


Verification and certification report form for programme of activities	
BASIC INFORMATION	
Title and GS reference number of the programme of activities (PoA)	Solar Cooking in Chad (POA) GS ID: 1075
Version number(s) of the PoA-DD(s) to which this report applies	Version 10.0 dated 23/09/2020
GS ID of the VPAs	(GS3445) Solar cooking in Chad, Iridimi (VPA1)
Version number of the VPA-DD(s) to which this report applies	Version 11.0, 23/09/2020
Version number of the verification and certification report	1.1
Completion date of the verification and certification report	18/08/2023
Monitoring period number and duration of this morning period	4 th Monitoring Period 01/01/2021 to 31/05/2022
Version number of the monitoring report to which this report applies	3.0 Dated 30/03/2023
Activity Requirements applied	Community Services Activities
Product Requirements applied	GHG Emission Reduction & Sequestration
Coordinating/managing entity (CME)	FairClimateFund
Host Country	Republic of Chad
Applied methodologies and standardized baselines	The Gold Standard Simplified Methodology for Efficient Cookstoves v1.1 (April 2020)
Mandatory sectoral scopes	Scope:3/technical area:3.1: -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	 Amit Anand, CEO

SECTION A. Executive summary

>>

Introduction:

The Co-ordinating Managing Entity/Project Participant has appointed the VVB, Carbon Check (India) Private Ltd. (CC IPL) to perform independent verification of the GS Programme of Activities, “Solar Cooking in Chad (POA)” in the Republic of Chad (hereafter referred to as “Programme of Activities or PoA”) for the VPAs titled “Solar cooking in Chad, Iridimi (VPA1)”.

The PoA involves the distribution of solar cookers to be used along with less efficient three-stone cooking stoves which are using woody biomass, VPAs are efficient in generating heat using solar energy to reduce the use of three-stone stoves typically used in the baseline. By reducing baseline stove usage time, the PoA will save on the consumption of woody biomass and do GHG emissions reduction.

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

Objective:

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

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

The duration of this monitoring period is 01/01/2021 to 31/05/2022. The objective of this verification was to verify and certify Emission Reductions and SDG benefits achieved for the period of “Solar cooking in Chad, Iridimi (VPA1)” 01/01/2021 to 31/05/2022 (inclusive of both the dates) reported for the “Solar Cooking in Chad (POA)” in the host country “Republic of Chad”.

The purpose of verification is to review the monitoring results and verify that the monitoring was implemented according to the monitoring methodology and the monitoring plan given in the PoA/ VPAs and to confirm that the reductions in anthropogenic emissions by sources are sufficient, definitive, and presented in a concise and transparent manner. CC IPL’s objective is to perform a thorough, independent assessment of the implementation of the registered program of activity VPA-DD.

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

Scope:

The scope of the verification is:

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

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

The verification comprises a review of the monitoring report covering the monitoring period from 01/01/2021 to 31/05/2022 (Inclusive of both dates) and based on the registered/included VPA-DDs including the monitoring plan, emission reduction calculation spreadsheet, monitoring methodology and all related evidence provided by a project participant.

The verification team assigned by the VVB concludes that the PoA (Version 10.0 dated 23/09/2020), “Solar cooking in Chad, Iridimi (VPA1)” all relevant requirements of the GS4GG requirements and UNFCCC for CDM project activities including article 12 of the Kyoto Protocol and paragraph 62 of CDM M&P, the modalities, and procedures for CDM (Marrakesh Accords) and the subsequent decisions by the COP/MOP and CDM Executive Board and Gold Standard Secretariat. The verification has been conducted in line with the GS4GG requirements and CDM VVS for PoAs requirements Version 3.0

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

GS3445 (VPA 01): 13,119 VERs.

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

SECTION B. Verification team

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

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

Sr. No.	Role	Type of resource	Last name	First name	Affiliation (e.g., name of central or other offices of VVB or outsourced entity)
1	Team Leader/Technical Expert	IR	Sharma	Harish	CC IPL
2.	Assessor	IR	Bankar	Siddhant	CC IPL
3.	Local Expert	IR	Tekapso	Leslie	CC IPL
4.	Technical Reviewer	IR	C.	Indumathi	CC IPL
5.	Approver	IR	Anand	Amit	CC IPL

SECTION C. Application of materiality in conducting the verification

C.1. Consideration of materiality in planning the verification

No.	Risk that could lead to material errors, omissions or misstatements	Assessment of the risk		Response to the risk in the verification plan and/or sampling plan
		Risk level	Justification	
1.	Human Error: Recording and reporting of the information in the ER spreadsheet.	Medium	<i>All the input data in the ER spreadsheet including the sales database, determination of parameters for efficiency testing including data calculation. This includes all the parameters to be monitored ex-post as per the.</i>	<i>The risk was mitigated by training the personnel involved in the data capture, and calculation and by following the monitoring responsibilities. The training records were reviewed. The verification team, based on the above, confirms that the risk is appropriately mitigated.</i>
2.	Information System: Use of spreadsheets without adequate controls related to data changes/updates, version tracking, traceability, security	Medium	<i>The data is recorded in spreadsheets based on the raw data collected during the field visits. The access to the spreadsheets for calculation of ERs,</i>	<i>The identified risk was mitigated by managing access to the records. It was confirmed by the CME that the raw data is collected by the field personnel and then transmitted and stored</i>

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

			<i>monitoring and sales database, and Stove efficiency testing records is controlled.</i>	<i>electronically to the CME's office. The organogram of the organization for the data collection and record-keeping was reviewed and found satisfactory. The data quality control is maintained by the CME.</i>
3.	<i>Accuracy of the measuring equipment</i>	<i>Low</i>	<i>Check the calibration records for the measurement equipment used for the efficiency test.</i>	<i>The risk due to the accuracy of the measuring equipment was ensured by planning to check the calibration certificates of the measuring equipment used for stove efficiency.</i>
4.	<i>Competence of personnel involved in conducting standardized tests.</i>	<i>Low</i>	<i>Interview of the personnel involved and check the training records/accreditation certificates (applicable in case of institutions) involved in conducting such tests.</i>	<i>The risk was mitigated by reviewing the training records of the personnel involved in conducting such tests and by following the monitoring responsibilities. For institutions involved in conducting such tests, their accreditation certificates were checked to establish their competence for conducting such tests. The training records and certificates were reviewed which were also confirmed during the verification.</i>
5.	<i>Sample</i>	<i>Medium</i>	<i>The sample size is not suitable or the surveyed stoves at the VPA level are not random.</i>	<i>Cross-check the procedure to identify the sample size against the sampling guideline and standard and confirm the sample size is calculated correctly.</i>

C.2. Consideration of materiality in conducting the verification

>>

The project is a Micro-scale, project activity achieving total emission reductions of < 10,000 tons of CO₂e per year; as such, a 10 percent materiality threshold is applied. The threshold of materiality was evaluated based on §13 of Guideline “Application of materiality in verifications” Version 2.0 and §306 (e) of CDM VVS for PoAs, version 3.0. It was concluded that the materiality threshold applicable to the project activity based on actual emission reductions achieved is 10% of GS3445 (VPA 01): 13,119 tCO₂e which is equal to 1,311 tCO₂e.

In planning the verification, the verification team took cognizance of §11 of the “Guideline: Application of materiality in verifications” Version 02.0. A materiality threshold of GS3445 (VPA 01) is 1,311 tCO₂e determined in line with §306 (e) of “CDM validation and verification standard for programmes of activities”, version 3.0.

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

1. Monitoring system including the data input procedure (including relevant personnel and applicable template forms used)

2. Copy of the agreement between household and Project Participant (s) (origin of data)
3. Stove unique ID system
4. ER sheet (application of data)
5. Data flow
6. Data control procedures
7. Monitoring survey records

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

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

Mitigation of Human error risks: The verification team mitigated the risk by checking the training records of the personnel and assessing their competencies, skills, monitoring/testing procedure followed, understanding of the monitoring survey forms, protocol and testing procedure, etc. Further, data was crosschecked with the ER calculation spreadsheet /2/ and the sample raw data.

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

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

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

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

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

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

SECTION D. Means of verification

D.1. Desk/document review

>>

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

D.2. On-site inspection

In line with the guideline of GS4GG for microscale projects, the on-site visit is not necessary within three years of the last visit of the objective observer. As per the information provided by SustainCert in Exhibit-A, the last site visit was conducted on 20/05/2017 but due to security issues in Chad the site audit is been not conducted after 2017 as considering current news and the situation in Chad it was not possible to conduct an on-site audit Hence, in line with the requirement, the last objective observer report has been taken as the reference for the verification and remote audit conducted by VVB on 14/03/2023 . The collection of data for the sampling and survey of “Solar Cooking in Chad, Iridimi” was done by Hamerkop Climate Impacts Ltd Implementation partners. The verification data is done by the verification team as per the requirement of registered VPA-DD, methodology, and GS4GG guidelines.

In line with 4.1.1 (b) of “Site visit and remote audit requirement and procedures”, and in line with 2.2.3(i) of “Applicability of minimum site visit requirement by VVB” as informed by the Developer the site visit is not possible due to security conditions in the Republic of Chad and the significant impact of delaying the site visit on project developer due to timeline/commitments. Hence, referring to section 4.1.1 (b) and considering approval from Sustaincert (Dated 21 November 2022), VVB replaced the mandatory on-site visit with a remote audit. The impact assessment has been carried out to analyze the risk associated with the non-conduction of mandatory physical on-site inspection for verification which is in line with the Annex 1 Risk assessment guideline of “Site visit and remote audit requirement and procedures” and the same is provided below.

The verification of data was collected as per the requirement of methodology and guidelines by conducting a remote interview of 8 end users under VPAs. The verification team has carried out remote site interviews to assess the information included in the Monitoring report. During the desk review, the relevant records related to project implementation and operation were checked, and implementing agency and beneficiary interviews were taken on a sampling basis.

The verification team applied a sampling approach for remote interviews as part of verification in accordance with paragraph 26 of the Standard: Sampling and surveys for CDM project activities and programs of activities, Version 09.0. In accordance with paragraph 28 of the sampling standard, acceptance sampling has been chosen by the verification team, and accordingly, the steps listed in paragraph 29 of the sampling standard were followed. So, in accordance with paragraph 39 (c) of the sampling standard the Verification team opted for AQL of 0.5% and UQL of 20%; producer risk of 10 %, and consumer risk of 20 % in determining the VVB’s sample size for which the sample size (n) is 8 with acceptance number (c) 0.

Risk associated to the non-conduction of mandatory physical on-site inspection for verification.

