVB										
Data / Parameter: (as in monitoring plan of VPA-DD):	Number of Mirt stoves that are operating in year y ($N_{y,Mirt}$)										
Measuring frequency/Time Interval:	Annually										
Reporting frequency:	Annually										
Reported value:	<table border="1"> <thead> <tr> <th>VPA Reference No.</th> <th>Number of ICS Distributed</th> </tr> </thead> <tbody> <tr> <td>VPA 1 (GS 11147)</td> <td>15,629</td> </tr> <tr> <td>VPA 2 (GS 11148)</td> <td>14,855</td> </tr> <tr> <td>VPA 3 (GS 11149)</td> <td>14,726</td> </tr> <tr> <td>TOTAL</td> <td>45,210</td> </tr> </tbody> </table>	VPA Reference No.	Number of ICS Distributed	VPA 1 (GS 11147)	15,629	VPA 2 (GS 11148)	14,855	VPA 3 (GS 11149)	14,726	TOTAL	45,210
VPA Reference No.	Number of ICS Distributed										
VPA 1 (GS 11147)	15,629										
VPA 2 (GS 11148)	14,855										
VPA 3 (GS 11149)	14,726										
TOTAL	45,210										
Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	Yes										
Details of monitoring equipment:	Calculated using the data from the electronic sales database										
Is accuracy of the monitoring equipment as stated in the VPA-DD? If the VPA-DD does not specify the accuracy of the monitoring equipment, does the monitoring equipment represent good monitoring practise?	An electronic sales database has been maintained for the project activity.										
Calibration frequency /interval: Is it monitoring methodology /CDM EB guidance / local or national standards / manufacturers specification	NA										
Is the calibration interval in line with the monitoring plan of the VPA-DD? If the VPA-DD does not specify the frequency of calibration, does the selected frequency represent good monitoring practise?	NA. QA/QC procedures stated in MR comply with VPA-DDs.										
Company performing the calibration (internal or external calibration):	NA										
Did calibration confirm proper functioning of monitoring equipment? (Yes / No):	NA										
Is (are) calibration(s) valid for the whole reporting period?	NA										
If applicable, has the reported data been cross-checked with other available data?	Yes, the value of parameter has been cross-checked with the monitoring database and sample households and the scanned copy records were also checked.										
How were the values in the monitoring report verified?	NA										
Does the data management (from data generation to emission reduction calculation) ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?	Yes, the data management ensures correct transfer of data and reporting of emission reductions and all necessary QA/QC processes are in place.										

In case only partial data are available because activity levels or non-activity parameters have not been monitored in accordance with the registered monitoring plan, has the most conservative assumption theoretically possible been applied or has a request for deviation been approved?	NA
--	----

Monitoring Parameter Requirement	Assessment/ Observation by the VVB
Data / Parameter: (as in monitoring plan of VPA-DD):	Number of full-time jobs
Measuring frequency/Time Interval:	Annually
Reporting frequency:	Annually
Reported value:	4
Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	Yes
Details of monitoring equipment:	-
Calibration frequency /interval: Is it monitoring methodology /CDM EB guidance / local or national standards / manufacturers specification	NA
Is the calibration interval in line with the monitoring plan of the VPA-DD? If the VPA-DD does not specify the frequency of calibration, does the selected frequency represent good monitoring practise?	NA.
Company performing the calibration (internal or external calibration):	NA
Did calibration confirm proper functioning of monitoring equipment? (Yes / No):	NA
Is (are) calibration(s) valid for the whole reporting period?	NA
If applicable, has the reported data been cross-checked with other available data?	Yes, the value of parameter has been cross-checked with the database.
How were the values in the monitoring report verified?	NA
Does the data management (from data generation to emission reduction calculation) ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?	Yes, the data management ensures correct transfer of data and reporting of emission reductions and all necessary QA/QC processes are in place.
In case only partial data are available because activity levels or non-activity parameters have not been monitored in accordance with the registered monitoring plan, has the most conservative assumption theoretically possible been applied or has a request for deviation been approved?	NA

