Verification and certification report form for GS PoA	
BASIC INFORMATION	
Title and GS reference number of the PoA	PoA Title: Dissemination of Improved Cookstoves in India by Greenway GS Ref. No: GS 10818
Reference Number	GS Ref. No: GS 10818
GS Version	GS4GG
Scale of the project activity	☐ Large-scale ☒ Small-scale
Version number of the verification and certification report	2.2
Completion date of the verification and certification report	12/02/2024
Monitoring period number and duration of this monitoring period	29/04/2022 – 31/05/2023 (including both days) MP 01 (VPA#016-026) MP 02 (VPA#01-15)
Version number of the monitoring report to which this report applies	4.0
PoA Crediting Period	14/05/2020 – 13/05/2025
Coordinating/managing entity (CME)	Greenway Grameen Infra Pvt Ltd
Host Party	India
Applied methodologies and standardized baselines	AMS.II.G, version 12
Sectoral scopes	Sectoral Scope 03
SDG Impact Certified	**SDG 03:** Good Health and Well Being: Decrease in Mortality rate attributed to household and ambient air pollution: 53% **SDG 05:** Gender Equality: Time spent collecting fuelwood from the forests and for cooking: 2.62 hours/week/household **SDG 07:** Affordable and Clean energy: Number of project households predominantly using clean cooking devices such as improved cook stoves: 396,834 households

	SDG 08 [1] : Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all	Employment generated for men & women on equal salaries: 101 employments (VPA02-VPA15) and 115 (VPA16-VPA 26)
	SDG 13: Climate Action	Emission Reductions: 792,750 tCO_2e
Name of the VVB	4K Earth Science Private Limited	
Name, position and signature of the approver of the verification and certification report	 Chandrakala R Director	

[1] The SDG 08 is applicable to the VPAs (VPA 02-VPA 15)

SECTION A. Executive summary

4K Earth Science Private Limited (4KES) has been commissioned by "Greenway Grameen Infra Pvt Ltd" to perform an independent verification of its registered GS PoA "Dissemination of Improved Cookstoves in India by Greenway", GS Ref # GS10818 for the reported GHG emission reductions for the given monitoring period 29/04/2022 to 31/05/2023 (both dates included). The GS projects must undergo independent third party verification and certification of emission reductions as the basis for issuance of Gold Standard Verified Emission Reductions (GS VERs).

The VPAs included in the GS PoA (GS10818) and considered for this verification are:

- GS10818 - Dissemination of Improved Cookstoves in India by Greenway - Dissemination of Improved Cookstoves in Karnataka by Greenway - VPA001 (GS 10821)
- GS10818 - Dissemination of Improved Cookstoves in India by Greenway - Dissemination of Improved Cookstoves in Karnataka by Greenway - VPA002 (GS 10825)
- GS10818 - Dissemination of Improved Cookstoves in India by Greenway - Dissemination of Improved Cookstoves in Karnataka by Greenway - VPA003 (GS 11218)
- GS10818 - Dissemination of Improved Cookstoves in India by Greenway - Dissemination of Improved Cookstoves in Karnataka by Greenway - VPA004 (GS 11309)
- GS10818 - Dissemination of Improved Cookstoves in India by Greenway - Dissemination of Improved Cookstoves in Karnataka by Greenway - VPA005 (GS 11310)
- GS10818 - Dissemination of Improved Cookstoves in India by Greenway - Dissemination of Improved Cookstoves in Karnataka by Greenway - VPA006 (GS 11311)
- GS10818 - Dissemination of Improved Cookstoves in India by Greenway - Dissemination of Improved Cookstoves in Karnataka by Greenway - VPA007 (GS 11312)
- GS10818 - Dissemination of Improved Cookstoves in India by Greenway - Dissemination of Improved Cookstoves in Karnataka by Greenway - VPA008 (GS 11313)
- GS10818 - Dissemination of Improved Cookstoves in India by Greenway - Dissemination of Improved Cookstoves in Karnataka by Greenway - VPA009 (GS11628)
- GS10818 - Dissemination of Improved Cookstoves in India by Greenway - Dissemination of Improved Cookstoves in Karnataka by Greenway - VPA010 (GS11629)
- GS10818 - Dissemination of Improved Cookstoves in India by Greenway - Dissemination of Improved Cookstoves in Karnataka by Greenway - VPA011 (GS11630)
- GS10818 - Dissemination of Improved Cookstoves in India by Greenway - Dissemination of Improved Cookstoves in Karnataka by Greenway - VPA012 (GS 11631)
- GS10818 - Dissemination of Improved Cookstoves in India by Greenway - Dissemination of Improved Cookstoves in Karnataka by Greenway - VPA013 (GS11632)
- GS10818 - Dissemination of Improved Cookstoves in India by Greenway - Dissemination of Improved Cookstoves in Karnataka by Greenway - VPA014 (GS11633)
- VPA 15: GS10818 - Dissemination of Improved Cookstoves in India by Greenway - Dissemination of Improved Cookstoves in Karnataka by Greenway - VPA015 (GS11634)
- VPA016: GS10818 - Dissemination of Improved Cookstoves in India by Greenway - Dissemination of Improved Cookstoves in Karnataka by Greenway - VPA016 (GS 12123)
- VPA017: GS10818 - Dissemination of Improved Cookstoves in India by Greenway - Dissemination of Improved Cookstoves in Karnataka by Greenway - VPA017 (GS 12124)
- VPA018: GS10818 - Dissemination of Improved Cookstoves in India by Greenway - Dissemination of Improved Cookstoves in Karnataka by Greenway - VPA018 (GS 12125)
- VPA019: GS10818 - Dissemination of Improved Cookstoves in India by Greenway - Dissemination of Improved Cookstoves in Karnataka by Greenway - VPA019 (GS 12126)
- VPA020: GS10818 - Dissemination of Improved Cookstoves in India by Greenway - Dissemination of Improved Cookstoves in Karnataka by Greenway - VPA020 (GS 12127)
- VPA021: GS10818 - Dissemination of Improved Cookstoves in India by Greenway - Dissemination of Improved Cookstoves in Karnataka by Greenway - VPA021 (GS 12128)

- VPA022: GS10818 - Dissemination of Improved Cookstoves in India by Greenway - Dissemination of Improved Cookstoves in Karnataka by Greenway - VPA022 (GS 12129)
- VPA023: GS10818 - Dissemination of Improved Cookstoves in India by Greenway - Dissemination of Improved Cookstoves in Karnataka by Greenway - VPA023 (GS 12130)
- VPA024: GS10818 - Dissemination of Improved Cookstoves in India by Greenway - Dissemination of Improved Cookstoves in Karnataka by Greenway - VPA024(GS 12131)
- VPA025: GS10818 - Dissemination of Improved Cookstoves in India by Greenway - Dissemination of Improved Cookstoves in Karnataka by Greenway - VPA025 (GS 12132)
- VPA026: GS10818 - Dissemination of Improved Cookstoves in India by Greenway - Dissemination of Improved Cookstoves in Karnataka by Greenway - VPA026 (GS 12141)

The objectives of this verification exercise are, by review of objective evidence, to establish that:

- The project activity has been implemented and operated as per the registered PoA-DD/4/ & validated VPA-DDs/3/ and that all physical features (technology, project equipment, and monitoring and metering equipment) of the project are in place;
- Monitoring report and other supporting documents are complete;
- The actual monitoring systems & procedures and monitoring report conforms with the requirements of the approved monitoring plan and the approved monitoring methodology/8/;
- The data is recorded and stored as per the monitoring methodology and approved monitoring plan.

Scope:

The scope of the verification is the independent and objective review and ex post determination of the monitored reductions in GHG emission by the project activity. The verification is based on review of monitoring report, supporting information and

(a) The registered GS PoA-DD /4/, validated GS VPA-DDs/3/
(b) The approved methodology (AMS II.G, version 12)/8/
(c) The registered monitoring plan
(d) Relevant decisions, clarifications and guidance from the CMP and the CDM Executive Board
(e) Applicable GS4GG guidance
(f) CDM Validation and Verification Standard (VVS) & Project Standard (PS)/22/
(g) All information and references relevant to the project activity's resulting in emission reductions
(h) Information related to monitoring of SDG parameters

The project is assessed against the requirements of the Gold Standard for Global Goals requirements/23/ and related rules and guidance.

4KES has based on the recommendations in the latest version of CDM Validation and Verification Standard & GS4GG Rules and Requirements, employed a rule-based approach in the verification, focusing on the identification of significant reporting risks and the reliability of project monitoring.

Description of PoA:

The purpose of the VPAs is the distribution of improved cook stoves (ICS) to households within Karnataka. The improved cook stoves are energy efficient than the baseline traditional cook stoves. Due to the higher efficiency, the improved cook stove reduces the usage of non-renewable biomass in cooking and thereby, it avoids the related CO_2 emission from the use of non- renewable biomass.

Each VPA from VPA 01 to VPA 25 has distributed 15,500 ICS in Karnataka and VPA 26 has distributed 9,334 ICS till the end of monitoring period. In total 396,834 ICS were sold till the end of monitoring period.

Methodology:

4KES follows a rule based verification approach, wherein, as a first step, the contract review is undertaken as per latest version of CDM Accreditation Standard. Subsequently, after the contract is signed, the Gold Standard Verification team is assigned for the verification of project activity.

A desk review of the project documentation is undertaken, which is followed by site visit and interviews by the members of verification team in accordance with the latest version of CDM AS. The verification protocol is filled by the verification team that is based on standard auditing practices and latest version of CDM VVS, to capture the assessment of applicable CDM & GS requirements viz., latest version of CDM Project Standard for PoAs, applicable GS4GG guidelines, registered GS4GG PoA-DD, validated VPA-DDs, applied methodology/ies and/or tools and recent decisions. The verification protocol provides transparent means to record the observations and compliances by the verification team members and the nonconformities (CARs/CLs), if any. The verification protocol is an internal document, and is available on request. After successful closure of findings (CARs/CLs), the draft verification report is prepared which went through Independent technical review as per 4KES internal procedures and the TR comments were given for any gaps in audit findings. After closure of the TR comments, final verification report is prepared then followed by final approval for the decision made. The approved verification report is given to PP which shall be submitted for request for issuance.

Following are the major milestones for the verification under consideration.