Sr. No	Identification of potential risks	Mitigation measures	Risk Mitigated
1.	<p>Risk associated to verify project implementation and operation with respect to the registered/included documents (PDD)</p> <p>Following risk has been identified in this category:</p> <ol style="list-style-type: none"> 1. Assessment of unique identification of the technology/measures and provision for avoidance of double counting 2. Assessment of the database and QA/QC procedure related to the database entry. 	<p>The identified risks can be mitigated by the following measures:</p> <ul style="list-style-type: none"> • Check the project database /sales records / end-user agreement for the total number of stoves distributed under the VPAs • Cross-check the total implemented measures of Solar cookers through other means as appropriate such as interviews, reviewing the web-based database, sample cross-check with sales bills etc; • Check the end user registration process including the QA/QC used during the process • Check use and appropriateness of the web-based server or any mobile 	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

	3. Assessment of sales receipt & warranty cards	<p>application used for the end user registration</p> <ul style="list-style-type: none"> • Check through video call (or video) of sample Solar cooker / with legible unique number or barcode 	
2	<p>Risk associated to verify implemented monitoring plan with the registered PDD and applied baseline and monitoring methodology</p> <p>Following risk has been identified in this category:</p> <ol style="list-style-type: none"> 1. Carbon waiver rights from the end-user 2. Repair & maintenance 3. Actual reporting on drop out from the technology 4. CMEs operation & management system including QA/QC for various operational 	<p>The identified risks can be mitigated by following measures:</p> <ul style="list-style-type: none"> • Check the sample agreements for provision of carbon credit rights. • Check the SOP for repair & maintenance. • Check the warranty cards where applicable. • Check the database & CME's SOP for dropping out of technology and how it reflects in the database. • Interviewing the PP's staff (management, implementation, and monitoring) 	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
3	<p>Risk associated to verify that the actual monitoring systems and procedures comply with the monitoring systems and procedures described in the monitoring plan</p> <p>Following risk has been identified in this category:</p> <ol style="list-style-type: none"> 1. Appropriateness of monitoring surveys/baseline/Usage Surveys/Leakage Assessment conducted including the traceability of measuring equipment used in testing (if any) etc. 2. Competency of the personnel involved in the monitoring process including those related to institutions such as laboratory. 	<p>The identified risks can be mitigated by the following measures:</p> <ul style="list-style-type: none"> • For acceptance sampling/interviews with the end-users for confirming monitoring surveys/baseline /Usage Surveys. • Interviews with the Survey team • Checking the traceability of the monitoring equipment (if any) • Checking the CVs and having interviews of the team involved 	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
4	<p>Risk associated to evaluate the GHG emission reduction data and express a conclusion with a reasonable level of assurance on whether the reported GHG emission reduction data is free from material misstatement.</p>	<p>The identified risk mitigated by managing access to the records during audio/video calls. It can be verified whether project has adequate controls related to data changes/updates, version tracking, traceability, security and whether data is reproduceable from the sample sheets. Furthermore, data quality control personnel can also be interviewed to establish the level of assurance.</p>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
5	<p>Risk associated to verify that reported GHG emission data is sufficiently supported by evidence.</p>	<p>The identified risk mitigated during remote interview by asking complete set of data for the monitoring period and Information provided in the monitoring report can be cross-checked with other sources such as sales receipts/log. To check whether, calculations of baseline emissions and</p>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

		emission reduction has been carried out in accordance with the formulae and methods described in the monitoring plan and the applied methodology. Furthermore, appropriate/correct emission factor value has been applied or not.	
6	Any outstanding FAR(s)/pending issue(s) since the previous physical site visit.	The identified risk is mitigated by reviewing the previous Verification report and identification of FARs applicable which will be addressed during current verification.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
7	Any gaps in monitoring data, if any, that cannot be justified as per applicable requirements.	As per the shared data no such gap exists for the proposed monitoring period.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
8	Any design change(s)/temporary deviation(s) since the previous physical site visit.	The identified risk is mitigated by reviewing the previous verification report and finding that design change is not available.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

D.3. Interviews

Interviews with solar cooker users were taken by a Verification team. All surveys were conducted in person and photos of end users with photo IDs and GPS coordinates were taken as records. Submitted photos, snapshots, and ER sheets maintained of the site survey were checked by the verification team to confirm.

The VV plan has been shared with the CME on dated 13/03/2023. In line with the VV plan, the VVB team has interviewed the CME team members involved in the survey and the end users.

No.	Name	Organization	Date	Topic	Team member
/1/	Emma Roberts	Hamerkop climate	14/03/2023	<ul style="list-style-type: none"> •Discussion on the stated goal and policy of the PoA. •Discussion on the sustainability, environmental impact, local stakeholders meeting procedure, baseline scenario, additionality, monitoring plan, Start date •Discussion on the GS registered VPA-DDs, eligibility criteria and its compliance, ongoing financial need, SDG impact, eligibility criteria for, safeguarding principles, stakeholder consultations and grievance mechanism in line with GS4GG, requirements. 	Harish Sharma, Siddhant Bankar, Leslie Tekapso
/2/	Zakaria	Fair climate resource	14/03/2023	Brief project description by the PP. Check the project database/sales records/end-user agreement for the total	Harish Sharma, Siddhant Bankar, Leslie Tekapso

				number of stoves/water purification distributed under the project; a random selection of the; Interviews with the monitoring survey, KPT, Usage Survey etc.	
/3/	Bakhit Ali Guisser	End- User (ID :259616341)	14/03/2023	<ul style="list-style-type: none"> • $U_{p,y}$ (Usage rate in project scenario p during year y) • Average household annual savings i.e., decrease in expenditure on wood fuel purchase. • Total estimated amount saved by stove users on wood fuel purchase for the group of VPA's • Smoke level reduction • Incidence of coughing reduction • Incidence of respiratory illness reduction • Incidence of itchy eyes reduction • Number of people in household 	Harish Sharma, Siddhant Bankar, Leslie Tekapso
/4/	Djafar Youssouf Djoufoun	End- User (ID :259616397)	14/03/2023	<ul style="list-style-type: none"> • $U_{p,y}$ (Usage rate in project scenario p during year y) • Average household annual savings i.e., decrease in expenditure on wood fuel purchase. • Total estimated amount saved by stove users on wood fuel purchase for the group of VPA's • Smoke level reduction • Incidence of coughing reduction • Incidence of respiratory illness reduction • Incidence of itchy eyes reduction • Number of people in household 	Harish Sharma, Siddhant Bankar, Leslie Tekapso

/5/	Adam Abdelbanat Wadi	End- User (ID :259620778)	14/03/2023	<ul style="list-style-type: none"> • $U_{p,y}$ (Usage rate in project scenario p during year y) • Average household annual savings i.e., decrease in expenditure on wood fuel purchase. • Total estimated amount saved by stove users on wood fuel purchase for the group of VPA's • Smoke level reduction • Incidence of coughing reduction • Incidence of respiratory illness reduction • Incidence of itchy eyes reduction • Number of people in household 	Harish Sharma, Siddhant Bankar, Leslie Tekapso
/6/	Zanouba Abdallah Yacoub	End- User (ID :259644800)	14/03/2023	<ul style="list-style-type: none"> • $U_{p,y}$ (Usage rate in project scenario p during year y) • Average household annual savings i.e., decrease in expenditure on wood fuel purchase. • Total estimated amount saved by stove users on wood fuel purchase for the group of VPA's • Smoke level reduction • Incidence of coughing reduction • Incidence of respiratory illness reduction • Incidence of itchy eyes reduction • Number of people in household 	Harish Sharma, Siddhant Bankar, Leslie Tekapso
/7/	Mariam Saboun Oumar	End- User (ID :261143228)	14/03/2023	<ul style="list-style-type: none"> • $U_{p,y}$ (Usage rate in project scenario p during year y) • Average household annual savings i.e., decrease in 	Harish Sharma, Siddhant Bankar, Leslie Tekapso

				<p>expenditure on wood fuel purchase.</p> <ul style="list-style-type: none"> • Total estimated amount saved by stove users on wood fuel purchase for the group of VPA's • Smoke level reduction • Incidence of coughing reduction • Incidence of respiratory illness reduction • Incidence of itchy eyes reduction <p>Number of people in household</p>	
/8/	Bokhita Mahamat Abdallah	End- User (ID : 261694838)	14/03/2023	<ul style="list-style-type: none"> • $U_{p,y}$ (Usage rate in project scenario p during year y) • Average household annual savings i.e., decrease in expenditure on wood fuel purchase. • Total estimated amount saved by stove users on wood fuel purchase for the group of VPA's • Smoke level reduction • Incidence of coughing reduction • Incidence of respiratory illness reduction • Incidence of itchy eyes reduction <p>Number of people in household</p>	Harish Sharma, Siddhant Bankar, Leslie Tekapso
/9/	Mariam Brahim Issakh	End- User (ID :261694869)	14/03/2023	<ul style="list-style-type: none"> • $U_{p,y}$ (Usage rate in project scenario p during year y) • Average household annual savings i.e., decrease in expenditure on wood fuel purchase. 	Harish Sharma, Siddhant Bankar, Leslie Tekapso

				<ul style="list-style-type: none"> • Total estimated amount saved by stove users on wood fuel purchase for the group of VPA's • Smoke level reduction • Incidence of coughing reduction • Incidence of respiratory illness reduction • Incidence of itchy eyes reduction <p>Number of people in household</p>	
/10/	Hawa Ahmat Said	End- User (ID :262059341)	14/03/2023	<ul style="list-style-type: none"> • $U_{p,y}$ (Usage rate in project scenario p during year y) • Average household annual savings i.e., decrease in expenditure on wood fuel purchase. • Total estimated amount saved by stove users on wood fuel purchase for the group of VPA's • Smoke level reduction • Incidence of coughing reduction • Incidence of respiratory illness reduction • Incidence of itchy eyes reduction • Number of people in a household 	Harish Sharma, Siddhant Bankar, Leslie Tekapso

D.4. Sampling approach

>>

As assessed in the above sections, emission reductions for the GS3445 (VPA 01): 13,119 VERs are being claimed for this monitoring period and the total population of the stoves under GS3445 (VPA 01) is as below:

Sr. No.	VPA Reference No.	Number of Solar cookers Distributed
1.	GS3445 (VPA 01)	4,434

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

1. Usage rate in project scenario p during year y ($U_{p,y}$)

As per the 'Guideline: Sampling and surveys for CDM project activities and programmes of activities, version 04.0', paragraph 4. Sampling requirements point no 10 states², "Where there is no specific guidance in the applicable methodology, project proponents shall use 90/10 confidence/precision as the criteria for the reliability of sampling efforts for small-scale project activities". As per paragraph 4, project participants or the coordinating/managing entity have implemented the sampling and surveys according to the sampling plan in the registered monitoring plan. The verification includes determining:

- (a) Whether the required confidence/precision has been met.
- (b) Whether the selected sample was representative of the population.