Monitoring Parameter Requirement	Assessment/ Observation by the VVB
Data / Parameter: (as in monitoring plan of VPA-DD):	Number of Tikikil stoves that are operating in year y ($N_{y,Tikikil}$)
Measuring frequency/Time Interval:	Annually
Reporting frequency:	Annually

Reported value:	<table border="1"> <thead> <tr> <th>VPA Reference No.</th> <th>Number of ICS Distributed</th> </tr> </thead> <tbody> <tr> <td>VPA 1 (GS 11147)</td> <td>15,642</td> </tr> <tr> <td>VPA 2 (GS 11148)</td> <td>14,939</td> </tr> <tr> <td>VPA 3 (GS 11149)</td> <td>14,806</td> </tr> <tr> <td>TOTAL</td> <td>45,387</td> </tr> </tbody> </table>	VPA Reference No.	Number of ICS Distributed	VPA 1 (GS 11147)	15,642	VPA 2 (GS 11148)	14,939	VPA 3 (GS 11149)	14,806	TOTAL	45,387
	VPA Reference No.	Number of ICS Distributed									
	VPA 1 (GS 11147)	15,642									
	VPA 2 (GS 11148)	14,939									
	VPA 3 (GS 11149)	14,806									
TOTAL	45,387										
Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	Yes										
Details of monitoring equipment:	Calculated using the data from the electronic sales database										
Is accuracy of the monitoring equipment as stated in the VPA-DD? If the VPA-DD does not specify the accuracy of the monitoring equipment, does the monitoring equipment represent good monitoring practise?	An electronic sales database has been maintained for the project activity.										
Calibration frequency /interval: Is it monitoring methodology /CDM EB guidance / local or national standards / manufacturers specification	NA										
Is the calibration interval in line with the monitoring plan of the VPA-DD? If the VPA-DD does not specify the frequency of calibration, does the selected frequency represent good monitoring practise?	NA. QA/QC procedures stated in MR comply with VPA-DDs.										
Company performing the calibration (internal or external calibration):	NA										
Did calibration confirm proper functioning of monitoring equipment? (Yes / No):	NA										
Is (are) calibration(s) valid for the whole reporting period?	NA										
If applicable, has the reported data been cross-checked with other available data?	Yes, the value of parameter has been cross-checked with the monitoring database and sample households and the scanned copy records were also checked.										
How were the values in the monitoring report verified?	NA										
Does the data management (from data generation to emission reduction calculation) ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?	Yes, the data management ensures correct transfer of data and reporting of emission reductions and all necessary QA/QC processes are in place.										
In case only partial data are available because activity levels or non-activity parameters have not been monitored in accordance with the registered monitoring plan, has the most conservative assumption theoretically possible been applied or has a request for deviation been approved?	NA										

Monitoring Parameter Requirement	Assessment/ Observation by the VVB
Data / Parameter: (as in monitoring plan of VPA-DD):	Efficiency of the Tikikil stove being deployed as part of the project activity in year y ($\eta_{new, Tikikil, y}$)
Measuring frequency/Time Interval:	Annual
Reporting frequency:	Annual