Verification contract	25/05/2023
Site visit	07/08/2023 to 11/08/2023
Draft Verification Report	14/09/2023
Final Verification Report	12/02/2024

SECTION B. Verification team, technical reviewer and approver

B.1. Verification team member

No.	Role	Type of resource	Last name	First name	Affiliation (e.g. name of central or other office of VVB or outsourced entity)	Involvement in			
						Desk/document review	On-site inspection	Interviews	Verification findings
1.	Team Leader, Technical Expert (TA 3.1) and Local Expert	EI	Kumar	Narendra	Central Office	✓	✓	✓	✓
2	Team Member and Local Expert	IR	Acharya	Swati S	Central Office	✓	✓	✓	✓

B.2. Technical reviewer and approver of the verification and certification report

No.	Role	Type of resource	Last name	First name	Affiliation (e.g. name of central or other office of VVB or outsourced entity)
1.	Technical Reviewer	IR	Ma Paa	Puratchikkanal	Central Office
2	Approver	IR	R	Chandrakala	Central Office

SECTION C. Application of materiality

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.	Wrong data collection/misinterpretation of household situation	Low	It's not complicated monitoring process. Appropriate trainings are conducted for the monitoring personnel.	By means of site visit check of actual situation to sample number of households.
2	Transfer of data from sampling survey sheet to monitoring database	Low	Possible human error during transfer of data to monitoring database	Thorough cross-check required on the transfer of data from survey sheets to the monitoring database sheet
3	Error in transferring the recorded data to ER sheet	Low	Since the process of transferring data from monitoring database to ER calculations sheets is done mostly though copy & paste, there is a very less chance of discrepancies.	Consistency between monitoring database and ER sheet to be checked.
4	Error in ER calculations	High	The sample size was large, hence increasing the chances of error in ER calculation	The ER calculations were checked for accuracy.

C.2. Consideration of materiality in conducting the verification

The prescribed thresholds for materiality, as per VVS for PoAs.

Prescribed range of ERs/annum	500,000+	300,000+ to 500,000	300,000	SSC Pas	MSC Pas
Prescribed Threshold	0.5%	1.0%	2.0%	5.0%	10.0%

The identified/selected materiality threshold for the project activity under current monitoring period is 5% as project activity is a small-scale PoA with one VPA already registered.

	MR Version (Draft)	MR Version (Final)
Emission reductions/monitoring period	814,554 tCO_2e	792,750 tCO_2e
Identified Threshold	5.0%	5.0%

The impact of errors observed during verification for each monitoring parameter on the emission reduction calculation is provided below:

Parameter	Verification approach	Error identified	Corrected	Within Threshold
Number of project devices of type I and age a that are operating in year y ($N_{y,i,a}$)	Complete data check in database	No error identified	NA	Yes
Efficiency of the device (Stove) of each type i and batch j implemented as part of	Sample survey data check & acceptance survey	No error identified	NA	Yes

the project activity ($\eta_{new,i,j}$)				
Adjustment to account for any continued use of pre-project devices during the year y (μ_y)	Sample survey data check & acceptance survey	No error identified	NA	Yes
Life Span	Sample survey data check	No error identified	NA	Yes
Date of commissioning of project device i	Sample survey data check & acceptance survey	No error identified	NA	Yes
Number of project devices distributed per household ($N_{d,HH}$)	Sample survey data check & acceptance survey	No error identified	NA	Yes
Air Quality	Sample survey data check & acceptance survey	Typo error was identified, which was subsequently corrected during the course of verification	Yes	Yes
Time Saving per household in collecting fuelwood (Number of Hours)	Sample survey data check & acceptance survey	Typo error identified, which was subsequently corrected during the course of verification	Yes	Yes
Number of ICS under the project	Sample survey data check & acceptance survey	No error identified	NA	NA

The change in the actual impacts related to the air quality and time savings between draft and final MR is due to the error identified in the monitoring report. Please refer the CARs & CLs raised in the Appendix 4.

SECTION D. Means of verification

D.1. Desk/document review

The verification is performed primarily as a desk review of the documents submitted at various stages of assessments. The review is performed by assessment team using verification protocols (checklists). The assessment team cross-checked the information provided in the MR and information from sources other than those used, if available, and also conducts independent background investigations. 4KES conducted a desk review, involving but not limited to,

- A review of the data and information presented to verify their completeness;
- A review of the monitoring plan and monitoring methodology, paying particular attention to the frequency of measurements, the quality of metering equipment including calibration requirements, and the quality assurance and quality control procedures;
- A review of calculations and assumptions made in determining the GHG data and emission reductions
- An evaluation of data management and the quality assurance and quality control system in the context of their influence on the generation and reporting of emission reductions.

The list of documents reviewed is included in the section 'Appendix 3' of this report.

D.2. On-site inspection

Duration of on-site inspection: 07/08/2023 to 11/08/2023				
No.	**Activity performed on-site**	**Site location**	**Date**	**Team member**
1.	Opening Meeting, Office Inspection, Verification of monitoring records, interviews and database inspection	Bangalore, Karnataka	07/08/2023	Narendra Kumar Swati S Acharya (on-site visit in Karnataka)
2.	Visit to sample of households	Beneficiary households at various locations in Karnataka	07/08/2023 to 11/08/2023	Narendra Kumar Swati S Acharya (on-site visit in Karnataka)
3	Closing Meeting	Bangalore, Karnataka	11/08/2023	Narendra Kumar Swati S Acharya (on-site visit in Karnataka)

D.3. Interviews

No.	**Interviewee**			**Date**	**Subject**	**Team member**
	Last name	**First name**	**Affiliation**			
1.	K	Jagadeesh	State Head-Sales, Greenway	07/08/2023 - 11/08/2023	- General aspects of the project - Changes since validation / previous verification - Remaining issues from validation/ previous verification - Quality management system - Involved personnel and responsibilities - Training and practice of the operational personnel - Implementation of the monitoring plan - Monitoring data management - Data uncertainty and residual risks - Procedural aspects of the Monitoring - Maintenance - Data analysis - Issues in the MR - ER calculation - Roles and responsibilities - Data collection - Carbon Rights - Sustainable Development parameters - Grievance Mechanism - Sales and distribution methods, trainings received, training to user, CER rights, sales	Narendra Kumar, Swati S Acharya (on-site visit in Karnataka)
2.	Sutar	Ravi G	Field Officer, Greenway			
3.	Bidikar	Atharv	Field Officer, Greenway			
4.	Begur	Shridhar	Field Officer, Greenway			
5.	Naik	Manju	ASM, Greenway			
6.	M.A.	Vinayaka	ASM, Greenway			
7.	R	Ramesh	ASO, Greenway			
8.	G.D.	Prashanth	ASO, Greenway			
9.	S.D	Mallikarjun	Field Officer, Greenway			
10.	Karivalappanavar	Ningappa	Field Officer, Greenway			
11.		Mahadevi	Sewa Pratinidhi, SKDRDP			
12.	Madlor	Sarojini	Sewa Pratinidhi, SKDRDP			
13.	Mirgi	Halappa	Field Supervisor, SKDRDP			
14.	Julkumar	Priyanka N	Sewa Pratinidhi, SKDRDP			
15.		Shabana	Sewa Pratinidhi, SKDRDP			
16.	Banu	Nazeema	Sewa Pratinidhi, SKDRDP			
17.	M.B.	Shankar	Field Officer, Greenway			
18.	S.	Shivakumar	Field Officer, Greenway			
19.	Barra	Ayesha	Sewa Pratinidhi,			

			SKDRDP		receipts, how to use, usage etc.	
20.		Kavitha	Sewa Pratinidhi, SKDRDP			
21.		Shivakumar	Sewa Pratinidhi, SKDRDP			
22.	G.T	Arun Kumar	Field Officer, Greenway			
23.	Nath	Manju	Sewa Pratinidhi, SKDRDP			
24.		Prema	Sewa Pratinidhi, SKDRDP			
25.	Gouda	Umesh	SO, Greenway			
26.	K.	Nagaraj	Field Officer, Greenway			
27.	Mahadev	N	Sewa Pratinidhi, SKDRDP			
28.	B	Haneesh	Sewa Pratinidhi, SKDRDP			
29.	Naik	Kiran Kumar	ASO, Greenway			
30.	Thappa	Hanuman	Field officer, Greenway			
31.		Rajeshwari	Sewa Pratinidhi, SKDRDP			
32.	Kumar	Pradeep	AFS, SKDRDP			
33.		Revannah	Fund Manager, SKDRDP			
34.	SN	Madhu	Field Supervisor, SKDRDP			
35.	N	Vinod	Internal Auditor, SKDRDP			
36.	Kishana	S.	Field Supervisor, SKDRDP			
37.		Annappakap	Field Supervisor, SKDRDP			
38.		Santosh	Field Supervisor, SKDRDP			
39.		Srikanth	Internal Auditor, SKDRDP			
40.		Naveen	Fund Manager, SKDRDP			
41.	Nayakag	Sundara	Field Supervisor, SKDRDP			
42.		Munikrishnan	Field Supervisor, SKDRDP			
43.	M.P.	Chudarathna	Field Supervisor, SKDRDP			
44.	N	Kalyani	Field Supervisor, SKDRDP			
45.		Anitha	Field Supervisor, SKDRDP			

46.		Padmavati	PO, SKDRDP			
47.	K	Uday	PO, SKDRDP			
48.		Dayashula	District Director, SKDRDP			
49.	Gouda	ChandraShekar G	Field Officer, Greenway			
50.	P	Kiran Kumar	ASM, Greenway			
51.	Naik	Dinesh	Field Officer, Greenway			
52.	Kumar	Vijay	Field Officer, Greenway			
53.	HC	Santosh	Field Officer, Greenway			
54.	Chalpati	Venkata	Field Officer, Greenway			
55.		Karthik	Field Officer, Greenway			
56.	S	Sachin	Field Officer, Greenway			
57.		Basavraj	Senior Executive, Logistics, Greenway			
58.	Daihande	Prakash	LMD, Greenway			
59.	Kokumar	Shankar Linga	Executive, Greenway			
60.	Padijier	Vishwanath	Junior Executive, Greenway			
61.	Saraf	Saurabh	Director, OffsetFarm Pte. Ltd.	14/08/2023	1. Monitoring Report and Implementation 2. Implementation of the monitoring plan 3. Sample survey 4. Data analysis 5. Issues in the Monitoring report 6. Roles and responsibilities 7. Applicability of the methodology 8. Emission reduction 9. Identification of users, Sales and distribution methods, trainings received, training to user, CER rights, sales receipts, How to use, usage etc. 10. Data collection 11. Monitoring Surveys 12. Safeguarding principles, 13. Project scenario, 14. Grievance mechanism	Narendra Kumar, Swati S Acharya (through Google meet)
62.	Mathur	Ankit	Director, SDG13 Ventures Pte Ltd			
63.	Hussain	Tanfiz	Associate-Carbon Asset Development Offsetfarm Pte Ltd.			
64	Pavithran	Shiji	CRO, Greenway			
65	Deep	Sapan	Manager -Data Operations, Greenway			
66	Biswas	Sudipta	VP-Supply Chain, Greenway			
67	Kazi	Shoeb	COO, Greenway			

Interviews with the households related to Monitoring survey:

No.	Household name	ICS Serial number	Subject	Team member
1	Prema	J21VJ091922	• Verification of data collected through sample survey • Awareness about ownership of CERs • Working condition of ICS unit • SDG parameter verification	Narendra Kumar, Swati S Acharya (on-site visit in Karnataka)
2	Parzana Banu	J22VI189648		
3	B C Vasanth	J20VJ106541		
4	Ummakka	J22VH163998		
5	Kavitha V	J21VK120318		
6	M. H. Anju	J20VG043078		
7	Mahadevi	J22VE027402		
8	Rupa Basawraj Badgavi	J22VJ241774		
9	Renuka Parshuran	J22VF080583		
10	Vijaylaxmi	J22VF055676		
11	Najimunnisa Mulla	J22VG087000		
12	Lalita Vi Hublaman	J21VL143518		
13	Latha	J21VF021251		
14	Khalandarsab	J20VJ105407		
15	Mangalama	J21VL134134		
16	Ningamma	J23VC437129		
17	Reddamma	J22VF056153		
18	Munniratnama	J22VD004918		
19	Gayathri	J22VE028238		
20	Manjula	J22VI197676		
21	Manjula KR	J21VK119521		
22	Trisa Rani	J21VB195428		
23	Mahadevi	J20VJ100259		
24	Madana	J21VA165599		
25	Kumar	J23VA399383		
26	Lakshmi Devi	J23VA397545		
27	Shobha Gujeri	J23VA394322		
28	Shantavva Masanakatte	J23VA399899		
29	Sangeeta	J23VD001867		
30	Renuka Mugali	J23VA399194		
31	Ramakka	J23VA399323		
32	Maduramma	J23VD006821		

Verification team cross verified parameters which are monitored through acceptance samples survey. Apart from acceptance sample survey the verification team asked additional questions to the households. The additional questions asked by the verification team and the general reply received from the stakeholders are given below:

Questions asked by verification team	Summary of Response by Stakeholders/end users
Name of the household representative, address of the location, their mobile number	Interviewed with the household representative
Is the ICS system in operating condition?	All end users confirmed the ICS system in operating condition now. The same was also confirmed through looking the ICS
Source of cooking fuel in technology	The wood fuel is mainly used in the technology
The details related to the Baseline technology and Baseline fuel were asked.	Three stone stove is the baseline technology and wood was the baseline fuel
Stove serial number printed on the ICS	Check through looking at the side surfaces of the ICS

Are you aware that the project claims emission reduction and the ownership of the eRs are with Greenway Grameen Infra Pvt Ltd?	All the end users are aware that all the rights of emission reduction are with Greenway Grameen Infra Pvt Ltd as the ICS.
Is there any repairs done to your ICS stove?	Almost all the households confirmed that the ICS was operating since purchased date without any repairs.
If you have any issue with the device/project, you contact whom?	All households confirmed that they have the contact number of the respective area field officer and for any requirement they can contact the field officer.
Is indoor smoke reduced due to the use of ICS unit?	All the households confirmed reduction in the indoor smoke and thereby reduction in health issues ie, eye related issues, respiratory issues.
Is cooking time reduced due to use of ICS unit?	All the households confirmed reduction in cooking time.
Is the consumption of fuel decreased since purchasing the ICS and hence lead to any money savings?	All the households confirmed reduction in the consumption of fuel and hence money savings.
Are you trained by the Greenway team?	All households confirmed they have been received training from Greenway
What are the other benefits of ICS unit?	The summary of the other benefits mentioned by households are: • Easy cooking • Reduction in fuelwood collection time & cooking time • Clean home • Clean vessel • Better lifestyle • Money savings
Do you have any issue with the project?	No households mentioned any issues with the project.

No risks were identified during the site visit and all the interviews were sufficiently conducted in order to conclude on the verification of the 26 VPAs under the PoA. There were no aspects identified, which needs to be further audited during the next verification.

D.4. Sampling approach

Due to the large number of ICS installed under the VPAs, it was not economically feasible to monitor each individual ICS unit installed, therefore, a representative sampling was undertaken for the ICS installed in the households. PP has proposed simple random sampling using 95/10 as confidence/precision for monitoring the parameters. This is inline with the applied methodology and Sampling Standard.

The monitoring parameters monitored through the sampling plan are:

1. Number of project devices of type i and age a that are operating in year y.
2. Efficiency of the device (ICS) of each type i and batch j implemented as part of the project activity
3. Adjustment to account for any continued use of pre-project devices during the year y
4. Users' perception on smoke reduction and Incidence of disease: perceived smoke levels, incidence of coughing, incidence of respiratory illness, Incidence of itchy eyes
5. Time Saving per household in collecting fuelwood
6. Number of ICS under the project

The objective of the sampling is to obtain an unbiased and reliable estimate of the proportion or mean value of the parameters over the course of the monitoring period, and with 95/10 confidence/precision.

The target population is the total ICS population served under the project (and covered under the monitoring report), and the sampling frame consists of aggregated data of end-users of the ICS as recorded in the project database. The 260 samples/18/ were used for determining the parameters through sample survey.

VVB Sampling approach:
For the SDG parameters monitored though sampling, verification team used acceptance sampling approach. During the site visit a sampling approach has been used by the verification team to verify the reported values for the SDG parameters which are determined through sample survey. Verification team has determined acceptance sample size for all the sample survey parameters based on the table provided under para 28-33 of standard "Sampling and surveys for CDM project activities and programmes of activities" version 9/24/.

Parameters	Producers risk	Consumers risk	AQL	UQL	Sample size	Acceptance Number
SDG Parameters monitored through sample survey	10%	10%	1.0%	20%	18	1

During the on-site verification a sampling approach has been used by the verification team to verify the reported values for the monitored parameters in the MR. In addition to the above 18 households, PP has chosen additional 14 household samples as part of the acceptance sampling during the site visit. The sampling approach included households which have been included in the monitoring survey by the CME. Accordingly, the verification team verified a total of 32 Samples as per the details provided in Section D.3 above observed that the sampling survey results of the PP for all the HHs checked were found to be correct and hence acceptable.

D.5. Clarification requests (CLs), corrective action requests (CARs) and forward action requests (FARs) raised

Areas of verification findings	No. of CL	No. of CAR	No. of FAR
General	-	-	-
Compliance of the monitoring report with the monitoring report form	-	01	-
Remaining forward action requests from validation and/or previous verifications	-	-	FAR 01
VPAs considered for verification and covered in this report		-	-
Programme of activities	-	-	-
Compliance of the programme implementation with the registered PoA-DD	-	-	-
Implementation and operation of the management system	-	-	-
Post-registration changes	-	-	-
• Corrections	-	-	-
• Inclusion of a monitoring plan	-	-	-
• Permanent changes to the registered monitoring plan, or permanent deviation of monitoring from the applied methodologies, standardized baselines, or other methodological regulatory documents[2]	-	-	-
• Changes to the programme design	-	-	-

[2] Other standards, methodologies, methodological tools and guidelines (to be) applied in accordance with the applied(selected) methodologies are collectively referred to as the other (applied) methodological regulatory documents).

Areas of verification findings	No. of CL	No. of CAR	No. of FAR
• Addition of VPA inclusion template	-	-	-
• Change of coordinating/managing entity	-	-	-
• Changes specific to afforestation and reforestation activities	-	-	-
Component project activities	-	-	-
Compliance of the VPA implementation with the included VPA design document	01	-	-
Post-registration changes	-	-	-
• Temporary deviations from registered monitoring plan, applied methodologies, standardized baselines or other methodological regulatory documents	-	-	-
• Corrections	-	-	-
• Changes to the start date-of the crediting period	-	-	-
• Inclusion of a monitoring plan	-	-	-
• Permanent changes to the registered monitoring plan, or permanent deviation of monitoring from the applied methodologies, standardized baselines, or other methodological regulatory documents	-	-	-
• Changes to the project design	-	-	-
• Changes specific to afforestation and reforestation activities	-	-	-
Compliance of the registered monitoring plan with applied methodologies and standardized baselines	-	-	-
Compliance of monitoring activities with the registered monitoring plan	-	-	-
• Data and parameters fixed ex ante or at renewal of crediting period	-	02	-
• Data and parameters monitored	01	02	-
• Implementation of sampling plan	01	01	-
Compliance with the calibration frequency requirements for measuring instruments	-	-	-
Assessment of data and calculation of emission reductions or net removals	-	-	-
• Calculation of baseline GHG emissions or baseline net GHG removals by sinks	-	02	-
• Calculation of project GHG emissions or actual net GHG removals by sinks	-	-	-
• Calculation of leakage GHG emissions	-	-	-
• Summary of calculation of GHG emission reductions or net GHG removals by sinks	-	-	-
• Comparison of actual GHG emission reductions or net GHG removals by sinks with estimates in included VPA	-	-	-
• Remarks on difference from estimated value in included VPA	-	-	-
Assessment of reported sustainable development co-benefits	-	-	-
Global stakeholder consultation	-	-	-
Input and Grievance Mechanism	01	-	
Total	04	08	01

SECTION E. Verification findings

E.1. General

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

Means of verification	PP used GS monitoring report template, version 1.1 which is a valid version. All the sections of the form were filled as per the GS4GG guidelines/27/ and gave all the relevant details.
Findings	CAR 01 was raised during the verification process and closed satisfactorily. Refer Appendix 4 for more details.
Conclusion	The monitoring report is prepared based on the version 1.1 of GS4GG monitoring report template/27/ which is valid at the time of assessment. All sections of the MR is filled correctly.

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

Means of verification	This is the 2nd verification of the PoA. The Verification report and Performance Review report of the 1st Verification has been checked. 1 FAR has been raised during the Performance Review process of the 1st monitoring period.
Findings	FAR was raised during the Performance Review of the 1st monitoring report and the same is addressed during the current verification.
Conclusion	There is no forward action request from 1st verification is pending.