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

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

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

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

>>

Not Applicable

E.2. Programme of activities

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

Means of verification	Document Review, Interview
Conclusion	CCIPL by means of remote interview and document provided by the CME confirms that all physical features (technology, project equipment, and monitoring equipment) of the included VPAs in the PoA are in place and that

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

	<p>the coordinating/managing entity has operated the PoA and the VPAs as per the PoA-DD and the VPA-DD.</p> <p>The verification team confirms the actual operation of the VPA and PoA implementation and operation in compliance with the PoA-DD / VPA-DD in order to confirm the compliance of § 338, § 339, and § 340 of CDM VVS for PoA, Version 03.0 and GS4GG requirements.</p>
--	--

E.2.2. Implementation and operation of the management system

Means of verification	Document Review, Interview
Conclusion	<p>The PoA management system including the record-keeping system has been explained in the PoA. During verification, the verification team based on a review of provided documents and discussion on video conferencing has assessed this management system. The verification team evaluated the management systems in place to implement the monitoring of the project activity. This included the roles and responsibilities of the monitoring staff, data collection, transfer and aggregation procedures, data storage, and archiving procedure for the monitoring system.</p> <p>Monitoring surveys were conducted by the implementation partner of FairClimateFund.</p> <p>To ensure the completeness and accuracy of monitoring information, an electronic database is operated and maintained by the VPA implementer. This information is further maintained by the CME. The data is further periodically checked by the CME to ensure there is no double counting. This provision for the avoidance of double counting as outlined in the PoA management system has been verified by means of review records of the sales database and on-site interviews during the course of verification.</p> <p>The responsibilities and authorities for monitoring and reporting are in accordance with the responsibilities and authorities stated in the monitoring plan provided in VPA-DD.</p> <p>The details about the monitoring system have been provided in the Monitoring report.</p> <p>The verification team confirms that the monitoring management system of the GS4GG PoA is in place, with the responsibilities properly identified and in place. This confirms the compliance of § 338 (a) and § 345 (b) (iv) of CDM VVS PoA version 03.0 and GS4GG requirements.</p>

E.3. Voluntary project activities

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

Means of verification	Document Review, Interview	
Conclusion	The implementation status of the PoA and the voluntary project activities is:	
	Project Participants:	FairClimateFund
	Title of PoA:	Solar Cooking in Chad (POA)
	Title of VPA:	Solar cooking in Chad, Iridimi (VPA1)
	GS Reference No:	PoA – GS1075 VPA 01 - GS3445

Applied Baseline and monitoring methodology:	The Gold Standard Simplified Methodology for Efficient Cookstoves, v1.1, (April 2020)
Project Scale:	Microscale
Location of the project activity:	Republic of Chad
Reported monitoring Period verified in this verification:	01/01/2021 to 31/05/2022 (Both days inclusive)

The VPAs distribute the Solar cookers. The Solar cookers under the VPA use solar energy to generate heat. These solar cookers are efficient in using solar energy to generate heat, thus saving fuel (Wood) compared to the traditional stoves.

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

Sr. No.	VPA Reference No.	Number of solar cookers Distributed
1.	VPA 01 - GS3445	4,434

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

The information (including data and variables) provided in the MR /01/ is in line with the details provided in the VPA-DD.

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

In accordance with §340 (c) of CDM VVS for PoAs, version 3, the verification team confirms that there is no information (data and variables) in the current monitoring period that are different from that stated in the approved revised VPA-DD which has caused an increase in the estimates of GHG emission reductions.

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

Temporary deviations from the approved Monitoring & Reporting Plan, which is mentioned under section B.2.1 of the MR/01/:

A minor deviation from the approved monitoring and reporting plan methodology or standardized baseline was made. The annual monitoring & usage survey was delayed due to the impacts of Covid, availability of staff and the findings from the previous monitoring survey; December and January are the months when beneficiaries usually go farming outside the camp and are therefore absent for long periods of time. It should have occurred by December 2021 but did not take place until February – March 2022. Which were confirmed during an interview with end users, furthermore the delay in monitoring due to lack of staff considering covid is understandable and have no impact on usage survey & monitoring survey.

	<p>CC IPL’s verification team confirms that the VPAs are implemented within the boundary of the PoA as described in the PoA and the implementation and operation of the project activity have been conducted in accordance with the description contained in the PoA-DD and VPA-DD.</p> <p>The verification team took cognizance of § 338, § 339, and § 340 of the CDM VVS for PoA, version 03. The § 339 of CDM VVS for PoA states that if an on-site inspection is not conducted, the DOE shall justify the rationale of the decision. In line with the guideline of GS4GG for microscale projects, the on-site visit is not necessary within three years of the last visit of the objective observer. As per the information provided by SustainCert in Exhibit-A, the last site visit was conducted on 20/05/2017 but due to security issues in Chad the site audit is been not conducted after 2017 as considering current news and the situation in Chad it was not possible to conduct an on-site audit Hence, in line with the requirement, the last objective observer report has been taken as the reference for the verification and remote audit is proposed. The collection of data for the sampling and survey of “Solar Cooking in Chad, Iridimi” was done by Hamerkop Climate Impacts Ltd Implementation partners. The verification data is done by the verification team as per the requirement of registered VPA-DD, methodology, and GS4GG guidelines.</p>
--	---

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

Means of verification	Document Review, Interview
Conclusion	<p>The verification team confirm that the monitoring plan contained in the VPAs is in accordance with the approved methodology applied by the project activity, i.e., The Gold Standard Simplified Methodology for Efficient Cookstoves, v1.1 (April 2020).</p> <p>The monitoring plan is in accordance with the approved methodology, The Gold Standard Simplified Methodology for Efficient Cookstoves, v1.1 (April 2020) is applied by the component project activities and as provided in the VPA.</p> <p>The verification took cognizance of § 341 to § 343 of CDM VVS for PoAs, Version 03.0 and GS4GG requirements.</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 VPA-DD. This conclusion has been made based on the assessment below.

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

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

E.3.3.2. Data and parameters monitored

Means of verification	Document Review, Interview
Conclusion	The Verification team confirms that the Data and parameters monitored are in compliance with the VPA-DD and the monitoring plan. A complete assessment

	<p>of each of the monitored parameters has been provided in Appendix 6 of this report.</p> <p>The verification took cognizance of § 344, § 345(c), §356 and §357 of CDM VVS for PoAs, Version 03.0 and GS4GG Requirements.</p>
--	--

E.3.3.3. Implementation of sampling plan

Means of verification	Document Review, Interview
Conclusion	<p>Monitoring surveys were conducted during the current monitoring period. The total population of the solar cooker under VPA considered for the monitoring period is 4,434 for both VPAs. The monitoring parameters required to be monitored through the sampling plan are:</p> <ol style="list-style-type: none"> 1. The average usage rate of the appliance ($U_{p,y}$) <p>Across VPA random sampling was applied for the VPA by CME for the selection of the monitoring samples with 90/10 confidence/precision for all the parameters of annual monitoring which is deemed acceptable as per the PoA and VPAs.</p> <p>Applying the random number generator, the solar cooker were randomly picked from the defined population up to the required sample size as calculated by the CME. The verification team confirms that the applied method for sample size calculation is in accordance with the PoA-DD / VPA-DD.</p> <p>The sampling plan implemented by the CME is in accordance with the applied approved monitoring methodology and the PoA/ VPA-DD. The CME has appropriately performed the Random Sampling procedure in line with the applied methodology and is best suited for this type of project. As the PoA mentions the option for a random Sampling procedure, it is acceptable to the verification team.</p> <p>The necessary confidence/precision of 90/10 for each of the parameters is met. This has been cross verified by the verification team from the supporting documents submitted and through interviews with end users, PP has taken 124 random samples for survey from database, the verification team applied a sampling approach for remote interviews as part of verification in accordance with paragraph 26 of the Standard: Sampling and surveys for CDM project activities and programs of activities, Version 09.0. In accordance with paragraph 28 of the sampling standard, acceptance sampling has been chosen by the verification team, and accordingly, the steps listed in paragraph 29 of the sampling standard were followed. So, in accordance with paragraph 39 (c) of the sampling standard the Verification team opted for AQL of 0.5% and UQL of 20%; producer risk of 10 %, and consumer risk of 20 % in determining the VVB's sample size for which the sample size (n) is 8 with acceptance number (c) 0. End user list with names can be found under section D.3 of this report.</p> <p>The verification took cognizance of "The Gold Standard Simplified Methodology for Efficient Cookstoves, v1.1 (April 2020)"</p>

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

Means of verification	Document Review, Interview
Conclusion	No device is used for measurement. Hence this point is Not applicable.

E.3.5. Emission Reduction Quantification

Assessment of data and calculation of emission reductions or net removals in line with the requirement of Gold Standard Methodology. The Gold Standard Simplified Methodology for Efficient Cookstoves, v1.1 (April 2020) the verification team has reviewed the Monitoring report /01/ and ER spreadsheets /02/ to check the arithmetic calculation of the emission reductions. The equation used for the calculation is compared with those provided in the VPA and The Gold Standard Methodology. The Gold Standard Simplified Methodology for Efficient Cookstoves, v1.1 (April 2020).

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

Means of verification	Document Review, Interview
Conclusion	<p>When the baseline fuel and the projected fuel are different and/or the emission factors are different, the overall GHG reductions achieved by the project activity in year y are calculated as follows:</p> $ER_y = \sum_{0 \text{ to } 1}^{x \text{ to } y} N_{p,y} * P_y * U_{p,y} * (f_{NRB,y} * EF_{b, \text{fuel}, CO_2} + EF_{b, \text{fuel}, \text{non_CO}_2}) * (1 - DF_{b, \text{Stove}, y})$ <p>Where:</p> <p>$N_{p,y}$ Number of projects cookstoves of each age group operational in the year y</p> <p>P_y Quantity of firewood that is saved in the year y (tonnes per household in year y)</p> <p>$U_{p,y}$ Usage rate for project cookstoves in year y, based on adoption rate and drop off rate revealed by usage surveys (fraction)</p> <p>$f_{NRB,b,y}$ Fraction of biomass, used in year y for baseline scenario, which can be established as non-renewable.</p> <p>$EF_{b, \text{fuel}, CO_2}$ CO2 emission factor of firewood that is substituted or reduced. (Default value for wood fuel 1.747 tCO2/ton of wood)</p> <p>$EF_{b, \text{fuel}, \text{non_CO}_2}$ Non-CO2 emission factor of firewood that is substituted or reduced. (IPCC Fifth Assessment Report: Climate Change (IPCC AR5) value for wood fuel 0.58 tCO2/ton of wood)</p> <p>$DF_{b, \text{Stove}, y}$ Usage of baseline cookstove during the year y (fraction) in project scenario</p> <p>x y – 1</p> <p>y Year of the crediting period</p> <p><i>Determination of quantity of biomass saved (Py):</i> Quantity of fire wood that is saved (P,y) is estimated as follows:</p> $P_y = B_{b,y} * (1 - \frac{\eta^b}{\eta_{p,y}})$ <p>Where:</p> <p>$B_{b,y}$ Quantity of firewood consumed in baseline scenario during year y (tonnes per household per year)</p>

	$\eta_{p,y}$ Efficiency of project cookstove in year y (fraction) η_b Efficiency of the baseline cookstove being replaced (fraction). A default value of 10% shall be used if the replaced cookstove is a three stone fire, or a conventional device without a grate or a chimney i.e., with no improved combustion air supply or flue gas ventilation <i>Determination of project cookstove efficiency ($\eta_{p,y}$ and η_p):</i> Efficiency of project cookstove in year y ($\eta_{p,y}$) is estimated as follows: $\eta_{p,y} = \eta_p * (DF_{\eta})^{y-1} * 0.94$ Where $\eta_{p,y}$ Efficiency of project cookstove in year y (fraction) η_p Efficiency of project cookstove (fraction) determined at the start of the project activity DF_{η} Discount factor to account for efficiency loss of project cookstove per year of operation (Fraction). The default value for this parameter is 0.99 i.e., 1% efficiency loss/year. 0.94 Adjustment factor to account for uncertainty related to project cookstove efficiency test From the above equation and the parameter values, emission reductions for the period 01/01/2021 to 31/05/2022 (inclusive of both dates) are calculated as: <table border="1" data-bbox="347 1218 1426 1303"> <thead> <tr> <th>Specific-case VPA reference number</th> <th>Emission Reductions (tCO_{2e})</th> </tr> </thead> <tbody> <tr> <td>GS3445 (VPA 01)</td> <td>13,119</td> </tr> </tbody> </table> The verification team confirms that the calculation of baseline emission and emission reductions is in accordance with the applied methodological equation and the VPAs. Calculations have been checked and confirmed from the ER spreadsheet/02/. The verification took cognizance of § 356 of CDM VVS for PoA, version 03.0 and GS4GG requirements.	Specific-case VPA reference number	Emission Reductions (tCO _{2e})	GS3445 (VPA 01)	13,119
Specific-case VPA reference number	Emission Reductions (tCO _{2e})				
GS3445 (VPA 01)	13,119				

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

>>

NA.