Reported value:	VPA 1, VPA 2 and VPA 3: 24.33%
Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	Yes
Details of monitoring equipment:	<p>The stove efficiency testing has been determined by WBTs conducted in line with the guidance provided by the CME in the VPA-DDs /B04/ /10/. Water Boiling Test (WBT) v.3.0. of Shell Foundation's Household Energy Program was used to carry out the WBT. The monitoring equipment used for conducting the stove efficiencies by WBTs are thermometer, weighing scale, standard mass and moisture meter. The equipment was either externally calibrated or were newly purchased at the time of use so measurements were done with the necessary guarantees /8/.</p> <p>QA/QC procedures stated in MR comply with VPA-DDs and the details of equipment used for conducting WBT is as follows:</p> <ol style="list-style-type: none"> 1. Digital thermometer/Serial Number: 801613685/Date of Calibration: 26/04/2023 2. Digital thermometer/Serial Number:801613681/ Date of Calibration: 26/04/2023 3. Digital Balance/ Certificate Number: OBL-0086/ Date of Calibration: 26/07/2023 4. Digital Balance/ Certificate Number: OBL-0087/ Date of Calibration: 26/07/2023 5. Digital Balance/ Certificate Number: OBL-0088/ Date of Calibration: 26/07.2023 6. Digital Balance/ Certificate Number: OBL-0089/Date of Calibration: 26/07/2023
Is accuracy of the monitoring equipment as stated in the VPA-DD? If the VPA-DD does not specify the accuracy of the monitoring equipment, does the monitoring equipment represent good monitoring practise?	VPA-DDs do not specify the accuracy of the monitoring equipment (thermometer, mass balance and moisture meter). Verification team confirms that the accuracy of the monitoring equipment used represent good monitoring practice based on sectoral expertise.
Calibration frequency /interval: Is it monitoring methodology /CDM EB guidance / local or national standards / manufacturers specification	The equipment used has valid calibration certificate for the monitoring period.
Is the calibration interval in line with the monitoring plan of the VPA-DD? If the VPA-DD does not specify the frequency of calibration, does the selected frequency represent good monitoring practise?	The exact calibration interval has not been provided in the registered CDM CPA-DD and the monitoring equipment to be used by the surveyor are to be calibrated as per manufacturer guidance. However, since all equipment are calibrated prior to use, the selected frequency represents good monitoring practice.
Company performing the calibration (internal or external calibration):	External.
Did calibration confirm proper functioning of monitoring equipment? (Yes / No):	Yes, the calibration confirmed proper functioning of the monitoring equipment.
Is (are) calibration(s) valid for the whole reporting period?	Yes, the calibration is valid for the whole monitoring period.
If applicable, has the reported data been cross-checked with other available data?	The data has been cross-checked with the WBT test documents /10/. For the stove efficiency parameter,

	<p>WBT have been performed and this has been checked by the verification team with the related spreadsheets. Furthermore, the verification team has cross checked all the raw data input records in the WBT calculation spread sheets including the calculation procedure for the sampled households and found them to be correct. All the raw data forms for the WBT carried out for efficiency parameter were checked by the verification team and thus no sampling of data is required.</p> <p>Correctness of the stove thermal efficiency values were verified by the verification team based on the review of the WBT calculation spread sheet for correctness of calculations in line with WBT protocol, original test records and review of measuring equipment used during WBTs for calibration and accuracy.</p>
How were the values in the monitoring report verified?	The reported data has been cross-checked against the raw data sheets for the WBTs and calculation sheets /10/ and compared with the ER sheet /02/ and the MR /01/.
Does the data management (from data generation to emission reduction calculation) ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?	<p>Yes.</p> <p>As the monitoring parameter under consideration is determined by standardized test procedures (WBT), the QA/QC and calibrations are at the test conduction by the measuring team for WBT. Accordingly, the verification team has focused on abilities, qualifications and recognition of involved personnel and institutions of the measuring team involved in the WBT. The WBT has been carried out by the well-trained personnel and training certificate of the personnel has been provided to the verification team in this respect /5/. The training content /5/ has also been provided to the verification team. The verification team based on on-site interviews and review of competency documents /13/ and training records /5/ confirms that the team was qualified to carry out the WBT in line with the protocol.</p>
In case only partial data are available because activity levels or non-activity parameters have not been monitored in accordance with the registered monitoring plan, has the most conservative assumption theoretically possible been applied or has a request for deviation been approved?	NA