E.1.3. VPAs considered for verification and covered in this report

Title and reference number of the VPA included in the PoA as of the end of this monitoring period	Is the VPA considered for this verification? (yes/no)	Version of the GS PoA-DD/4/
1. VPA 01: GS10818 – Dissemination of Improved Cookstoves in India by Greenway – Dissemination of Improved Cookstoves in Karnataka by Greenway – VPA001 (GS 10821) 2. VPA 02: GS10818 – Dissemination of Improved Cookstoves in India by Greenway – Dissemination of Improved Cookstoves in Karnataka by Greenway – VPA002 (GS 10825) 3. VPA 03: GS10818 – Dissemination of Improved Cookstoves in India by Greenway – Dissemination of Improved Cookstoves in Karnataka by Greenway – VPA003 (GS 11218) 4. VPA 04: GS10818 – Dissemination of Improved Cookstoves in India by Greenway – Dissemination of Improved Cookstoves in Karnataka by Greenway – VPA004 (GS 11309) 5. VPA 05: GS10818 – Dissemination of Improved Cookstoves in India by Greenway – Dissemination of Improved Cookstoves in Karnataka by Greenway – VPA005 (GS 11310) 6. VPA 06: GS10818 – Dissemination of Improved Cookstoves in India by Greenway	Yes	Version 5.1

– Dissemination of Improved Cookstoves in Karnataka by Greenway – VPA006 (GS 11311) 7. VPA 07: GS10818 – Dissemination of Improved Cookstoves in India by Greenway – Dissemination of Improved Cookstoves in Karnataka by Greenway – VPA007 (GS 11312) 8. VPA 08: GS10818 – Dissemination of Improved Cookstoves in India by Greenway – Dissemination of Improved Cookstoves in Karnataka by Greenway – VPA008 (GS 11313) 9. VPA 09: GS10818 – Dissemination of Improved Cookstoves in India by Greenway – Dissemination of Improved Cookstoves in Karnataka by Greenway – VPA009 (GS11628) 10. VPA 10: GS10818 – Dissemination of Improved Cookstoves in India by Greenway – Dissemination of Improved Cookstoves in Karnataka by Greenway – VPA010 (GS11629) 11. VPA 11: GS10818 – Dissemination of Improved Cookstoves in India by Greenway – Dissemination of Improved Cookstoves in Karnataka by Greenway – VPA011 (GS11630) 12. VPA 12: GS10818 – Dissemination of Improved Cookstoves in India by Greenway – Dissemination of Improved Cookstoves in Karnataka by Greenway – VPA012 (GS 11631) 13. VPA 13: GS10818 – Dissemination of Improved Cookstoves in India by Greenway – Dissemination of Improved Cookstoves in Karnataka by Greenway – VPA013 (GS11632) 14. VPA 14: GS10818 – Dissemination of Improved Cookstoves in India by Greenway – Dissemination of Improved Cookstoves in Karnataka by Greenway – VPA014 (GS 11633) 15. VPA015: GS10818 – Dissemination of Improved Cookstoves in India by Greenway – Dissemination of Improved Cookstoves in Karnataka by Greenway – VPA015 (GS 11634) 16. VPA016: GS10818 – Dissemination of Improved Cookstoves in India by Greenway – Dissemination of Improved Cookstoves in Karnataka by		

Greenway – VPA016 (GS 12123) 17. VPA017: GS10818 – Dissemination of Improved Cookstoves in India by Greenway – Dissemination of Improved Cookstoves in Karnataka by Greenway – VPA017 (GS 12124) 18. VPA018: GS10818 – Dissemination of Improved Cookstoves in India by Greenway – Dissemination of Improved Cookstoves in Karnataka by Greenway – VPA018 (GS 12125) 19. VPA019: GS10818 – Dissemination of Improved Cookstoves in India by Greenway – Dissemination of Improved Cookstoves in Karnataka by Greenway – VPA019 (GS 12126) 20. VPA020: GS10818 – Dissemination of Improved Cookstoves in India by Greenway – Dissemination of Improved Cookstoves in Karnataka by Greenway – VPA020 (GS 12127) 21. VPA021: GS10818 – Dissemination of Improved Cookstoves in India by Greenway – Dissemination of Improved Cookstoves in Karnataka by Greenway – VPA021 (GS 12128) 22. VPA022: GS10818 – Dissemination of Improved Cookstoves in India by Greenway – Dissemination of Improved Cookstoves in Karnataka by Greenway – VPA022 (GS 12129) 23. VPA023: GS10818 – Dissemination of Improved Cookstoves in India by Greenway – Dissemination of Improved Cookstoves in Karnataka by Greenway – VPA023 (GS 12130) 24. VPA024: GS10818 – Dissemination of Improved Cookstoves in India by Greenway – Dissemination of Improved Cookstoves in Karnataka by Greenway – VPA024(GS 12131) 25. VPA025: GS10818 – Dissemination of Improved Cookstoves in India by Greenway – Dissemination of Improved Cookstoves in Karnataka by Greenway – VPA025 (GS 12132) 26. VPA026: GS10818 – Dissemination of Improved Cookstoves in India by Greenway – Dissemination of Improved Cookstoves in Karnataka by Greenway – VPA026 (GS 12141)		

E.2. Programme of activities

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

Means of verification	All the VPAs (VPA 01 – VPA 026)/6/ are registered under the PoA as confirmed through GS registry. The verification team determined the conformity of all the 26 VPAs and its operation with the validated programme design document. Verification team has, by means of a desk review and an on-site visit, assessed that all physical features of the VPAs proposed in the validated PoA-DD are in place, and that the project participants have operated the project as per the validated PoA-DD. The verification team has checked the information in the monitoring report and compared against the registered PoA-DD. During the onsite inspection, the verification team has checked the VPA locations, implementation, technology applied, project equipment, and monitoring system against the information in the registered PoA-DD. Interviews with operational personnel and households and random samplings have been carried out.
Findings	No findings raised during the verification process.
Conclusion	The verification team has reviewed the ICS systems installation documents viz. Invoices, End-user agreement between CME & end-users, and other log records. The verification team has observed at the site that all physical locations of the ICS units and found that the details are correctly matching with the monitoring report and monitoring records maintained by CME. Thus the verification team concludes that the VPAs was implemented and operated as per registered PoA-DD. The verification team, based on the site visit and document review, was able to conclude that the VPA has been commissioned and implemented as per the registered PoA-DD/4/ and that all physical features of the project are in place.

E.2.2. Implementation and operation of the management system

Means of verification	The verification team determined the implementation and operation of management system through the site visit and interviews with the CME. The verification team checked whether the actual management system implemented in accordance with the management system described in the registered PoA-DD/4/. During site visit, verification team checked the procedures implemented for inclusion of VPAs, roles and responsibilities, quality check etc.
Findings	No findings raised during the verification process.
Conclusion	The verification team confirms that the implementation and operation of the PoA management system, including the record-keeping system, complies with the registered PoA design document (PoA-DD)/4/.

E.2.3. Post-registration changes

E.2.3.1. Corrections

No corrections in the PoA-DD is sought by CME

E.2.3.2. Inclusion of a monitoring plan

Not applicable as monitoring plan is provided in the registered PoA-DD itself.

E.2.3.3. Permanent changes to the registered monitoring plan, or permanent deviation of monitoring from the applied methodologies, standardized baselines, or other methodological regulatory documents

No permanent changes to the monitoring plan described in the PoA-DD or applied methodology is sought by CME.

E.2.3.4. Changes to the programme design

No change in programme design of registered PoA-DD is sought by CME.

E.2.3.5. Addition of CPA inclusion template

Not applicable

E.2.3.6. Change of coordination/managing entity

Not applicable

E.2.3.7. Changes specific to afforestation and reforestation activities

Not applicable

E.3. Component project activities

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

Means of verification	The verification team determined the conformity of the VPAs and its operation with the validated VPA-DDs. Verification team has, by means of a desk review and an on-site visit, assessed that all physical features of the voluntary project activity proposed in the validated VPA-DDs are in place, and that the project participants have operated the project activity as per the validated VPA-DDs/3/. The verification team has checked the information in the monitoring report and compared against the registered VPA-DDs. During the onsite inspection, the verification team has checked the project locations, technology applied, project equipment, and monitoring system against the information in the VPA-DDs/3/. The ICS units proposed to be installed in the VPAs are 403,000 ICS, however only 396,834 are installed in all the VPAs till the end of monitoring period. PP has considered all the installed units for the emission reduction calculations. The ICS distributed in the VPAs have unique ICS IDs, unique locations/address/geocoordinates and other details included in the project database. Further each of the end-user (beneficiary) has signed an agreement with Greenway, which is unique to the households which is installed in the VPAs. Hence the possibility of double counting has been totally avoided in the case of project activity. An agreement between “Beneficiary and Greenway Grameen Infra Pvt. Ltd.” /16/ has been signed corresponding to each of the households in the VPAs. As per the agreement, households transfer all the carbon rights to Greenway Grameen Infra Pvt. Ltd generated due to the use of ICS. Further this agreement /16/ is signed by both household and the project developer. Additionally the ownership of the carbon credits was also confirmed during the site visit. Interviews with operational personnel and households and random samplings have been carried out.
Findings	CL 03 was raised during the verification process and closed satisfactorily. Refer Appendix 4 for more details.
Conclusion	The verification team has reviewed the Invoices/17/, End-user agreements/16/ and other records/14/. The verification team has observed at the site that all physical locations of the ICS units and found that the details are correctly matching with the monitoring report and monitoring records maintained by CME. Thus the verification team concludes that the VPAs were implemented and operated as per the validated VPA-DDs. The verification team, based on the site

	visit and document review, was able to conclude that the VPAs have been commissioned and implemented as per the validated VPA-DDs and that all physical features of the project are in place.

E.3.2. Post-registration changes

E.3.2.1. Temporary deviations from the registered monitoring plan, applied methodologies, standardized baselines or other methodological regulatory documents

>>
No temporary deviations from the validated VPA-DDs are sought.

E.3.2.2. Corrections

>>
No corrections in the validated VPA-DDs are sought.

E.3.2.3. Changes to the start-date of the crediting period

>>
No change in start date of the crediting period is applied.

E.3.2.4. Inclusion of a monitoring plan

>>
Not applicable as monitoring plan is provided in the VPA-DDs during the inclusion time only.

E.3.2.5. Permanent changes to the registered monitoring plan, or permanent deviation of monitoring from the applied methodologies, standardized baselines, or other methodological regulatory documents

>>
No permanent changes to the monitoring plan or applied methodology is sought by the CME

E.3.2.6. Changes to the project design

>>
No change to the programme design of the included VPA-DDs are sought by CME.

E.3.2.7. Changes specific to afforestation and reforestation activities

>>
Not Applicable.

E.3.3. Compliance of the registered monitoring plan with applied methodologies and standardized baselines

Means of verification	The verification team checked compliance of project monitoring plan with the applied methodology (AMS.II.G version 12)/8/. The actual procedures followed for monitoring of parameters are checked against the parameters and procedures provided in the applied methodology.
Findings	No findings raised during the verification process.
Conclusion	All parameters stated in the monitoring plan and the applied methodology has been fulfilled in the current monitoring report. All baseline emission parameters have been verified and found satisfactory. The discussion regarding each parameter has been elaborated in the further sections of this report. The monitoring plan as mentioned in the respective validated VPA-DDs are in accordance with the applied methodology.

	In the opinion of the verification team the monitoring report complies with the requirement of the validated VPA-DDs and applied methodology (AMS.II.G version 12)/8/ in the context of the project activity. It also conforms to the requirement of VVS for PoA, ver 03/22/.

E.3.4. Compliance of monitoring activities with the registered monitoring plan

E.3.4.1. Data and parameters fixed ex ante or at renewal of crediting period

Means of verification

The verification team has checked the ex-ante parameters and data stated in Section D.1 of MR and compared with the Section B.6.2 of the validated VPA-DDs whether all parameters fixed ex-ante for the crediting period have been applied correctly.