E.3.5.3. Calculation of leakage GHG emissions

Means of verification	Document Review, Interview
Conclusion	As per para 6 of the applied methodology, the CME has conducted the survey to analyse the applicability of leakage emissions. It is found that the project activity doesn't qualify for any of the criteria for considering leakage emission. Hence, As defined under The Gold Standard Simplified Methodology for Efficient Cookstoves, the net emission reductions (ER _y) for a micro-scale

	programme of activities (POA) need to be discounted by a factor of 0.95 to account for leakages related to non-renewable biomass saved by the project activity.
--	---

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

Means of verification	Document Review, Interview
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 VPAs. The total number of ERs achieved during the monitoring period for GS3445 (VPA 01) is 13,119 VERs.</p> <p>In summary, the verification team confirms that for vintage year 2021 the actual emission reduction is higher than the estimated in the VPA-DD for the current monitoring period.</p> <p>The verification took cognizance of § 356 of CDM VVS PoAs, version 03 and GS4GG requirements.</p>

Title and GS reference number of the VPA	Baseline emissions or baseline net GHG removals by sinks (tCO ₂ e)	Project emissions or actual net GHG removals by sinks (tCO ₂ e)	Leakage (tCO ₂ e)	GHG emission reductions or net GHG removals by sinks (tCO ₂ e)	
				Amount achieved from 1 st January 2021 to 31 st December 2021	Amount achieved in the monitoring period
Solar cooking in Chad, Iridimi (VPA1) GS3445	-	-	-	8,538	8,538
				Amount achieved from 1 st January 2022 to 31 May 2022	Amount achieved in the monitoring period
Solar cooking in Chad, Iridimi (VPA1) GS3445	-	-	-	4,581	4,581

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
Conclusion	A comparison of the actual GHG emission reductions with the estimates in the included specific VPA is given in the below table. The verification team took cognizance of § 356 of CDM VVS for PoAs, version 03 and GS4GG requirements.

Title and UNFCCC reference number of the VPA	Value estimated in an ex-ante calculation in the included VPA-DD(s)	Actual values achieved by the VPAs during this monitoring period
Solar cooking in Chad, Iridimi (VPA1) GS3445	2021: 7,525 tCO ₂ e 2022: 10,000 tCO ₂ e	2021: 8,538 tCO ₂ e 2022 (January to May ³): 4,581 tCO ₂ e

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

Means verification	of	Document review
Conclusion	The actual emission reductions for VPA are more than the ex-ante estimated values in the VPA-DDs. For which CME has added the remark under section E.6 of the MR which was further assessed by VVB, compare to the latest registered VPA-DD, Emission reduction are higher than estimated which is the result of a higher usage rate, which was considered during an ex-ante calculation which was further assessed from monitoring records and interviews with end user, which is the reason for an increase in ERs calculated for this monitoring period which is deemed to be appropriate in opinion of VVB.	

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

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

SECTION F. Internal quality control

>>

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

SECTION G. Verification opinion

>>

Carbon Check (India) Private Ltd. has performed the third verification of the GS Programme of Activities "Solar Cooking in Chad (POA)" (hereafter referred to as "Programme of Activities or PoA") for the Solar cooking in Chad, Iridimi (VPA1) GS3445.

The verification team assigned by the VVB concludes that the PoA (Version 10.0, dated 23/09/2020), Solar cooking in Chad, Iridimi (VPA1) GS3445, as described in the VPA-DD and the Monitoring report (Version 3, dated 30/03/2023), meet all relevant GS4GG requirements and requirements of the UNFCCC for CDM project activities including article 12 of the Kyoto Protocol and paragraph 62 of CDM M&P, the modalities and procedures for CDM (Marrakesh Accords) and the subsequent decisions by the COP/MOP and CDM Executive Board.

Verification methodology and process:

³ 31st May 2022

The Verification team confirms the contractual relationship signed on 24/11/2022 between the VVB, Carbon Check (India) Private Ltd., and SustainCert the entity authorized by Co-ordinating Managing Entity/ Project Participant, (FairClimateFund). 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, and GS4GG requirements and constitutes the review and completion of the following steps:

- Reviewing the PoA GS1075 (Version 10.0 dated 23/09/2020), the VPA for Solar cooking in Chad, Iridimi (VPA1) GS3445 to include the monitoring plan and the corresponding verification report.
- Previous verification and certification reports and the monitoring reports for the previous monitoring periods.
- Desk review of the validation report, MR, and other relevant documents including documents related to the project activities in emission reductions.
- Review of the applied monitoring methodology (The Gold Standard Simplified Methodology for Efficient Cookstoves, v1.1 (April 2020)).
- Review of any CMP and EB decisions, clarifications, and guidance.
- Resolution of CARs and CLs raised during verification.
- Issuance of Verification Report.

The voluntary project activities were correctly implemented according to the selected monitoring methodology, monitoring plan, and VPA/s. The monitoring system was installed, and maintained in a proper manner, while collected monitoring data allowed for the verification of the amount of achieved GHG emission reductions. Through the review, the verification team confirms that the PoA has resulted in the Solar cooking in Chad, Iridimi (VPA1) GS3445: 13,119 tCO_{2e} of emission reductions for the period 01/01/2021 to 31/05/2022 (inclusive of both dates) during the fourth monitoring period for and achieved SDG benefits as detailed in Appendix 6 for the period.

Verified emission reductions:

Specific-case VPA reference number	Emission Reductions (tCO _{2e})
GS3445 (VPA 01)	13,119

The sustainable development contribution achieved during this monitoring period is shown in Appendix 6. CCIPL as a VVB is therefore pleased to issue a positive verification opinion in the attached Certification statement.

SECTION H. Certification statement

>>

Carbon Check (India) Private Ltd., the VVB, has performed the verification of the GS Programme of Activities, GS1075 "Solar Cooking in Chad (POA)" in "Republic of Chad". The PoA involves the distribution of solar cookers. The activity involves the distribution and maintenance of domestic solar cookers through local implementation partners (IP). The solar cookers distributed under VPA are efficient in generating heat using solar energy instead of using three-stone stoves typically used in the baseline. By using solar cookers along with inefficient stoves, the PoA will save on the consumption of woody biomass/charcoal and reduces GHG emissions.

The voluntary project activities of the Programme of Activities are designed to generate emission reductions through the distribution of solar cookers in Republic of Chad. The CME and VPA implementer is responsible for the collection of data in accordance with the monitoring plan and reporting GHG emissions reductions from the voluntary project activity/ies. It is VVB's responsibility to express an independent verification statement on the reported GHG emission reductions from the component

project/s. The VVB does not express any opinion on the selected baseline scenario or on the validated and registered PoA-DD/VPA-DD. The verification is carried out in line with the CDM VVS and GS4GG requirements.

The verification was performed to identify the compliance of the component project with implementation and monitoring requirements and to verify the actual amount of emission reductions achieved by the project, through obtaining evidence that included.

- i) Checking whether the provisions of the monitoring methodology and the monitoring plan were consistently and appropriately applied and
- ii) The collection of evidence supporting the reported data.

The verification is based on:

- PoA-DD, Version 10.0 dated 23/09/2020.
- VPA-DD, Version 11.0, dated 23/09/2020.
- Solar cooking in Chad, Iridimi (VPA1) GS3445 are included in the PoA and its monitoring plan for the monitoring period is from 01/01/2021 to 31/05/2022 (inclusive of both dates).
- Approved GS monitoring methodology The Gold Standard Simplified Methodology for Efficient Cookstoves, v1.1 (April 2020)
- Validation report for the PoA and the VPA.
- Monitoring report Version 3 dated 30/03/2023.

This statement covers the verification period from 01/01/2021 to 31/05/2022 (inclusive of both dates).

The VVB had raised one (1) FAR, six (6) clarifications, and Twenty-one (21) Corrective action requests which have been resolved by the CME.


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

The VVB, hereby certifies that the project activity achieved emission reductions by sources of GHG equal to GS3445 (VPA 01): 13,119 tCO₂e for the period 01/01/2021 to 31/05/2022 (inclusive of both dates).and achieved SDG benefits as detailed in Appendix 6 for the period 01/01/2021 to 31/05/2022 (inclusive of both dates) and all monitoring requirements have been fulfilled and is substantiated by an audit trail that contains evidence and records.

Appendix 1. Abbreviations

Abbreviations	Full texts
AQL	Acceptable Quality Limit
CDM	Clean Development Mechanism
CER	Certified Emission Reduction
CAR	Corrective Action Request
CC IPL	Carbon Check (India) Private Ltd.
CER	Certified Emission Reduction
CL	Clarification Request
CME	Co-ordinating and Managing entity
VPA	Voluntary Project Activity
VPA-DD	Voluntary Project Activity Design Document
CO ₂	Carbon Dioxide
CO ₂ e	Carbon Dioxide Equivalent
DR	Document review
EB	CDM Executive Board
EF	Emission Factor
EI	External individual
FA	Final Approval
FAR	Forward Action Request
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
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
VVS	Validation and Verification Standard
VVB	Validation & Verification Body

Appendix 2. Competence of team members and technical reviewers



Carbon Check (India) Private Limited

Certificate of Competency

Mr. Harish Sharma

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

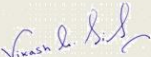
for the following functions and requirements:

<input checked="" type="checkbox"/> Validator	<input checked="" type="checkbox"/> Verifier	<input checked="" type="checkbox"/> Team Leader	<input checked="" type="checkbox"/> Technical Expert
<input type="checkbox"/> Technical Reviewer	<input type="checkbox"/> Health Expert	<input type="checkbox"/> Gender Expert	<input type="checkbox"/> Plastic Waste Expert
<input 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 type="checkbox"/> Financial Expert	<input checked="" type="checkbox"/> Local Expert for India		

in the following Technical Areas:


<input checked="" 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



Mr. Vikash Kumar Singh
Compliance Officer

Expiry Date
31st December 2023



Mr. Amit Anand
CEO

CCIPL_FM 7.9 Certificate of Competency_V2.1_012023



Carbon Check (India) Private Limited

Certificate of Competency

Mr. Siddhant Bankar

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 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 | | |

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

Ms. Indumathi C

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 Sri Lanka | | |

in the following Technical Areas:

- | | | | | |
|--|--|----------------------------------|---|---|
| <input checked="" 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 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

Appendix 3. Documents reviewed or referenced.