Monitoring Parameter Requirement	Assessment/ Observation by the VVB
Data / Parameter: (as in monitoring plan of VPA-DD):	Specific fuel consumption in year y of the Mirt stove as part of the project that is fuel consumption per quantity of item/s processed (e.g. food cooked) ($SC_{new,Mirt,y}$)
Measuring frequency/Time Interval:	Annual
Reporting frequency:	Annual
Reported value:	VPA 1, VPA 2 and VPA 3: 381.72 g/kg
Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	Yes
Details of monitoring equipment:	The specific fuel consumption has been determined by CCTs conducted in line with the guidance provided by the CME in the VPA-DDs /B04/ /10/. Controlled

	<p>Cooking Test (CCT) protocol, version 2.0, by the Shell Foundation was used to carry out the CCT. The equipment used for CCTs was either externally calibrated or were newly purchased at the time of use, so measurements were done with the necessary guarantees /8/.</p> <p>QA/QC procedures stated in MR comply with VPA-DDs and the details of equipment used for conducting CCT is as follows:</p> <ol style="list-style-type: none"> 1. Digital thermometer/Serial Number: 801613685/Date of Calibration: 26/04/2023 2. Digital thermometer/Serial Number:801613681/ Date of Calibration: 26/04/2023 3. Digital Balance/ Certificate Number: OBL-0086/ Date of Calibration: 26/07/2023 4. Digital Balance/ Certificate Number: OBL-0087/ Date of Calibration: 26/07/2023 5. Digital Balance/ Certificate Number: OBL-0088/ Date of Calibration: 26/07.2023 6. Digital Balance/ Certificate Number: OBL-0089/Date of Calibration: 26/07/2023
<p>Is accuracy of the monitoring equipment as stated in the VPA-DD? If the VPA-DD does not specify the accuracy of the monitoring equipment, does the monitoring equipment represent good monitoring practise?</p>	<p>VPA-DDs do not specify the accuracy of the monitoring equipment. Verification team confirms that the accuracy of the monitoring equipment used represent good monitoring practice based on sectoral expertise.</p>
<p>Calibration frequency /interval: Is it monitoring methodology /CDM EB guidance / local or national standards / manufacturers specification</p>	<p>The equipment used has valid calibration certificate for the monitoring period.</p>
<p>Is the calibration interval in line with the monitoring plan of the VPA-DD? If the VPA-DD does not specify the frequency of calibration, does the selected frequency represent good monitoring practise?</p>	<p>The exact calibration interval has not been provided in the registered CDM CPA-DD and the monitoring equipment to be used by the surveyor are to be calibrated as per manufacturer guidance. However, since all equipment are calibrated prior to use, the selected frequency represents good monitoring practice.</p>
<p>Company performing the calibration (internal or external calibration):</p>	<p>External.</p>
<p>Did calibration confirm proper functioning of monitoring equipment? (Yes / No):</p>	<p>Yes, the calibration confirmed proper functioning of the monitoring equipment.</p>
<p>Is (are) calibration(s) valid for the whole reporting period?</p>	<p>Yes, the calibration is valid for the whole monitoring period.</p>
<p>If applicable, has the reported data been cross-checked with other available data?</p>	<p>The data has been cross-checked with the CCT test documents /10/. For the specific fuel consumption parameter, CCT have been performed and this has been checked by the verification team with the related spreadsheets. Furthermore, the verification team has cross checked all the raw data input records in the CCT calculation spread sheets including the calculation procedure for the sampled households and found them to be correct. All the raw data forms for the CCT carried out for efficiency parameter were checked by the verification team and thus no sampling of data is required.</p>