Ex-ante Parameter	Value	Consistent with the respective VPA-DDs & the source mentioned in it
$NCV_{biomass}$	0.0156 TJ/tonne	Net Calorific Value of the wood used as cooking fuel. Default value as per the applied methodology.
$B_{old,HH}$	3.83 Tonnes/household/year	The data has been derived from baseline surveys and fixed ex-ante in the validated VPA-DDs/3/ as required by the methodology.
η_{old}	10%	Default value is taken as per applied methodology, "Data/Parameter table 9 (Section 5.5)". This is consistent with validated VPA-DDs.
fNRB,y	93.66%	State of forest report 2019/32/ The fNRB has been calculated with the help of Tool 30 (*Calculation of the fraction of non-renewable biomass*) and found correct. The value is also consistent with the validated VPA-DDs.
Efprojected_fossilfuel	64.40	Emission factor for the substitution of non-renewable biomass by similar consumers. Default value as per the applied methodology.
Ley	0.95	Net to gross Adjustment Factor. Default value as per the applied methodology.
$S_{install}$	15,500/VPA (for the VPA 01 to VPA 25) 9,334 (for VPA 26 till the end of monitoring period)	The total number of ICS installed in all the VPAs have been cross-checked with the project database and found correct.

Findings

CAR 05, CAR 06 was raised during the verification process and closed satisfactorily. Refer Appendix 4 for more details.

Conclusion

The values of ex-ante fixed parameters have been verified from the validated VPA DDs. Same has been crosschecked with the source mentioned in the validated VPA-DDs and found to be consistent. The verification team confirms that the values

	used/applied are correct and justified. Also, the ex-ante values have been correctly applied in the calculation of emission reductions.

E.3.4.2. Data and parameters monitored

Means of verification

The verification team has determined whether the registered monitoring plan has been properly implemented and followed by the CME that the monitoring has been carried out in accordance with the registered monitoring plan; and determined whether all parameters including project emission parameters, baseline emission parameters and leakage parameters used for emission reduction calculation stated in the registered monitoring plan are monitored or used appropriately as per the registered PoA-DD.

During the verification all monitoring parameters listed in Section D.2 of MR were compared with section B.7.1 of the included VPA-DDs and of registered PoA-DD have been verified with regard to the: (i) appropriateness of the applied measurement / determination method, (ii) the correctness of the values applied for ER calculation, (iii) the accuracy, and applied QA/QC measures.

The monitored parameters and their values are assessed as follows:

Parameter	Value	Description/Assessment
Number of project devices of type I and age a that are operating in year y	396,834	From the total commissioned ICS, PP has monitored the number of project ICS in operation based on sampling survey. As per the survey of 260 samples/18/, all the samples were operating at the time of survey. The surveys for the previous monitoring period were undertaken from 28/04/2022 to 13/06/2022. The current monitoring survey (for 2nd monitoring period) was undertaken in May-June 2023, which was within 1 year of the last monitoring survey conducted during the 1st monitoring period, hence the annual monitoring frequency has been met by the VPAs. The following samples were chosen vintage wise Batch / Monitored sample size 2020-2021 (Vintage 3) / 70 2021-2022 (Vintage 2) / 76 2022-2023 (Vintage 1) / 114 Hence, 100% of the total commissioned ICS during the monitoring period is

			considered in the operation. The VPA-wise operating status is found as follows: VPA1 15,500 VPA 2 15,500 VPA 3 15,500 VPA 4 15,500 VPA 5 15,500 VPA 6 15,500 VPA 7 15,500 VPA 8 15,500 VPA 9 15,500 VPA 10 15,500 VPA 11 15,500 VPA 12 15,500 VPA 13 15,500 VPA 14 15,500 VPA 15 15,500 VPA 16 15,500 VPA 17 15,500 VPA 18 15,500 VPA 19 15,500 VPA 20 15,500 VPA 21 15,500 VPA 22 15,500 VPA 23 15,500 VPA 24 15,500 VPA 25 10,376 VPA 26 9,334 As detailed in section D.3 & D.4 above, 4KES verified 30 samples of project ICS and found all ICS were in operation. Hence, the information available in the database to be consistent with onsite observations.
	$\eta_{new,i,j}$: Efficiency of the device (Stove) of each type i and batch j implemented as part of the project activity. .	36.63%	To determine the efficiency of the stoves, Water Boiling Test (WBT)/19/ was carried out based on the statistically determined representative samples using the WBT Protocol listed by Clean Cooking Alliance. PP has conducted water boiling test of 15 ICS and confirmed through the interviews that WBT

			Protocol listed by Clean Cooking Alliance has been following for the WBT tests/34/. The same approach for the testing was following during the 1st monitoring period of this PoA, which has already been accepted by SustainCERT during the previous verification. The surveys for the previous monitoring period were undertaken from 28/04/2022 to 13/06/2022. The current monitoring survey (for 2nd monitoring period) was undertaken in May-June 2023, which was within 1 year of the last monitoring survey conducted during the 1st monitoring period, hence the annual monitoring frequency has been met by the VPAs. PP used the stove efficiency determined from sample stoves having vintage 1 (2022-2023), vintage 2 (2021-2022) and vintage 3 (2020-2021). The households samples based on each of the vintages were selected. The sample size of 3 samples (vintage-1), 2 samples (vintage-2), 2 samples (vintage-3) were calculated based on the calculations recommended by "*Standard: Sampling and surveys for CDM project activities and programmes of activities, Version 09.0*", which is also inline with the applied methodology/8/, hence found appropriate. Please refer to the paragraph 22 of the "Standard: Sampling and surveys for CDM project activities and programmes of activities, version 09" as per which "*Parameter values shall be estimated by sampling in accordance with the requirements in the applied CDM methodologies separately and independently for each of the CPAs included in the PoA except when a single sampling plan covering a group of CPAs is undertaken applying 95/10*

			confidence/precision for the sample size calculation. In the latter case, the populations of all CPAs in the group are combined together, the sample size is determined and a single survey is undertaken to collect data". Hence a single sample size has been determined applying 95/10 confidence/precision for the sample size calculation, which is inline with the Sampling Standard. All the 26 VPAs have been considered in 3 age-groups and batchwise sample size has been calculated for all the 3 age groups. As the parameter is a numeric mean and sample sizes arrived is very less (2, 2, 3 samples), hence Student's t-distribution has been used to finally arrive at the sample size. Based on the calculations presented in the "Sampling & Precision" spreadsheet, the 15 samples have been arrived, which is found inline with the Sampling Standard/Guidelines. Hence 15 WBTs were found as appropriate. However more number of sample surveys were carried out: 4 samples (vintage-1), 6 samples (vintage-2), 5 samples (vintage-3) during the monitoring period, which is more than the minimum sample size required for each of the vintages. The average monitored efficiency of 37.71%, 36.42% and 35.23% were determined for the vintage-1, vintage-2 and vintage-3 respectively. The efficiency test sheets and the age calculation of sample stoves are checked and found correct. Hence the weighted average efficiency of the Stoves as 36.63% based on the above three vintages have been found correct. The results of the water boiling test shows that the accuracy of the result is within 5% limit. Verification team checked all the water boiling test results

			and found correct.
	μ_y : Adjustment to account for any continued use of pre project devices during the year y: .	0.918	It is noticed that the traditional stoves are not disposed in some of the households. If the traditional cook stoves are used for any time for complete cooking or cooking for specific items the same is monitored through the surveys. As per the monitored records, an adjustment factor of 91.8% has been applied to account for any continued use of pre-project devices during the year y and hence found correct. The surveys for the previous monitoring period were undertaken from 28/04/2022 to 13/06/2022. The current monitoring survey (for 2nd monitoring period) was undertaken in May-June 2023, which was within 1 year of the last monitoring survey conducted during the 1st monitoring period, hence the annual monitoring frequency was followed, which is more accurate than the biennial frequency (as recommended by the approved VPA-DDs), hence found appropriate.
	Life Span:	7 years	The lifespan of 7 years is based on the technical specifications/14/ submitted by the manufacturer. The lifetime is fixed and recorded at the time of distribution of the ICS stoves and found correct. Life of ICS is as per manufacturer specifications and this is consistent with the applied methodology.
	Date of commissioning of project device i:	-	The date of commissioning of ICS is considered as per the applied methodology requirement. The date of commissioning of project devices are found correct as per the project database and accordingly the date of commissioning is taken correctly for the project devices. The date of commissioning of project device is fixed and recorded at the time of distribution of the ICS stoves and found correct. The date of commissioning or

			distribution date of the ICS is recorded in the Sales record excelsheet. The VVB based on the ICS samples checked the distribution date of the ICS with the Invoices and found consistent.
	$N_{d,HH}$: Number of project devices distributed per household:	1 ICS	As per the project implementation database, 1 ICS is distributed in each household. This is also conservative as per the applied methodology. Further the same is fixed and recorded at the time of distribution of the ICS stoves and found correct.
	Users' perception on smoke reduction and Incidence of disease: perceived smoke levels, incidence of coughing, incidence of respiratory illness, Incidence of itchy eyes:	Positive feedback related to health and illness	As per the monitoring survey, the sample end users reported positive feedback related to health and illness compared to baseline scenario. The monitoring procedure is as per registered monitoring plan and verification team also interviewed end users who confirmed positive feedback related to health and illness. The surveys for the previous monitoring period were undertaken from 28/04/2022 to 13/06/2022. The current monitoring survey (for 2nd monitoring period) was undertaken in May-June 2023, which was within 1 year of the last monitoring survey conducted during the 1st monitoring period, hence the annual monitoring frequency has been met by the VPAs.
	Time Saving per household in collecting fuelwood	Positive feedback on the time savings	All sampled users reported less time consumption for fuel collection as due to the project activity less fuel is used for the same thermal needs. The monitoring procedure is as per registered monitoring plan and verification team also interviewed end users who confirmed positive feedback related to fuel collection time. The surveys for the previous monitoring period were undertaken from 28/04/2022 to 13/06/2022. The current monitoring survey (for 2nd monitoring period) was

<table>
<tr><td></td><td></td><td></td><td>undertaken in May-June 2023, which was within 1 year of the last monitoring survey conducted during the 1st monitoring period, hence the annual monitoring frequency has been met by the VPAs.</td></tr>
<tr><td></td><td>Number of ICS under the project:</td><td>15,500/VPA (for the VPA 01 to VPA 25)

9,334 (for VPA 26 till the end of monitoring period)

Total distributed stoves till the end of monitoring period: 396,834 ICS</td><td>The total number of 396,834 ICS has been distributed till the end of monitoring period and the same has been confirmed through the sales database and during the site visit.