No.	Author	Title	Provider
/1/	FairClimateFun, Hamercorp	Monitoring report: a. GS3445 GS4GG MR 4th MP v1.1 10062022 b. GS3445 GS4GG MR 4th MP v.2 31012023 c. GS3445 GS4GG MR 4th MP v.3 30032023	CME
/2/	FairClimateFun, Hamercorp	ER sheet: G ER calculation - Chad Solar Cookers MP4_07.06.2022 FINAL	CME
/3/	FairClimateFun, Hamercorp	CP Renewal_GS1075_GS3445-Final round_07102020	CME
/4/	FairClimateFun, Hamercorp	Iridimi user database v20.05.2022	CME
/5/	FairClimateFun, Hamercorp	Usage Survey - Sampling 07 Fev. 2022	CME
/6/	FairClimateFun, Hamercorp	Usage Survey 2022	CME
/7/	FairClimateFun, Hamercorp	FNRB_GS	CME
/8/	FairClimateFund, Hamercorp	Activities schedule and content	CME
/9/	FairClimateFun, Hamercorp	Description of person running training sessions	CME
/10/	FairClimateFun, Hamercorp	Iridimi grievance book	CME
/11/	FairClimateFun, Hamercorp	Registre des remplacements (replacement registre)_KoboToolbox	CME
/12/	FairClimateFun, Hamercorp	Usage Survey (Enquête d'usage) 2021-22 _KoboToolbox	CME
/13/	FairClimateFun, Hamercorp	Workshop records and attendance sheet	CME
/14/	FairClimateFun, Hamercorp	GS1075 GS4GG PoA-DD v10 23092020_final	CME
/15/	FairClimateFun, Hamercorp	GS3445 GS4GG VPA-DD v11 23092020_final	CME

Appendix 4. Clarification requests, corrective action requests and forward action requests
4.1 Clarifications (CLs)
Table 1 CLs

CL ID	01	Section no.	B.1 of MR	Date: 02/12/2022
Description of CL				
As per section B.1 CME to clarify what activity is conducted under "Manufacture of solar cookers".				
Project participant response				Date: 23/12/2022
This activity is comprised of the following: a group of local women who are trained by and employed by this project create the solar cookers in the Iridimi workshop. First, the cardboard is folded into shape, and then				

the aluminium is attached on with glue applied by a brush. Once dry, the edges are then sealed and the stove is put into its proper shape. The women at the workshop also sew carrying bags to transport the stoves to the beneficiary households.

Documentation provided by project participant

N/A

GS VVB assessment

Date: 24/03/2023

CME has given an appropriate clarification for the "Manufacture of solar cookers" and same has been added under section B.1. Hence the

CL is Closed.

CL ID	02	Section no.	B.1 of MR	Date: 02/12/2022
-------	----	-------------	-----------	------------------

Description of CL

As per section B.1 CME to submit replacement records for cookers, and clarify how CME is maintaining and updating records which cooker is being replaced.

Project participant response

Date: 05/01/2023

The user database (sales record) for Iridimi has now been submitted as a supporting document. The CME is maintaining and updating this database to track which cookers are being replaced. When a stove is replaced, the local project implementing partner (ADES) completes a survey form on Kobo (the surveying software for this project). This form, which is now provided as a supporting document, gathers data on beneficiary ID (WFP number), name, contact information, location, etc. This data is then uploaded to Kobo and then used to update the user database (sales record), which tracks how many replacements cookers a given beneficiary has received, and how long it has been since their last replacement (to ensure cookers are still in their operational lifespan).

Documentation provided by project participant

"Iridimi user database v20.05.2022" Excel spreadsheet

"Registre des remplacements (replacement registre) KoboToolbox" PDF

GS VVB assessment

Date: 24/03/2023

CME has submitted the replacement records and given clarification on how they are maintaining the records of replacement same needs to be added in MR Hence.

CL is Open and Being treated as CAR.

Project participant response

Date: 30/03/2023

This explanation has now been added to the Monitoring Report (please see page 12 of updated version)

Documentation provided by project participant

GS3445 GS4GG MR 4th MP v.2 30.03.23 Track changes

GS VVB assessment

Date: 03/04/2023

CME has given an replacement records which was further assessed and deemed to be appropriate further monitoring for maintaining the cooker working is confirmed during interview and desk review which deemed to be intact in line with registered VPA-DD hence

CAR is closed

CL ID	03	Section no.	D.1 of MR	Date: 02/12/2022
-------	----	-------------	-----------	------------------

Description of CL

CME to clarify how they evaluated the value 96% for f_{NRB} .

Project participant response

Date: 21/12/2022

This calculation was done using data from the most recent FAO Chad Forest Assessment report (published in 2020) and IPCC default values. This calculation was validated by Gold Standard when the project's crediting period was renewed (please see supporting documents provided).

Documentation provided by project participant

"FNRB_GS" Excel spreadsheet

"CP Renewal_GS1075_GS3445-Final round@07102020" PDF

GS VVB assessment

Date: 24/03/2023

From The clarification given and the supporting document it is clear how CME came to the value 96% for f_{NRB} Hence,

CL is closed.

CL ID	04	Section no.	E.5 of MR	Date: 02/12/2022
-------	----	-------------	-----------	------------------

Description of CL

As per section E.5, CME to clarify increase in 2021 VERs than estimated value in ex-ante.	
Project participant response	Date: 05/01/2023
An explanation for this increase in VERs in 2021 is provided in section E.6. This has been further elaborated on with a more detailed explanation of why these values are higher than the ex-ante estimations, such as the impact of the usage rate.	
Documentation provided by project participant	
N/A	
GS VVB assessment	Date: 24/03/2023
From the given clarification and on the review of "Usage Survey - Sampling 07 Feb. 2022", "Usage Survey 2022" documents submitted it is clear why the value obtained higher than the ex-ante estimations in PDD. Hence CL is closed .	

CL ID	05	Section no.	D.4 of MR	Date: 02/12/2022
Description of CL				
CME to justify, how the selected sample size of 124 respondents is in line with required confidence/precision levels of 90/10.				
Project participant response				Date: 05/01/2023
An explanation of the sampling is provided in section C of the monitoring report. Evidence of how this sample size was calculated is in an excel spreadsheet which is now provided as a supporting document. This aligns with the Gold Standard sampling rules as it is above 100 and it accounts for the different age classes of cookers.				
Documentation provided by project participant				
"Usage Survey - Sampling 07 Feb. 2022" Excel spreadsheet				
GS VVB assessment				Date: 24/03/2023
The Sample size calculation have been provided by the CME which is in line with requirement of GS methodology "The Gold Standard Simplified Methodology for Efficient Cookstoves v1.1 (April 2020)", However explanation provided under section C does not provide any Idea how Sample is being calculated CME to update the section with information given in methodology on page no.5 and under the para B.7.2 of the registered VPA-DD.				
CL is open and will be treated as CAR.				
Project participant response				Date: 30/03/2023
A more detailed explanation of how the random sampling was done is now provided in the monitoring report (please see pages 12-13). This includes a description of how it aligns with the specific requirements of the SMEC V1.1 as well as the VPA-DD.				
Documentation provided by project participant				
GS3445 GS4GG MR 4th MP v.2 30.03.23 Track changes				
GS VVB assessment				Date: 03/04/2023
CME has given an clarification for selection of sample, however random sample snapshot is not available as it is not possible to get exact results after using random selection using Excel, further it is confirmed during an interview how the sample was selected with a demo from client, hence				
CAR is closed				

CL ID	06	Section no.	D.2 of MR	Date: 02/12/2022
Description of CL				
CME to justify the reason of taking the value of parameter "DFn (Discount factor to account for efficiency loss of project cookstoves)" as "0".				
Project participant response				Date: 21/12/2022
All this has already been done at the time of the project registration and crediting period renewal. VVB is expected to read all project documentation. Due to the simplicity of the cooking technology (essentially just cardboard and aluminum) and the fact that it does not consume fuel, these stoves are considered to be 100% efficient and do not lose efficiency. If the stoves happen to be damaged or broken, then they are considered not in use, and a replacement stove is issued which itself has a 100% efficiency rating. Therefore, over time, there is no decrease in stove efficiency. If the technology were to perform more slowly this would not have an implication on the quantity if energy emitting GHG emissions.				
Documentation provided by project participant				
N/A				
GS VVB assessment				Date: 03/04/2023

CME has clarified the reason for taking DF_n as zero, which was further confirmed by GS performance review and renewal records and accepted by GS, considering the same VVB has accepted the values.
CAR is closed

1.1 Corrective action required (CARs)

Table 2 CARs

CAR ID	01	Section no.	Key Project Info.	Date: 02/12/2022
Description of CAR				
Serial numbers of index under key project info provided in cover page should be corrected as per the template.				
Project participant response				Date: 19/12/2022
This has been corrected to match the Gold Standard template, however, the Gold Standard template is very unstable and the PD should not be held responsible for these IT bugs.				
Documentation provided by project participant				
N/A				
GS VVB assessment				Date: 24/03/2023
Indexing of the MR is now in line with the template of Gold standard, Hence CAR is closed.				

CAR ID	02	Section no.	Key Project Info	Date: 02/12/2022
Description of CAR				
Under Key project Info Title of POA is not consistent with GS registry.				
Project participant response				Date: 19/12/2022
This has been changed to the correct title to match the GS registry.				
Documentation provided by project participant				
N/A				
GS VVB assessment				Date: 24/03/2023
CME have updated the title of POA which is now in-line with a GS registry Hence the CAR is closed.				

CAR ID	03	Section no.	Key Project Info	Date: 02/12/2022
Description of CAR				
Under Key project Info Title of VPA should be in-line with GS registry.				
Project participant response				Date: 19/12/2022
This has been changed to the correct title to match the GS registry.				
Documentation provided by project participant				
N/A				
GS VVB assessment				Date: 24/03/2023
CME have updated the title of VPA which is now in-line with a GS registry Hence the CAR is closed.				

CAR ID	04	Section no.	Key Project Info	Date: 02/12/2022
Description of CAR				
The latest available version of the VPA DD in registry database is not as referenced in MR				
Project participant response				Date: 13/01/2023
The PD cannot be held accountable for what the registry shows. The PD is now sharing the 2 DDs mentioned in the MR.				
Documentation provided by project participant				
"GS1075 GS4GG PoA-DD v10 23092020_final" PDF "GS3445 GS4GG VPA-DD v11 23092020_final" PDF				
GS VVB assessment				Date: 24/03/2023
CME has submitted latest version of VPA-DD and POA-DD mentioned in MR hence				

CAR is Closed

CAR ID	05	Section no.	Key Project Info	Date: 02/12/2022
Description of CAR				
Date of last annual report should be mentioned in the relevant table for key project information				
Project participant response				Date: 13/01/2023
As per the GS Principles & Requirements section 5.1.39, "an annual report shall be submitted for each monitoring year by end of next calendar year for which verification is not completed". Since this monitoring period ended in May 2022, this means that the PD has until December 31 st , 2023, to complete the verification, before being required to submit an annual report.				
Documentation provided by project participant				
GS VVB assessment				Date: 24/03/2023
Considering the requirement of GS Principles & Requirements section 5.1.39, To submit the annual report PD has still more 9 months to do the verification (Until December 31 st , 2023) Hence; CAR is closed.				