	Correctness of the specific fuel consumption values were verified by the verification team based on the review of the CCT calculation spread sheet for correctness of calculations in line with CCT protocol, original test records and review of measuring equipment used during CCTs for calibration and accuracy.
How were the values in the monitoring report verified?	The reported data has been cross-checked against the raw data sheets for the CCTs and calculation sheets /10/ and compared with the ER sheet /02/ and the MR /01/.
Does the data management (from data generation to emission reduction calculation) ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?	Yes. As the monitoring parameter under consideration is determined by standardized test procedures (CCT), the QA/QC and calibrations are at the test conduction by the measuring team for CCT. Accordingly, the verification team has focused on abilities, qualifications and recognition of involved personnel and institutions of the measuring team involved in the CCT. The CCT has been carried out by the well-trained personnel and training certificate of the personnel has been provided to the verification team in this respect /5/. The training content /5/ has also been provided to the verification team. The verification team based on on-site interviews and review of competency documents /13/ and training records /5/ confirms that the team was qualified to carry out the CCT in line with the protocol.
In case only partial data are available because activity levels or non-activity parameters have not been monitored in accordance with the registered monitoring plan, has the most conservative assumption theoretically possible been applied or has a request for deviation been approved?	NA

Sustainable Development Contributions Achieved

Sustainable Development Goals Targeted	SDG Impact	Amount achieved	Units/products
13 Climate Action (mandatory)	Amount of CO _{2e} emissions reduced by the project	VPA 1: 34,705 VPA 2: 33,055 VPA 3: 32,765	tCO ₂ (eq) VERs
7 Affordable and Clean Energy	Increased access to energy	VPA 1: 16,651 VPA 2: 15,903 VPA 3: 15,844	%
8 Decent Work and Economic Growth	Increased employment opportunities	VPA 1: 4 VPA 2: 4 VPA 3: 4	Number

Furthermore, during on-site interviews it was confirmed that no disputes, inputs and comments have been received via the Continuous Input and Grievance Mechanism during the monitoring period.

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	The PoA and CME both respect human rights and are not complicit in violence or human rights abuses.	The PoA involves dissemination of improved cookstove which users are free to choose. This project is a voluntary action by the project developer and no risk and issues to the internationally proclaimed human rights are expected from this project. The PoA and CME both respect human rights and are not complicit in violence or human rights abuses. No mitigation measure required. The validation team confirms that PoA fulfils the GS requirement outlined in the para 3.1.1 of the GS4GG safeguarding principles requirements version 1.2 /B08/.
	2. The Project shall not discriminate with regards to participation and inclusion	The PoA does not discriminate with regards to participation and inclusion	The PoA involves dissemination of improved cookstove which users are free to choose. There is no discrimination against any person or group regarding the possibility to buy a stove. No mitigation measure required. The validation team confirms that PoA fulfils the GS requirement outlined in the para 3.1.2 of the GS4GG safeguarding principles requirements version 1.2 /B08/.
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 – adopt project measures where possible to support to women's access to inherit and own land, homes, and other assets or natural resources.	Not relevant	This is not relevant for the project activity.
	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 /B08/.
	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	The PoA reduces exposure to indoor air pollutants and smoke levels, further reducing incidence of respiratory illness compared to cooking on traditional biomass stoves using solid biomass fuel.	The improved cookstove will help to improve the air quality by reducing air pollution and thus avoids community exposure to increased health risks. The validation team confirms that PoA fulfils the GS requirement outlined in the para 3.3.1 of the GS4GG safeguarding principles requirements version 1.2 /B08/.
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	The CME does not promote / or is complicit in direct or indirect corruption.	The PoA does not in any way promote or complicity corruption. The validation team confirms that PoA fulfils the GS requirement outlined in the para 3.5.1 of the GS4GG safeguarding principles requirements version 1.2 /B08/.
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	The PoA does not involve any forced labour and the PP ensures that all employment is in compliance with local labour regulations and laws.	The PoA does not involve any kind of forced labour or compulsory labour. The validation team confirms that PoA fulfils the GS certification requirement outlined in the para 3.6.1 of the GS4GG safeguarding principles requirements version 1.2 /B08/.