The VPA-wise details are presented as follows:
<table>
<tr><td>VPA1</td><td>15,500</td></tr>
<tr><td>VPA 2</td><td>15,500</td></tr>
<tr><td>VPA 3</td><td>15,500</td></tr>
<tr><td>VPA 4</td><td>15,500</td></tr>
<tr><td>VPA 5</td><td>15,500</td></tr>
<tr><td>VPA 6</td><td>15,500</td></tr>
<tr><td>VPA 7</td><td>15,500</td></tr>
<tr><td>VPA 8</td><td>15,500</td></tr>
<tr><td>VPA 9</td><td>15,500</td></tr>
<tr><td>VPA 10</td><td>15,500</td></tr>
<tr><td>VPA 11</td><td>15,500</td></tr>
<tr><td>VPA 12</td><td>15,500</td></tr>
<tr><td>VPA 13</td><td>15,500</td></tr>
<tr><td>VPA 14</td><td>15,500</td></tr>
<tr><td>VPA 15</td><td>15,500</td></tr>
<tr><td>VPA 16</td><td>15,500</td></tr>
<tr><td>VPA 17</td><td>15,500</td></tr>
<tr><td>VPA 18</td><td>15,500</td></tr>
<tr><td>VPA 19</td><td>15,500</td></tr>
<tr><td>VPA 20</td><td>15,500</td></tr>
<tr><td>VPA 21</td><td>15,500</td></tr>
<tr><td>VPA 22</td><td>15,500</td></tr>
<tr><td>VPA 23</td><td>15,500</td></tr>
<tr><td>VPA 24</td><td>15,500</td></tr>
<tr><td>VPA 25</td><td>10,376</td></tr>
<tr><td>VPA 26</td><td>9,334</td></tr>
</table>

The surveys for the previous monitoring period were undertaken from 28/04/2022 to 13/06/2022. The current monitoring survey (for 2nd monitoring period) was undertaken in May-June 2023, which was within 1 year of the last monitoring survey</td></tr>
</table>

			conducted during the 1st monitoring period, hence the annual monitoring frequency has been met by the VPAs.
	Number of employments generated (Ne)	101 employments (VPA02-VPA15) and 115 employments (VPA16-VPA 26) The VPA01 does not claim benefits of SDG 8	The total 101 employments (VPA02-VPA15) and 115 employments (VPA16-VPA 26) has been generated till the end of monitoring period and the same has been confirmed through the employment records /33/. The surveys for the previous monitoring period were undertaken from 28/04/2022 to 13/06/2022. The current monitoring survey (for 2nd monitoring period) was undertaken in May-June 2023, which was within 1 year of the last monitoring survey conducted during the 1st monitoring period, hence the annual monitoring frequency has been met by the VPAs.
Findings	CL 02, CAR 02, CAR 04 was raised during the verification process and closed satisfactorily. Refer Appendix 4 for more details.		
Conclusion	The verification team confirm that the monitoring has been carried out in accordance with the validated VPA-DDs/3/. As per the registered monitoring plan, some of the parameters have biennial monitoring frequency, while some have annual monitoring frequency. However the CME has undertaken the annual monitoring for each of the parameter on conservative grounds even some of the parameters required biennial monitoring, which is found appropriate. The surveys for the previous monitoring period were undertaken from 28/04/2022 to 13/06/2022. The monitoring survey for this verification cycles were undertaken from 04/05/2023 to 03/06/2023 therefore the annual monitoring requirement is complied and found appropriate. The monitoring system is in compliance with the information flow for the parameters as mentioned in monitoring plan in validated VPA-DDs/3/. The monitored data for the parameters has been verified by checking the procedure for information flow and found to be complete and consistent.		

E.3.4.3. Implementation of sampling plan

Means of verification	A total of 396,834 ICS has been installed in all the VPAs (VPA 01 – VPA 26) till the end of monitoring period. During the verification all monitoring parameters listed in Section D.2 of MR were compared with section B.7.1 of the included VPA-DDs and registered PoA-DD have been verified with regard to the: (i) appropriateness of the applied measurement / determination method, (ii) the correctness of the values applied for ER calculation, (iii) the accuracy, and applied QA/QC measures. A representative sampling was undertaken as part of PoA level Sampling Plan. The objective of the sampling was to obtain an unbiased and reliable estimate of the proportion or mean value of the following parameters over the course of the monitoring period, and with 95/10 confidence/precision. As per the para 48 of the applied methodology/8/ "*When biennial inspection is chosen a 95 per cent confidence interval and a 10 per cent margin of error shall be achieved for the sampling parameter. On the other hand, when the project proponent chooses to inspect annually, a 90 per cent confidence interval and a 10*

	per cent margin of error shall be achieved for the sampled parameters. In cases where survey results indicate that 90/10 precision or 95/10 precision are not achieved, the lower bound of the 90 per cent or 95 per cent confidence interval of the parameter value may be chosen as an alternative to repeating the survey efforts to achieve the 90/10 or 95/10 precision" Further the applied methodology recommends applying the "*Standard for sampling and surveys for CDM project activities and programme of activities*"/24/ for determining the valid sample size. As per the para22 of the Sampling Standard, "*Parameter values shall be estimated by sampling in accordance with the requirements in the applied CDM methodologies separately and independently for each of the CPAs included in the PoA except when a single sampling plan covering a group of CPAs is undertaken applying 95/10 confidence/precision for the sample size calculation*". The target population is the total ICS population served under the grouped project (and covered under the monitoring report), and the sampling frame consists of aggregated data of end-users of the ICS as recorded in the project Databases. The sampling was conducted using simple random sampling technique over the sampling frame for each project instance. The expected parameter values (mean, standard deviation and proportion) have been determined based on project developer's knowledge and experience as per para 13(b) and 13(c) of the Sampling and surveys for CDM project activities and programmes of activities, Version 09.0/24/. Questionnaire survey form used by the surveyor has been provided. Since the relative margin of error obtained is less than 10% for the monitored parameter, relative precision of the data is statistically acceptable and deemed representative of the population.
Findings	CL 01, CAR 07 was raised during the verification process and closed satisfactorily. Refer Appendix 4 for more details.
Conclusion	Verification team concludes the following: • The sample size considered for the parameter (monitored through sample basis) is found to be appropriate • The sampling plan implemented seems to be appropriate. • Through acceptance sampling, the verification team confirmed that all the data collected by CME through sample survey are correct. No error found.

E.3.5. Compliance with the calibration frequency requirements for measuring instruments

Means of verification	Not applicable as no monitoring equipments involved.
Findings	Not applicable
Conclusion	Not applicable

E.3.6. Assessment of data and calculation of emission reductions or net removals

E.3.6.1. Calculation of baseline GHG emissions or baseline net GHG removals by sinks

Means of verification	The verification team has checked whether calculations of baseline GHG emissions calculation have been carried out in accordance with the formulae and methods described in the registered monitoring plan. In detail the following has been verified: Transparency: It has been checked whether the calculation of baseline emissions is fully traceable and, where used, the Excel calculation provides all calculation formulae. Parameter consistency: It has been checked whether all internal and external parameters and data used for the calculation are applied consistently in the monitoring report and the calculation spread sheet. Correctness: It has been checked whether the applied formulae and methods for calculating baseline emissions are in accordance with the monitoring plan and the approved

methodology.

Completeness: It has been checked whether all calculations are complete and without omissions.

The emission reductions are calculated as follows:
As per the validated VPA PDDs/PoA DD, emission reductions for both the scenarios have been calculated as per the following formulas given in the applicable meth, AMS-II.G. version 12.0;

$$ER_y = \sum_i \sum_j ER_{y,i,j} - LE_y$$

Where

i	=	Indices for the situation where more than one type of project device is introduced to replace the pre-project devices
J	=	Indices for the situation where there is more than one batch of project device
ER_y	=	Emission reductions during year y in t CO2e
$ER_{y,i,j}$	=	Emission reductions by project device of type i and batch j during year y in t CO2e
LE_y	=	Leakage emissions in the year y

where

$$ER_{y,i,j} = B_{y,savings,i,j} \times N_{y,i,j} \times \mu_y \times f_{NRB,y} \times NCV_{biomass} \times EF_{projected\_fossil\ fuel}$$

where

$B_{y,savings,i,j}$	=	Quantity of woody biomass that is saved in tonnes per cook stove device of type i and batch j during year y
$f_{NRB,y}$	=	Fraction of woody biomass that can be established as non-renewable biomass using survey methods or government data or default country specific fraction of non-renewable woody biomass (fNRB) values available on the CDM website
$NCV_{biomass}$	=	Net calorific value of the non-renewable woody biomass that is substituted (IPCC default for wood fuel, 0.015 TJ/tonne, based on the gross weight of the wood that is 'air-dried')
$EF_{projected\_fossilfuel}$	=	Emission factor for the fossil fuels projected to be used for substitution of non-renewable woody biomass by similar consumers. Use a value of 64.40 t CO2/TJ
$N_{y,i,j}$	=	Number of project devices of type i and batch j operating during year y
μ_y	=	Adjustment to account for any continued use of pre-project devices during the year y when applying equations 6 (fraction).

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

Where

$B_{old,i,j}$	=	Annual quantity of woody biomass that would have been used in the absence of the project activity to generate useful thermal energy equivalent to that provided by the project device type i and batch j

$\eta_{new,i,j}$ = Efficiency of the device of each type i and batch j implemented as part of the project activity.

$\eta_{old,i,j}$ = Efficiency of pre–- project device, which is a three-stone fire using firewood (not charcoal), or a conventional device with no improved combustion air supply or flue gas ventilation, that is without a grate or a chimney;

$$B_{old,i,j} = B_{old,HH} = B_{old,p} \times N_{p,HH}$$

Where

$B_{old,HH}$ = Annual quantity of woody biomass that would have been used in the household in the absence of the project activity to generate useful thermal energy equivalent to that provided by the project devices

$B_{old,p}$ = Annual quantity of woody biomass that would have been used per person in the household in the absence of the project activity to generate useful thermal energy equivalent to that provided by the project devices

$N_{p,HH}$ = Average number of persons served per household prior to the project implementation

Using the above formula and ex-ante and ex-post parameters, the baseline emissions arrive as "814,554 tCO_2" (SDG13). However as the usage of LPG has been observed during the monitoring surveys, hence the usage of LPG has been accounted in the calculation of emission reductions. The emissions due to the usage of LPG has been calculated as follows:

Particulars used in the calculations	**Value**	**Source of value**
Average no. of cylinders used per HH annually	1.2962	The average value of total cylinders used in 260 monitoring surveyed households/2/ has been used in the calculations.
Weight of one cylinder	14.2 Kg	The value has been confirmed through the IOCL website/35/. As IOCL is one of the major supplier of household cylinders in India, hence the weight of 14.2 kg has been found appropriate.
Average weight of LPG per HH	18.4053 Kg	The weight has been calculated based on the multiplication of "average no. of cylinders used per HH annually" with "weight of one cylinder" and hence found correct.
Total weight of LPG in the population	7303882.4 Kg	The value has been calculated by multiplying "Average weight of LPG per HH" with total number of households as per the database, which is a conservative approach.
Calorific value of LPG	47.31 MJ/Kg	The calorific value of LPG has been sourced from the IPCC publications/30/ and hence found appropriate.

	Emission factor of LPG	63.1 tonnes of CO_2 per TJ	The default value of 63.1 tCO_2/TJ is sourced from the applied methodology (AMS II.G, version 12)/8/ and hence found appropriate.
	Total emissions due to LPG use	21,804 tCO_2	The total emissions due to the LPG usage has been calculated based on the above parameters. The calculations are available in the ERs Excelsheet and found appropriate.