CAR ID	06	Section no.	Table 2 of MR	Date: 02/12/2022
Description of CAR				
Table 2 should be updated for product vintages/amount achieved by SDG 1, 3 and 7.				
Project participant response				Date: 05/01/2023
Table 2 only presents vintages for SDG 13 (VERs) as these are the only products generated by this project. For the contributions achieved to the other SDGs (1, 3, and 7), please see Table 1.				
Documentation provided by project participant				
N/A				
GS VVB assessment				Date: 24/03/2023
CME has given the explanation as there is only SDG 13 which is products generated by this project hence only SDG 13 is mentioned under table 2 of the MR Hence; CAR is closed				

CAR ID	07	Section no.	N/A	Date: 02/12/2022
Description of CAR				
Replacement Record of Solar Cooker confirming the user's name, WFP food ration number, batch number of the cooker and the date of receiving the replacement should to VVB for the verification.				
Project participant response				Date: 05/01/2023
The Iridimi user database, which is now provided as a supporting document, contains all of the data for solar cooker replacements, including WFP number, beneficiary name, date of replacement, dates of receiving previous stoves, etc.				
Documentation provided by project participant				
"Iridimi user database v20.05.2022" Excel spreadsheet				
GS VVB assessment				Date: 24/03/2023
CME has submitted the "Iridimi user database v20.05.2022" which suffices the requirement of CAR raised, document provides details all of the data for solar cooker replacements, including WFP number, beneficiary name, date of replacement, dates of receiving previous stoves Hence. CAR is closed				

CAR ID	08	Section no.	A.1 of MR	Date: 02/12/2022
Description of CAR				
In section A.1, provide the information about total number of solar cookers in operation. Also, mention the data showing number of Solar Cooker sold to new users and replaced in the current monitoring period.				
Project participant response				Date: 04/01/2023

These details have now been provided in section A.1 (see paragraph 6). This data is also available in the Iridimi user database, which show which beneficiaries received new stoves during this monitoring period, and which received replacement stoves.

Documentation provided by project participant	
"Iridimi user database v20.05.2022" Excel spreadsheet	
GS VVB assessment	Date: 24/03/2023
The information about the total number of solar cookers in operation and the data showing the number of Solar Cooker sold to new users and replaced in the current monitoring period has now been Mentioned under MR section A.1. by CME hence. CAR is closed.	

CAR ID	09	Section no.	A.2 of MR	Date: 02/12/2022
Description of CAR				
WGS 84 GPS coordinate system should be used (e.g. deg, min and sec)				
Project participant response				Date: 19/12/2022
The coordinates have been changed to be in deg, min, sec.				
Documentation provided by project participant				
N/A				
GS VVB assessment				Date: 24/03/2023
CME has updated the GEO coordinates as raised CAR hence. CAR is closed.				

CAR ID	10	Section no.	A.2 of MR	Date: 02/12/2022
Description of CAR				
The map provided in section A.2 is not legible.				
Project participant response				Date: 21/12/2022
An updated map was added to the report which is fully legible.				
Documentation provided by project participant				
N/A				
GS VVB assessment				Date: 24/03/2023
CME has updated section A.2 with legible MAP; Hence, CAR is closed.				

CAR ID	11	Section no.	B.2.1 of MR	Date: 02/12/2022
Description of CAR				
In section B.2.1, Indicate the details of approval granted for the temporary deviation.				
Project participant response				Date: 05/01/2023
A temporary deviation request form was not required for the minor deviation explained in section B.2.1. As per the Gold Standard <i>Deviation Approval Requirements and Procedures V 1.2 (2022)</i> , this minor deviation did not a) deviate from GS4GG requirements prior to submission for certification, or b) temporary changes to a certified project such as changes from the monitoring plan, applied methodologies, or other documents. The delay of monitoring surveys by a few months did not constitute a sufficient change to require the submission of a deviation request form.				
Documentation provided by project participant				
N/A				
GS VVB assessment				Date: 24/03/2023
VVB has done an assessment of temporary deviation mentioned under section B.2.1 considering para 4 of "Gold Standard Deviation Approval Requirements and Procedures V 1.2 (2022)", and concludes that there due to temporary deviation, there will be no effect on calculations of GHG emission reductions or net anthropogenic GHG removals will not be overestimated as a result of the deviation, Hence CAR is closed				

CAR ID	12	Section no.	B.1 of MR	Date: 02/12/2022
---------------	-----------	--------------------	------------------	-------------------------

Description of CAR	
As per section B.1 CME to submit Training and awareness raising activity records for current MP as well as the content used for training and competency of person conducted the trainings. e.g. Attendance records, Photos of training,	
Project participant response	Date: 27/01/2023
We have now provided several documents on the training and awareness-raising activities. Please see the three documents below.	
Documentation provided by project participant	
"Activities schedule and content" PDF "Workshop records and attendance sheet" PDF "Description of person running training sessions" PDF	
GS VVB assessment	Date: 03/04/2023
CME has now submitted documents against the training and awareness activity conducted by CME as documents are hand written, which was further clarified during interviews as Burkina Faso is remote area and it is not possible to generate an soft copies hence	
CAR is closed	

CAR ID	13	Section no.	B.1 of MR	Date: 02/12/2022
Description of CAR				
As per section B.1 CME to submit maintenance records for the solar cooker with supporting doc e.g. Bills, receipts.				
Project participant response				Date: 06/01/2023
Maintenance of the solar cookers does not produce records such as bills, receipts, etc. The stove technology is quite simple, and therefore the maintenance/repairs provided is often quick, simple fixes. This maintenance is done by the local women who manufacture the stoves in the workshops, and therefore keeping records would pose challenges in terms of language, literacy, and allocation of time. That being said, if a stove is broken and needs replacement, this is always recorded in Kobo and tracked in the master database.				
Documentation provided by project participant				
N/A				
GS VVB assessment				Date: 24/03/2023
As per the given clarification by CME it clears it will be challenge to track the records for the maintenance of solar cookers, however, the database for replacement is being maintained and shared by CME hence;				
CAR is Closed				

CAR ID	14	Section no.	B.2 of MR	Date: 02/12/2022
Description of CAR				
As mentioned in section B.2 CME to submit approved deviation request form as mentioned in MR.				
Project participant response				Date: 05/01/2023
A deviation request form was not submitted as the minor change to the timing of the monitoring surveys did not constitute a significant enough deviation to require approval. Please see CAR 11 for a more detailed explanation.				
Documentation provided by project participant				
N/A				
GS VVB assessment				Date: 24/03/2023
VVB has done an assessment of temporary deviation mentioned under section B.2.1 considering para 4 of "Gold Standard Deviation Approval Requirements and Procedures V 1.2 (2022)", and concludes that there due to temporary deviation, there will be no effect on calculations of GHG emission reductions or net anthropogenic GHG removals will not be overestimated as a result of the deviation, Hence				
CAR is closed				

CAR ID	15	Section no.	C of MR	Date: 02/12/2022
Description of CAR				

CME to submit newly added cookers data for this MP and the initial sales data for last MP.	
Project participant response	Date: 05/01/2023
Initial sales data as well as newly added cookers (including replacements) can be found in the Iridimi user database, which is now provided as a supporting document.	
Documentation provided by project participant	
"Iridimi user database v20.05.2022" Excel spreadsheet	
GS VVB assessment	Date: 24/03/2023
CME has submitted the "Iridimi user database v20.05.2022" which is showing the replacement records hence CAR is closed.	

CAR ID	16	Section no.	C of MR	Date: 02/12/2022
Description of CAR				
CME to submit "Ongoing monitoring studies" for this MP.				
Project participant response				Date: 05/01/2023
The results of the OMS have now been submitted as supporting documents.				
Documentation provided by project participant				
"Usage Survey 2022" Excel spreadsheet				
GS VVB assessment				Date: 24/03/2023
CME has submitted the document "Usage Survey 2022" against the results of the OMS which indicates the Ongoing Monitoring studies Hence; CAR is closed				

CAR ID	17	Section no.	C of MR	Date: 02/12/2022
Description of CAR				
CME to submit sample filled Questionnaires used during site survey and interview photographs.				
Project participant response				Date: 05/01/2023
A sample questionnaire has now been submitted as a supporting document. The results from this questionnaire have also been submitted as a supporting document. There were no photos taken during the monitoring surveys. Please see the responses in the supporting documents provided below for evidence that they took place.				
Documentation provided by project participant				
"Usage Survey (Enquête d'usage) 2021-22 _ KoboToolbox" PDF "Usage survey 2022" Excel spreadsheet				
GS VVB assessment				Date: 24/03/2023
Questionnaires used during a site survey with its result have been submitted by CME hence the CAR is closed				

CAR ID	18	Section no.	C of MR	Date: 02/12/2022
Description of CAR				
CME to submit Age wise data of cookers mentioned in the monitoring plan and the methodology.				
Project participant response				Date: 05/01/2023
This information can be found in the Iridimi user database, which is now submitted as a supporting document. There is a column showing the age of the current cooker, as well as a final sheet which recaps cookers based on their most recent date of distribution (i.e. age). The data sampled for the Monitoring Surveys is also organized by age wise data, and this can be found in the Usage Survey sample spreadsheet.				
Documentation provided by project participant				
"Iridimi user database v20.05.2022" Excel spreadsheet "Usage Survey - Sampling 07 Fev. 2022" Excel spreadsheet				
GS VVB assessment				Date: 24/03/2023

CME has submitted "Iridimi user database", and "Usage Survey - Sampling 07 Feb. 2022" in which all The data sampled for the Monitoring Surveys is also organized by age wise, Which is further reviewed and suffices the requirement of the finding Hence;
CAR is closed

CAR ID	19	Section no.	D.2 of MR	Date: 02/12/2022
Description of CAR				
<ul style="list-style-type: none"> CME to provide Screenshots of smartphone survey conducted. CME to add an abbreviation for WFP. 				
Project participant response				Date: 19/12/2022
<ul style="list-style-type: none"> A screenshot of the smartphone survey has now been provided as a supporting document Abbreviation for WFP added 				
Documentation provided by project participant				
"Usage Survey (Enquête d'usage) 2021-22 _ KoboToolbox"				
GS VVB assessment				Date: 24/03/2023
CME has submitted the Screen shot and the abbreviation for WFP have been added Hence ; CAR is closed				

CAR ID	20	Section no.	G of MR	Date: 02/12/2022
Description of CAR				
CME to submit the photographic proof of grievance book being maintained at site.				
Project participant response				Date: 27/01/2023
We have now submitted photos of the Iridimi grievance book which is located in the Iridimi workshop. Please refer to the VPA-DD and the LSC report for further details on this.				
Documentation provided by project participant				
"Iridimi grievance book" PDF				
GS VVB assessment				Date: 24/03/2023
CME have submitted the photographic proof of grievance book Hence; CAR is closed				