	<p>2. Workers shall be able to establish and join labour organisations</p>	<p>The CME puts no constraints / limitation on employees to form a union.</p>	<p>The CME does not limit any of the employees to form unions or join labour organizations. The validation team confirms that PoA fulfils the GS certification requirement outlined in the para 3.6.1 of the GS4GG safeguarding principles requirements version 1.2 /B08/.</p>
	<p>3. Working agreements with all individual workers shall be documented and implemented and include:</p> <ul style="list-style-type: none"> 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. 	<p>The CME's policies and employment contracts are compliant with the requirement</p>	<p>The PoA does not involve any kind of forced labour or compulsory labour. The CME has submitted HR Policy & Employee Handbook and also Employee in this respect. The validation team confirms that PoA fulfils the GS requirement outlined in the para 3.6.1 (b) of the GS4GG safeguarding principles requirements version 1.2 /B08/.</p>
	<p>4. No child labour is allowed (Exceptions for children working on their families' property requires an Expert Stakeholder opinion)</p>	<p>The CME does not promote / or is complicit in child labour</p>	<p>The PoA does not involve any kind of child labour and the CME shall take adequate steps to ensure the age verification process is thoroughly carried out while recruitment. The validation team confirms that PoA fulfils the GS requirement outlined in the para 3.6.2 of the GS4GG safeguarding principles requirements version 1.2 /B08/.</p>
	<p>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</p>	<p>Not relevant</p>	<p>This is not relevant for the project activity.</p>

Principle 6.2 Negative Economic Consequences	Does the project cause negative economic consequences during and after project implementation?	No negative economic consequences are deemed applicable	No negative economic consequences are deemed applicable. This is not relevant for the project activity.
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 /B08/
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 disrupt the natural pattern of erosion?	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 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 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 1.2 /B08/.
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	Will the Project be susceptible to or lead to increased vulnerability to wind, earthquakes, subsidence, landslides,	Not applicable	This is not relevant for the project activity.

Natural Disaster	erosion, flooding, drought or other extreme climatic conditions?		
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?	The PoA reduces indoor air pollution relative to baseline scenario	The project involves dissemination of improved cookstove which will reduce indoor air pollution compared to the baseline scenario. 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 /B08/.
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 Does the Project potentially impact other areas where endangered species may be present through transboundary affects?	Not applicable	This is not relevant for the project activity.

APPENDIX 8: Gold Standard Verification Protocol

CC IPL's Checklist question	Ref.	MoV ²	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?	/1/	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?	/1/	DR	Methods to monitor data have not changed as compared with the monitoring plan in the registered passport and monitoring plan.	OK	OK

² MoV = Means of Verification, DR = Document Review, I = Interview, www = internet search.

CC IPL's Checklist question	Ref.	MoV ²	Findings, comments, references, data sources	Draft conclusion	Final conclusion
1.3 Has the way of monitoring been followed? With the inclusion of dates and parameters?	/1/	DR	The sustainability monitoring plan has been followed as per described in the Passport.	OK	OK
1.4 Have mitigation measures been put in place to prevent the risk of the violation of the safe guarding principle of "Do No Harm" assessment or to neutralise a Sustainable Development Indicator that is being monitored?	/1/	DR	The mitigation measures have been put in place that has been put in records as a proof of the same. Several supporting documents as listed under Appendix 3 have been provided. Also, the on-site interview of the households and interviews of the trained personals of PP were performed during an on-site interview.	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?	/1/	DR and on-site interview	Yes, all data in the sustainability development matrix have been verified and cross checked from the supporting documents and during on-site audit.	OK	OK
2. Other					
2.1 Are there any issues from the previous validation/verification? (ie FARs, requests / approvals for RMP)	/1/ /B03/	DR	No	OK	OK
2.2 Has the project ever received any requests for reviews or incompletes from the UNFCCC or GS Secretariat?	/1/ /B03/	DR	No there are no request for reviews or incomplete for the project.	OK	OK
2.3 The evaluation of the status of mitigation and compensation measures has been verified.	/1/ /B03/	DR	Yes, the status of mitigation and compensation measures has been verified.	OK	OK