Further the total emission reductions are bifurcated into each of year vintages (2022, 2023), for which the calculations have been found correct as per the submitted ERs Excelsheet.

The emissions due to the usage of LPG has been deducted from the calculated emission reductions, hence the emission reductions decreased from "814,554 tCO_2" to "792,750 tCO_2" for the monitoring period. The chosen approach has been found conservative and leads to lower emission reductions for the monitoring period.

For the parameters other than SDG13, the following values have been estimated based on the validated VPA-DDs.
Decrease in Mortality rate attributed to household and ambient air pollution (SDG03): 0%
Time spent collecting fuelwood from the forests and for cooking (SDG05): 4.38 hours
Number of project households predominantly using clean cooking devices such as Improved Cook Stoves: 0
Number of employments generated (Ne): 0 Employments

PP has submitted the calculation in the excel sheet. The baseline calculation in the excel sheet is checked whether the calculation is in accordance with the formula given in the validated VPA-DDs and the selected methodology.

Findings	CAR 03, CAR 08 was raised during the verification process and closed satisfactorily. Refer Appendix 4 for more details.
Conclusion	The verification team confirms the following: • The calculations of baseline GHG emissions have been carried out in accordance with the equations and methods described in the registered monitoring plan and applied methodology. • The emission factor applied is an ex-ante value valid for the fixed crediting period. • Any assumptions used in emission or removal calculations have been justified. • Appropriate emission factor and other reference values have been correctly applied. It can be confirmed that the baseline calculation is overall correct. • The ER calculation sheet provided is clear, transparent and the calculations provided in the sheet are reproducible. • Hence, the baseline emission reported in the monitoring report for the monitoring period is verified to be correct.

E.3.6.2. Calculation of project GHG emissions or actual net GHG removals by sinks

Means of verification	The verification team has checked whether calculations of project GHG emissions calculation have been carried out in accordance with the formulae and methods described in the registered monitoring plan. For the SDG13, the calculation algorithm in the methodology directly calculates emission reductions hence this is not applicable.
Findings	No findings raised during the verification process.
Conclusion	N/A

E.3.6.3. Calculation of leakage GHG emissions

Means of verification	The Net to Gross Leakage Adjustment Factor has been included in the emission reduction calculations applying adjustment factor 0.95 as per paragraph 39 of the applied methodology.
Findings	N/A
Conclusion	N/A

E.3.6.4. Summary of calculation of GHG emission reductions or net GHG removals by sinks

Means of verification	Section E.4 of MR demonstrate the summary of GHG emission reductions for the monitoring period and calculated according to the applied methodologies as follows: ERy = BEy - PEy – Ly Baseline emissions: 792,750 tCO_{2e} Project emissions: 0 tCO_{2e} Leakage: 0 tCO_{2e} Total Emission Reductions: 792,750 tCO_{2e} The ER calculation sheet and monitoring report is verified to check the calculation.
Findings	No findings raised during the verification process.
Conclusion	The verification team confirms the following: • The emission reduction value reported (ie, 792,750 tCO_{2e}) is verified to be correct. • The summary table in the MR has been filled correctly and the values are in line with the related emissions reduction spread sheet.

Title and UNFCCC reference number of the CPA	Baseline GHG emissions or baseline net GHG removals (t CO_2e)	Project GHG emissions or actual net GHG removals (t CO_2e)	Leakage GHG emissions (t CO_2e)	GHG emission reductions or net anthropogenic GHG removals (t CO_2e)			
				Before 01/01/2013	From 01/01/2013 until 31/12/2020	From 01/01/2021	Total amount
VPA 01 – VPA 26	792,750	0	0	-	0	792,750	792,750
Total	792,750	0	0	-	0	792,750	792,750

SDG 13: The VPA wise break-up after apportioning the monitoring period with stove age in each calendar year and number of ICS is provided as below:

Vintage	2022	2023	Amount achieved during this monitoring period tCO2e
VPA 01	24,540	11,922	36,462
VPA 02	24,540	11,922	36,462
VPA 03	24,540	11,922	36,462
VPA 04	24,540	11,922	36,462
VPA 05	24,540	11,922	36,462
VPA 06	24,540	11,922	36,462

VPA 07	24,540	11,922	36,462
VPA 08	24,540	11,922	36,462
VPA 09	24,540	11,922	36,462
VPA 10	24,540	11,922	36,462
VPA 11	24,540	11,922	36,462
VPA 12	24,540	11,922	36,462
VPA 13	24,540	15,001	39,541
VPA 14	24,540	11,922	36,462
VPA 15	24,540	15,001	39,541
VPA 16	21,152	15,001	36,153
VPA 17	18,718	15,001	33,719
VPA 18	16,713	11,922	28,635
VPA 19	14,897	11,922	26,819
VPA 20	12,008	11,922	23,930
VPA 21	10,519	11,922	22,441
VPA 22	8,805	11,922	20,727
VPA 23	6,228	11,922	18,150
VPA 24	3,121	11,922	15,043
VPA 25	254	10,719	10,973
VPA 26	-	3,072	3,072
ERy (total)	**480,515**	**312,235**	**792,750**

The VPA wise emission reductions (as above) have been checked from the MR/ERs Excelsheet and found that conservative approach has been applied to estimate the emission reductions for each of the VPAs.

E.3.6.5. Comparison of actual GHG emission reductions or net GHG removals by sinks with estimates in included CPA

Means of verification	The verification team has checked whether the MR includes a comparison of actual values of the monitoring period with the estimations in the validated VPA-DDs. The MR includes a comparison of the calculated actual emission reductions with the ex-ante calculated values in the validated VPA-DDs/3/. The actual achieved emission reduction is less than estimated emission reduction mentioned in the VPA-DDs.
Findings	No findings raised during the verification process.
Conclusion	The estimated emission reduction as per validated VPA-DDs/3/ and the actual emission reduction achieved for the monitoring period are correctly reported in the MR. The actual achieved emission reduction for all VPAs are less than the VPA-DDs/3/ estimation. Hence no justification is required.

Title and Reference number of the VPA	Actual values achieved by the VPAs during this monitoring period	Value estimated in ex ante calculation in the included VPA-DD(s)
VPA 01 – VPA 26	792,750	899,118
Total	792,750	899,118

The VPA wise (also vintage year wise) comparison between "*actual values achieved by the VPAs during this monitoring period*" and "*value estimated in ex ante calculation in the included VPA-DD(s)*" are provided as below:

Vintage	2022	2023	Amount achieved during this monitoring period (tCO2e)
VPA 01	24,540	11,922	36,462
VPA 02	24,540	11,922	36,462
VPA 03	24,540	11,922	36,462
VPA 04	24,540	11,922	36,462
VPA 05	24,540	11,922	36,462
VPA 06	24,540	11,922	36,462
VPA 07	24,540	11,922	36,462
VPA 08	24,540	11,922	36,462
VPA 09	24,540	11,922	36,462
VPA 10	24,540	11,922	36,462
VPA 11	24,540	11,922	36,462
VPA 12	24,540	11,922	36,462
VPA 13	24,540	15,001	39,541
VPA 14	24,540	11,922	36,462
VPA 15	24,540	15,001	39,541
VPA 16	21,152	15,001	36,153
VPA 17	18,718	15,001	33,719
VPA 18	16,713	11,922	28,635
VPA 19	14,897	11,922	26,819
VPA 20	12,008	11,922	23,930
VPA 21	10,519	11,922	22,441
VPA 22	8,805	11,922	20,727
VPA 23	6,228	11,922	18,150
VPA 24	3,121	11,922	15,043
VPA 25	254	10,719	10,973
VPA 26	0	3,072	3,072
Total	480,515	312,235	792,750

Vintage	2022	2023	ERy-Exante
VPA 01	27,832	13,522	41,354
VPA 02	27,832	13,522	41,354
VPA 03	27,832	13,522	41,354
VPA 04	27,832	13,522	41,354
VPA 05	27,832	13,522	41,354
VPA 06	27,832	13,522	41,354
VPA 07	27,832	13,522	41,354
VPA 08	27,832	13,522	41,354
VPA 09	27,832	13,522	41,354
VPA 10	27,832	13,522	41,354
VPA 11	27,832	13,522	41,354
VPA 12	27,832	13,522	41,354
VPA 13	27,832	17,015	44,847
VPA 14	27,832	13,522	41,354
VPA 15	27,832	17,015	44,847
VPA 16	23,991	17,015	41,006
VPA 17	21,230	17,015	38,245
VPA 18	18,956	13,522	32,477
VPA 19	16,896	13,522	30,418
VPA 20	13,620	13,522	27,141
VPA 21	11,931	13,522	25,453
VPA 22	9,987	13,522	23,509
VPA 23	7,063	13,522	20,585
VPA 24	3,540	13,522	17,062
VPA 25	287	12,154	12,441
VPA 26	0	3,485	3,485
Total	5,44,985	3,54,133	8,99,118

E.3.6.6. Remarks on difference from estimated value in included VPA

Means of verification	The verification team has determined the VERs achieved during this monitoring period with the estimated values and reason for increase, if any.

Findings	No findings raised during the verification process.
Conclusion	The actual achieved emission reductions are less than the VPA-DDs estimation. Hence no justification is required.

E.3.7. Assessment of reported other SDG benefits

Relevant SDG	SDG-3: Good Health and Well Being
Parameter	Mortality rate attributed to household and ambient air pollution
Source	Monitoring survey
Monitored Value	Decrease in Mortality rate attributed to household and ambient air pollution: 53%
Means of verification	The Mortality rate attributed to household and ambient air pollution is monitored through sample surveys. The sample survey sheets are verified and found that the data reported in MR is correct. It is also cross-verified through interview with end user during the site visit.
Findings	No findings raised during the verification process.
Conclusion	The parameter is monitored appropriately, in accordance with the registered monitoring plan. The monitoring results were recorded consistently as per the approved frequency in the monitoring plan. All the monitored parameter values reported in the MR are found to be correct.

Parameter	Baseline Estimate	Project Estimate	Net Benefit
Decrease in Mortality rate	0	53%	53%

Relevant SDG	SDG-5: Gender Equality
Parameter description	Time spent collecting fuelwood from the forests and for cooking
Source	Monitoring survey
Monitored Value	2.62 hours/week/HH decrease in the time spent collecting firewood. The same value is applicable to all VPAs.
Means of verification	The stoves are distributed to the households with the help of women self-help groups. Women are educated on the benefits of improved stoves and they are further involved in the knowledge transfer and promotion of the improved cookstoves to the households. This is possible only when they have spare time for attending the trainings and participating in the discussions and then finally disseminating knowledge to the end-users. Hence this project equally promotes women to take part in the activities apart from only collecting wood and cooking food and hence it leads to promotion of gender equality. The time spent collecting fuelwood from the forests and for cooking is monitored through sample surveys. The sample survey sheets are verified and found that the data reported in MR is correct. It is also cross-verified through interview with end user during the site visit.
Findings	No findings raised during the verification process.
Conclusion	The parameter is monitored appropriately, in accordance with the registered monitoring plan. The monitoring results were recorded consistently as per the approved frequency in the monitoring plan. All the monitored parameter values reported in the MR are found to be correct.