CAR ID	21	Section no.	D.4 of MR	Date: 02/12/2022
Description of CAR				
As number of beneficiaries represented by CME for the given monitoring period is 4,434. The population considered for the random survey represents 4,290 beneficiaries which were available during the date of survey. As per the guideline, proof of random survey outcome should be submitted. Furthermore, in table provided in section D.4, CME to provide the reference date against parameter "total population in the sales register".				
Project participant response				Date: 05/02/2023
The excel spreadsheet used to calculate the random survey sample has now been submitted as a supporting document. The reference date for the table in section D.4 has now been added (01/12/2021).				
Documentation provided by project participant				
"Usage Survey - Sampling 07 Feb. 2022" Excel spreadsheet				
GS VVB assessment				Date: 24/03/2023
CME has mentioned the reference date under section D.4 however for the random sample outcome CME has submitted "Usage Survey - Sampling 07 Feb. 2022" in which only the list of samples selected is present however Random sampling procedure is missing and a snapshot for the Random sample generator is expected to be shared with VVB against CAR no.21, Hence. CAR is open				
Project participant response				Date: 03/04/2023
Because we used the RND () function in excel, it is not possible for us to screenshot this formula "in action" as it will continually re-generate a random number each time we do so.				
Documentation provided by project participant				

N/A	
GS VVB assessment	Date: 03/04/2023
CME has given an clarification for selection of sample, however random sample snapshot is not available as it is not possible to get exact results after using random selection using Excel, further it is confirmed during an interview how the sample was selected with a demo from client, hence	
CAR is closed	

4.3 Forward action request

FAR ID	01	Section no.	NA	Date: 14/07/2023
Description of FAR				
CME to note that the remote audit for the monitoring period 01/01/2021 to 31/05/2022 is conducted considering the security situations in Chad, however, in accordance with paragraph 11.1.2 of the microscale project requirement, CME shall facilitate VVB's on-site audit during the next periodic verification.				
Project participant response				Date: XX/XX/XXXX
Documentation provided by project participant				
GS VVB assessment				Date: XX/XX/XXXX

Appendix 5. Data and parameters fixed ex-ante

SDG 13: Climate Action

Parameter	$EF_{b, \text{fuel, CO}_2}$
Data unit:	tCO ₂ /t firewood
Default values used:	1.747
Purpose of data	To calculate VERs
Source and Verification of the source	IPCC default values, table 1.4 of chapter 1 of Vol. 2, 2006 IPCC Guidelines for National Greenhouse Gas Inventories

Parameter	$EF_{b, \text{fuel, non_CO}_2}$
Data unit:	tCO ₂ /t firewood
Default values used:	0.53
Purpose of data	To calculate VERs
Source and Verification of the source	Section 4 of The Gold Standard Simplified Methodology for Efficient Cookstoves

Parameter	η_p
Data unit:	Fraction
Default values used:	100
Purpose of data	To calculate VERs
Source and Verification of the source	The cookers do not use fuel per se and so there is no loss of energy being used.

Parameter	f_{NRB}
Data unit:	Fraction
Default values used:	0.96
Purpose of data	To calculate VERs
Source and Verification of the source	A new value was submitted by the project developer on 25/09/2020 to the GS. This value was accepted by the GS on 08/10/2020.

Parameter	$B_{b,y}$
Data unit:	t/hh/a (tons of firewood per household per annum)
Default values used:	MSL: 0.5 tonne per capita per year (MSL method)
Purpose of data	To calculate VERs
Source and Verification of the source	Derived from the minimum service level (MSL) or KPT

Parameter	L_y
Data unit:	fraction
Default values used:	0.95
Purpose of data	To calculate VERs
Source and Verification of the source	Default value

Appendix 6. Data and parameters monitored

Relevant SDG Indicator	SDG 13, SDG 7, SDG 13
Data/ Parameter	$U_{p,y}$
Unit	Percentage
Description	Usage rate in project scenario p during year y
Source of data	Ongoing Monitoring Studies (ER calculation - Chad Solar Cookers MP4_07.06.2022 FINAL)
Value(s) applied	100%
Measurement methods and procedure	Estimated on the basis of the monitoring survey results. All respondents surveyed answered that they were using their solar cooker.
Monitoring frequency	Annual
QA/QC procedures	Gathered data is cross-checked with sales records for user identification and stove installation date. During the ongoing monitoring studies, qualitative checks on the physical condition of stoves are performed to cross-check with the information provided by the user and potentially flag premature stove failure. All information was gathered and analysed by local ADES' staff and HAMERKOP (carbon consultant).
Purpose of data	Calculating NRB saved and calculating SDG 1, 7 & 13 impacts.
Additional comment	-
VVB Assessment	VVB has assessed the "Ongoing Monitoring Studies (ER calculation - Chad Solar Cookers MP4_07.06.2022 FINAL)" against to $U_{p,y}$, which was found in line with the values mentioned same has been cross checked by VVB during end-user interviews and confirmed that the values mentioned are correct.

Relevant SDG Indicator	SDG 13, SDG 7, SDG 1
Data/ Parameter	$N_{p,y}$
Unit	Number
Description	Number of project cookers installed
Source of data	Sales records (ER calculation - Chad Solar Cookers MP4_07.06.2022 FINAL)
Value(s) applied	4,434
Measurement methods and procedure	Measured. Data collected and updated by ADES and checked by HCI on the basis of the number of stoves distributed and entered into the sales records. Some duplication of records was identified, these could relate to different family members using the same World Food Program (WFP) number but to be conservative it has been decided to remove these possible duplications.
Monitoring frequency	Continuous
QA/QC procedures	Checks that contracts contain all information required, once information is entered into the spreadsheet, checks that information matches over a 10% sample.
Purpose of data	Calculating NRB saved.
Additional comment	-

VVB Assessment	VVB has assessed the “Sales records (ER calculation - Chad Solar Cookers MP4_07.06.2022 FINAL)” against $N_{p,y}$ which was found in line with the values mentioned same has been checked by VVB and confirmed that the values mentioned are correct.
-----------------------	---

Relevant SDG Indicator	SDG 13, Climate action
Data/ Parameter	$DF_{b,stove,y}$
Unit	Percentage
Description	Discount factor to account for usage of baseline cookstove during the year y in project scenario
Source of data	Ongoing Monitoring Studies (ER calculation - Chad Solar Cookers MP4_07.06.2022 FINAL)
Value(s) applied	61.2%
Measurement methods and procedure	Calculated on the basis of the monitoring survey results. Calculation method: Average number of meals cooked with the baseline stove / Average number of meals cooked over a period of 7 days
Monitoring frequency	Annual
QA/QC procedures	Gathered data is cross-checked with sales records for user identification and stove installation date. All information gathered and analyzed by a local independent consultant and Hamerkop Climate Impacts (carbon consultant).
Purpose of data	Calculating NRB saved.
Additional comment	-
VVB Assessment	VVB has assessed the “Ongoing Monitoring Studies (ER calculation - Chad Solar Cookers MP4_07.06.2022 FINAL)” against $DF_{b,stove,y}$ which was found in line with the values mentioned same has been checked by VVB during a remote site interviews and confirmed that the values mentioned are correct.

Relevant SDG Indicator	SDG 13, Climate action
Data/ Parameter	DF_{η}
Unit	Fraction
Description	Discount factor to account for efficiency loss of project stoves
Source of data	NA
Value(s) applied	0
Measurement methods and procedure	N.A.
Monitoring frequency	N.A.
QA/QC procedures	N.A.
Purpose of data	Calculation of emission reductions
Additional comment	Solar cookers’ efficiency is considered 100% with no loss of efficiency
VVB Assessment	The default value is being used from a methodology that is in line with the requirement.

Relevant SDG Indicator	SDG 1
Data/ Parameter	$S_{p,y}$
Unit	CFA francs / year

Description	Cumulated savings from an average household using the project cookstoves in year y
Measured/calculated/default	Measured
Source of data	Ongoing Monitoring Studies (ER calculation - Chad Solar Cookers MP4_07.06.2022 FINAL)
Value(s) of monitored parameter	36,388,086 CFA Francs (54,582 EUR) in total per month or 148 EUR per household per year
Monitoring equipment	N/A
Measuring/reading/recording frequency	Annual
Calculation method (if applicable)	Calculated based on the monitoring survey results. Calculation method: $S_{p,y} = N_p \times U_{p,y} \times S_{pi,y}$ Where: N _p = number of households who have received / acquired / using a solar cooker U _{p,y} = usage rate in project scenario p during year y S _{pi,y} = yearly cumulated money saving from an average representative household in year y
QA/QC procedures	Gathered data is cross-checked with sales record for user identification and stove installation date. All information gathered and analysed by a local independent consultant and Hamerkop Climate Impacts (carbon consultant).
Purpose of data	Calculating SDG 1 impacts
Additional comments	N.A.
VVB Assessment	VVB has assessed the “Ongoing Monitoring Studies (ER calculation - Chad Solar Cookers MP4_07.06.2022 FINAL)” against “ S_{p,y} ” which was found in line with the values calculated same has been cross checked by VVB during interviews and confirmed that the values mentioned are correct.

Relevant SDG Indicator	SDG 3, Good health, and well-being
Data/ Parameter	RD_{p,y}
Unit	Percentage
Description	Portion of households experiencing fewer respiratory diseases after adopting solar cooking during year y
Source of data	Ongoing Monitoring Studies (ER calculation - Chad Solar Cookers MP4_07.06.2022 FINAL)
Value(s) applied	100%
Measurement methods and procedure	Estimated based on the monitoring survey results. All respondents reported improvement; 55.6% reporting partial improvement and 44.4% reporting significant improvement.
Monitoring frequency	Annual
QA/QC procedures	Gathered data is cross-checked with sales record for user identification and stove installation date. All information gathered and analysed by a local independent consultant and Hamerkop Climate Impacts (carbon consultant).
Purpose of data	Calculating SDG 3 impacts in project scenario
Additional comment	N.A.
VVB Assessment	VVB has assessed the “Ongoing Monitoring Studies (ER calculation - Chad Solar Cookers MP4_07.06.2022 FINAL)” against “ RD_{p,y} ” which was found in line with the values

	calculated same has been cross-checked by VVB during interviews and confirmed that the values mentioned are correct.
--	--

Relevant SDG Indicator	SDG 3, Good health, and well-being
Data/ Parameter	ED_{p,y}
Unit	Percentage
Description	Portion of households experiencing fewer eye infections after adopting solar cooking during year y
Source of data	Ongoing Monitoring Studies (ER calculation - Chad Solar Cookers MP4_07.06.2022 FINAL)
Value(s) applied	100%
Measurement methods and procedure	Estimated based on the monitoring survey results. All respondents reported improvement; 62.9% reporting partial improvement and 37.1% reporting significant improvement. Estimated on the basis of the monitoring survey results
Monitoring frequency	Annual
QA/QC procedures	Gathered data is cross-checked with sales record for user identification and stove installation date. All information gathered and analysed by a local independent consultant and Hamerkop Climate Impacts (carbon consultant).
Purpose of data	Calculating SDG 3 impacts in project scenario
Additional comment	NA
VVB Assessment	VVB has assessed the “Ongoing Monitoring Studies (ER calculation - Chad Solar Cookers MP4_07.06.2022 FINAL)” against “ED _{p,y} ” which was found in line with the values mentioned in the supporting document same has been cross-checked by VVB during interviews and confirmed that the values mentioned are correct.

Safeguarding Principles Assessment (SPA) Monitoring

>> Not Applicable

No safeguarding principles were added to the Monitoring plan by CME.

Sustainable Development Contributions Achieved

Sustainable Development Goals Targeted	SDG Impact	Amount Achieved	Units/ Products
		Amount achieved from 01 st January 2021 to 31 st December 2021	
GS3445 (VPA 01)	Emissions Reductions	8,538	VERs
		Amount achieved from 01 st January 2022 to 31 st May 2022	
GS3445 (VPA 01)	Emissions Reductions	4,582	VERs

1: No poverty	Average household savings i.e., decrease in expenditure on basic service such as cooking, lighting, drinking	148	Euros / HH / year
3. Good health and well being	Households' perception of health benefits (reduction in the incidence of eye and respiratory diseases) as a fraction	100 (respiratory) 100 (eye)	Fraction (%) of all respondents declaring that they perceived a significant or partial reduction in the occurrence of eye and respiratory diseases within their respective household, since the adoption of the solar cookers
7. Affordable and clean energy	Number of beneficiaries: households	4,434	Number of households who have benefitted from project cookers installed (as of 2022)

Furthermore, as per report of CME and from remote interviews conducted by VVB, it was confirmed that no disputes, inputs, and comments has received via the Continuous Input and Grievance Mechanism during this 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	No human rights violation risks are envisaged in the PoA.	The PoA involves the dissemination of improved cook stove which users are free to choose. There are no human risks envisaged during the dissemination of cookstoves. No mitigation measure is required. The validation team confirms that PoA fulfils the GS requirement outlined in para 3.2.3 of the GS4GG safeguarding principles requirements version 1.2.
	2. The Project shall not discriminate with regard to participation and inclusion	NA.	NA.
Principle 2. Gender Equality	1. The Project shall not directly or indirectly lead to/contribute to adverse impacts on gender equality and/or the situation of women (a) Sexual harassment and/or any forms of violence against women – address the multiple risks of gender-based violence, including sexual exploitation or human trafficking.	Not relevant	This is not relevant for the project activity.
	(b) Slavery, imprisonment, physical and mental drudgery, punishment or coercion of women and girls.	Not relevant	This is not relevant for the project activity.
	(c) Restriction of women’s rights or access to resources (natural or economic).	Not relevant	This is not relevant for the project activity.
	(d) Recognise women’s ownership rights regardless of marital status – adopt project measures where possible to support to women’s access	Not relevant	This is not relevant for the project activity.

	to inherit and own land, homes, and other assets or natural resources.		
	2. Projects shall apply the principles of non-discrimination, equal treatment, and equal pay for equal work: (a) Where appropriate for the implementation of a PoA/VPA, paid, volunteer work or community contributions will be organised to provide the conditions for equitable participation of men and women in the identified tasks/activities.	Not relevant	This is not relevant for the project activity.
	(b) Introduce conditions that ensure the participation of women or men in Project activities and benefits based on pregnancy, maternity/paternity leave, or marital status.	Not relevant	This is not relevant for the project activity.
	(c) Ensure that these conditions do not limit the access of women or men, as the case may be, to PoA/VPA participation and benefits.	Not relevant	This is not relevant for the project activity.
	3. The Project shall refer to the country's national gender strategy or equivalent national commitment to aid in assessing gender risks	Not relevant	This is not relevant for the project activity.
	4. (where required) Summary of opinions and recommendations of an Expert Stakeholder(s)	Not relevant	This is not relevant for the project activity.
Principle 3. Community Health, Safety and Working Conditions	The Project shall avoid community exposure to increased health risks and shall not adversely affect the health of the workers and the community	NA.	NA.
Principle 4.1 Sites of Cultural	Does the Project Area include sites, structures, or objects with historical,	Not relevant	This is not relevant for the project activity.

and Historical Heritage	cultural, artistic, traditional or religious values or intangible forms of culture?		
Principle 4.2 Forced Eviction and Displacement	Does the Project require or cause the physical or economic relocation of peoples (temporary or permanent, full or partial)?	Not relevant	This is not relevant for the project activity.
Principle 4.3 Land Tenure and Other Rights	Does the Project require any change, or have any uncertainties related to land tenure arrangements and/or access rights, usage rights or land ownership?	Not relevant	This is not relevant for the project activity.
Principle 4.4 Indigenous People	Are indigenous peoples present in or within the area of influence of the Project and/or is the Project located on land/territory claimed by indigenous peoples?	Since this is a cookstove distribution project, there is no risk to land/territory claimed by indigenous peoples. Cookstoves will be distributed to all willing customers within the project boundary.	This is not relevant for the project activity.
Principle 5. Corruption	The Project shall not involve, be complicit in or inadvertently contribute to or reinforce corruption or corrupt Projects	NA.	NA.
Principle 6.1 Labour Rights	1. The Project Developer shall ensure that all employment is in compliance with national labour occupational health and safety laws and with the principles and standards embodied in the ILO fundamental conventions	To ensure there is no forced labour of any kind with the project.	Project activity involves dissemination of improved cook stove, for site surveys during monitoring CME appoints sales agents which leaves nearby to the project locations, for assessment VVB has taken a declaration that these agents were worked for them. Hence, we can ensures no forced labour are there and project activity is not violating any host country rules.
	2. Workers shall be able to establish and join labour organisations	NA.	NA.
	3. Working agreements with all individual workers shall be documented and implemented and include:	NA.	NA.

	<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. 		
	4. No child labour is allowed (Exceptions for children working on their families' property requires an Expert Stakeholder opinion)	NA.	NA.
	5. The Project Developer shall ensure the use of appropriate equipment, training of workers, documentation and reporting of accidents and incidents, and emergency preparedness and response measures	NA.	NA.
Principle 6.2 Negative Economic Consequences	Does the project cause negative economic consequences during and after project implementation?	NA	NA.
Principle 7.1 Emissions	Will the Project increase greenhouse gas emissions over the Baseline Scenario?	The PoA reduces GHG emissions relative to baseline scenario	The project involves dissemination of improved cookstove which will reduce GHG emissions compared to the baseline scenario. This is not relevant for the project activity.
Principle 7.2 Energy Supply	Will the Project use energy from a local grid or power supply (i.e., not	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

	connected to a national or regional grid) or fuel resource (such as wood, biomass) that provides for other local users?		wood as an energy source. The project will reduce fuel resource consumption. The validation team confirms that PoA fulfils the GS requirement outlined in the para 3.7.2 of the GS4GG safeguarding principles requirements version 1.2.
Principle 8.1 Impact on Natural Water Patterns/Flows	Will the Project affect the natural or pre-existing pattern of watercourses, groundwater and/or the watershed(s) such as high seasonal flow variability, flooding potential, lack of aquatic connectivity or water scarcity?	Not applicable	This is not relevant for the project activity.
Principle 8.2 Erosion and/or Water Body Instability	Could the Project directly or indirectly cause additional erosion and/or water body instability or 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..
Principle 9.1 Landscape Modification and Soil	Does the Project involve the use of land and soil for production of crops or other products?	Not applicable	This is not relevant for the project activity.
Principle 9.2 Vulnerability to Natural Disaster	Will the Project be susceptible to or lead to increased vulnerability to wind, earthquakes, subsidence, landslides, erosion, flooding, drought or other extreme climatic conditions?	Not applicable	This is not relevant for the project activity.
Principle 9.3 Genetic Resources	Could the Project be negatively impacted by or involve genetically modified organisms or GMOs (e.g., contamination, collection and/or harvesting, commercial development,	Not applicable	This is not relevant for the project activity.

	or take place in facilities or farms that include GMOs in their processes and production)?		
Principle 9.4 Release of pollutants	Could the Project potentially result in the release of pollutants to the environment?	Not applicable	This is not relevant for the project activity.
Principle 9.5 Hazardous and Non-hazardous Waste	Will the Project involve the manufacture, trade, release, and/ or use of hazardous and non-hazardous chemicals and/or materials?	Not applicable	This is not relevant for the project activity.
Principle 9.6 Pesticides & Fertilisers	Will the Project involve the application of pesticides and/or fertilisers?	Not applicable	Not applicable
Principle 9.7 Harvesting of Forests	Will the Project involve the harvesting of forests?	The PoA does not involve harvesting of forests. The PoA shall result in reduction in demand of biomass fuel in the region putting less pressure of forests for deforestation and will hence indirectly avoid erosion associated with tree cutting/ felling.	The PoA involves in the reduction of fuel wood consumption therefore it will positively support the forest resources. The validation team confirms that PoA fulfils the GS requirement outlined in the GS4GG safeguarding principles requirements version 1.2.
Principle 9.8 Food	Does the Project modify the quantity or nutritional quality of food available such as through crop regime alteration or export or economic incentives?	Not applicable	This is not relevant for the project activity.
Principle 9.9 Animal husbandry	Will the Project involve animal husbandry?	Not applicable	This is not relevant for the project activity.
Principle 9.10 High Conservation Value Areas and Critical Habitats	Does the Project physically affect or alter largely intact or High Conservation Value (HCV) ecosystems, critical habitats, landscapes, key biodiversity areas or sites identified?	Not applicable	This is not relevant for the project activity.

Principle 9.11 Endangered Species	Are there any endangered species identified as potentially being present within the Project boundary (including those that may route through the area)? AND/OR 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

CCIPL's Checklist question	Ref.	MoV ⁴	Findings, comments, references, data sources	Draft conclusion	Final conclusion
1. Sustainability Monitoring					
1.1 Have all non-neutral indicators been monitored as per the sustainability monitoring plan?	-	DR,	Yes, all the non-neutral indicators have been monitored as per the sustainability monitoring plan.	OK	OK
1.2 Have the methods to monitor data changed? And are they suitable to the project scale and type?	-	DR	Methods to monitor data have not changed as compared with the monitoring plan in the registered passport and monitoring plan.	OK	OK
1.3 Has the way of monitoring been followed? With the inclusion of dates and parameters?	-	I, DR	The sustainability monitoring plan has been followed as described in the Passport.	OK	OK

⁴ MoV = Means of Verification, DR = Document Review, I = Interview, www = internet search.

CC IPL's Checklist question	Ref.	MoV ⁴	Findings, comments, references, data sources	Draft conclusion	Final conclusion
1.4 Have mitigation measures been put in place to prevent the risk of the violation of the safeguarding principle of the "Do No Harm" assessment or to neutralize a Sustainable Development Indicator that is being monitored?	-	I, DR	The POA is the distribution of efficient cookstoves to the masses and doesn't involve any large set up or organization base that can be qualified as significant for a "Do Not Harm" procedures.	OK	OK
1.5 Has all the data in the Sustainability development matrix been verified and cross-checked against available sources of project data? Has it been described how sustainable development would be affected if a variance occurred?	-	I, DR	Yes, all data in the sustainability development matrix have been verified and cross-checked from the supporting documents/data and during the on-site audit.	OK	OK
2. Other	-				
2.1 Are there any issues from the previous validation/verification? (ie FARs, requests / approvals for RMP)	-	DR	No	OK	OK
2.2 Has the project ever received any requests for reviews or incompletes from the UNFCCC or GS Secretariat?	-	DR	No there are no requests for reviews or incomplete for the project.	OK	OK
2.3 The evaluation of the status of mitigation and compensation measures has been verified.	-	DR	Yes, the status of mitigation and compensation measures has been verified.	OK	OK