Parameter	Baseline value	Project Value	Net Benefit
Time spent collecting fuelwood	4.38 hours/week/HH	1.76 hours/week/HH	2.62 hours/week/HH

Relevant SDG	SDG-7: Affordable and Clean energy
Parameter description	Number of project households predominantly using clean cooking devices such as Improved Cook Stoves

Source	Monitoring survey
Monitored Value	15,500/VPA (for the VPA 01 to VPA 25) 9,334 (for VPA 26 till the end of monitoring period) Total distributed stoves till the end of monitoring period: 396,834 ICS
Means of verification	The information on the number of clean cooking devices operational is determined by the ICS users' survey through monitoring of the user households drawn as random sample. The details on the monitoring survey was checked with the help of interviews conducted with the households during site visit and found correct.
Findings	No findings raised during the verification process.
Conclusion	The parameter is monitored appropriately, in accordance with the registered monitoring plan. The monitoring results were recorded consistently as per the approved frequency in the monitoring plan. All the monitored parameter values reported in the MR are found to be correct.

Parameter	Baseline value	Project Value	Net Benefit
Number of project households predominantly using clean cooking devices such as Improved Cook Stoves	0	396,834 households	396,834 households

SDG 7: The VPA wise break-up of ICS operating in each calendar year is provided as below:

VPA Number	2022	2023
VPA 01	15,500	15,500
VPA 02	15,500	15,500
VPA 03	15,500	15,500
VPA 04	15,500	15,500
VPA 05	15,500	15,500
VPA 06	15,500	15,500
VPA 07	15,500	15,500
VPA 08	15,500	15,500
VPA 09	15,500	15,500
VPA 10	15,500	15,500
VPA 11	15,500	15,500
VPA 12	15,500	15,500
VPA 13	15,500	15,500
VPA 14	15,500	15,500
VPA 15	15,500	15,500
VPA 16	15,500	15,500
VPA 17	15,500	15,500
VPA 18	15,500	15,500
VPA 19	15,500	15,500
VPA 20	15,500	15,500
VPA 21	15,500	15,500
VPA 22	15,500	15,500
VPA 23	15,500	15,500
VPA 24	15,500	15,500
VPA 25	5,124	10,376
VPA 26	0	9,334

<table>
<tr><td>Relevant SDG</td><td>SDG-8: Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all</td></tr>
<tr><td>Parameter description</td><td>Number of employments generated (Ne)</td></tr>
<tr><td>Source</td><td>Employment records</td></tr>
<tr><td>Monitored Value</td><td>101 employments (VPA02-VPA15) and 115 employments (VPA16-VPA 26)
VPA 01 does not claim benefits of SDG 8</td></tr>
<tr><td>Means of verification</td><td>The information on the number of employment has been checked through the Employment records and through the interview of project owner and site visit.</td></tr>
<tr><td>Findings</td><td>-</td></tr>
<tr><td>Conclusion</td><td>The parameter is monitored appropriately, in accordance with the registered monitoring plan. The monitoring results were recorded consistently as per the approved frequency in the monitoring plan. All the monitored parameter values reported in the MR are found to be correct.
<table>
<tr><th>Parameter</th><th>Baseline value</th><th>Project Value</th><th>Net Benefit</th></tr>
<tr><td>Number of employments generated (Ne)</td><td>0</td><td>101 employments (VPA02-VPA15) and 115 employments (VPA16-VPA 26)</td><td>101 employments (VPA02-VPA15) and 115 employments (VPA16-VPA 26)</td></tr>
</table></td></tr>
</table>

SDG 8: The VPA wise break-up in each calendar year is provided as below:

VPA Number	**2022**	**2023**
VPA 01	0	0
VPA 02	101	101
VPA 03	101	101
VPA 04	101	101
VPA 05	101	101
VPA 06	101	101
VPA 07	101	101
VPA 08	101	101
VPA 09	101	101
VPA 10	101	101
VPA 11	101	101
VPA 12	101	101
VPA 13	101	101
VPA 14	101	101
VPA 15	101	101
VPA 16	115	115
VPA 17	115	115
VPA 18	115	115
VPA 19	115	115
VPA 20	115	115
VPA 21	115	115
VPA 22	115	115
VPA 23	115	115
VPA 24	115	115
VPA 25	115	115
VPA 26	0	115

The VPA wise break-up (as above) has been checked from the MR/ERs Excelsheet and found correct based on the site visit/interviews conducted for the PoA.

E.4. Stakeholder Inputs & Legal Dispute

Means of verification	The project developer has a defined continuous grievance input mechanism in place which is made aware to all stakeholders specially to project ICS users in their ICS user's manual and VERs right transfer agreement. As per PP's record there was no grievance recorded during the monitoring period. VVB interviewed ICS users and could confirm there was no grievance recorded by any stakeholders. Hence, PP's justification is accepted.
Findings	CL 04 was raised during the verification process, which was subsequently closed.
Conclusion	The verification team confirms the following: • No grievances received during the current monitoring period • 4KES confirms that monitoring of all the sustainable development monitoring parameters during this monitoring period is in line with the SD monitoring plan and are consistent with on-site visit. • No legal consent or dispute arise during the monitoring period.

SECTION F. Internal quality control

The draft verification report prepared by team leader is reviewed by an independent technical reviewer (having competence of relevant technical area himself/herself or through an independent technical area expert) to confirm the internal procedures established by 4KES are duly followed and the verification report/opinion is reached in an objective manner and complies with the applicable Gold Standard & CDM requirements.
The technical review team is collectively required to possess the technical expertise of all the technical area/sectoral scope the project activity relates to. All team members of technical review team are independent of the verification team. The independent technical reviewer(s) may approve or reject the draft verification report. The findings may be identified even at this stage, which needs to be satisfactorily resolved, before submitting final report to Client/Gold Standard. The final approval decision is taken by the Head of the DOE/Director.

The final decision is authorized by the Director, 4KES, once the report is finalized by the Head of the DOE/DOE Manager.

SECTION G. Verification opinion

The verification team confirms that the evidence is of sufficient quantity, appropriate quality and reliable. The reported values, notation, units and sources in the monitoring report for all the monitoring parameters have been cross checked with the emission reduction sheet and monitoring report. During the course of verification and onsite visit, the data submitted by CME was cross verified with the values mentioned in the emission reduction sheet and monitoring report. The procedure for data monitoring, recording, transfer and compilation was also verified and found in compliance with the monitoring plan as mentioned in the registered PoA-DD/4/ & VPA-DDs/3/ and is in line with VVS for PoA, Version 03/22/ paragraph 345 & GS4GG guidelines/23/.

Evidences (Documents/interview/site visit) referred for verification of individual monitoring parameter and fixed parameters are defined in section E.3.4 above. It is confirmed by the assessment team that the reported emission reductions have been conservatively calculated. A list of referred documents for verification is also included in Appendix 3 of this report.

Based on the information seen and evaluated we confirm that the implementation of the project has resulted in 792,750 tCO_2e emission reductions during period 29/04/2022 – 31/05/2023 (including both days).

SECTION H. Certification statement

4K Earth Science Private Limited has been contracted by “Greenway Grameen Infra Pvt Ltd” to undertake independent verification and certification for the greenhouse gas (GHG) emission reductions reported and the contribution to sustainable development indicators from the GS4GG PoA “Dissemination of Improved Cookstoves in India by Greenway” and GS Ref # GS 10818 for the monitoring period 29/04/2022 – 31/05/2023 (including both dates) in the GS Monitoring Report Version 01 (first version) dated 22/06/2023/1/.

The verification is based on the registered GS4GG PoA-DD & validated VPA-DDs and the GS4GG monitoring report for this project. Our verification approach was based on the requirements as defined under the Kyoto Protocol, Marrakech accord, as well as those defined by the Gold Standard Board.

“Greenway Grameen Infra Pvt Ltd” is the coordinating/Managing Entity and it is responsible for inclusion of 26 VPAs (VPA01 – VPA26) under this PoA. The verification of the PoA includes 26 VPAs (VPA01 – VPA26) for the monitoring period: 29/04/2022 – 31/05/2023 (including both dates). The management of the "Greenway Grameen Infra Pvt Ltd" is responsible for the preparation of the GHG emissions data and the reported GHG emissions reductions & monitoring of SDG parameters on the basis set out within the project final GS Monitoring Report Version 4.0, dated 30/12/2023/1/. The calculation and determination of GHG emission reductions from the project is the responsibility of the management of "Greenway Grameen Infra Pvt Ltd”. The development and maintenance of records and reporting procedures are in accordance with the GS Monitoring Report Version 4.0, dated 30/12/2023/1/

It is our responsibility to express an independent GHG verification opinion on the GHG emissions and on the calculation of GHG emission reductions from the project for the monitoring period 29/04/2022 – 31/05/2023 (including both dates) based on the reported emission reductions in the final Monitoring Report Version 4.0 dated 30/12/2023/1/ for the same period.

Based on an understanding of the risks associated with reporting GHG emissions data and the controls in place to mitigate these, 4K Earth Science Pvt. Ltd planned and performed our work to obtain the information and explanations that we considered necessary to provide sufficient evidence for us to give reasonable assurance that this reported amount of GHG emission reductions for the period is fairly stated.

As per the VVS for PoA, Version 03, paragraph 358, 4KES confirms and concludes the following;

The verified and certified emission reduction during the monitoring period 29/04/2022 – 31/05/2023 (including both dates) is stated below:

Vintage	Duration	Certified emission reductions (tCO_2e)
2022	29/04/2022 – 31/12/2022	480,515
2023	01/01/2023 – 31/05/2023	312,235
Total	**29/04/2022 – 31/05/2023**	**792,750**

Appendix 1. Abbreviations

Abbreviations	Full texts
4KES	4K Earth Science Pvt. Ltd
BE	Baseline Emissions
CAR	Corrective Action Request
CDM	Clean Development Mechanism
CDM EB	CDM Executive Board
CH4	Methane
CL	Clarification Request
CO2e	Carbon dioxide equivalent
DOE	Designated Operating Entity
EF	Emission Factor
ERs	Emission Reductions
FAR	Forward Action Request
FT	Field Test
GHGs	Greenhouse Gas(es)
GS	Gold Standard
GWP	Global Warming Potential
HH	Household
ISO	International Organization of Standardization
IPCC	Intergovernmental Panel on Climate Change
KP	Kyoto Protocol
KPT	Kitchen Performance Test
LE	Leakage Emissions
LPG	Liquefied Petroleum Gas
MDG	Millennium Development Goal
MP	Monitoring Plan
MR	Monitoring Report
NCV	Net Calorific Value
NGO	Non Governmental Organisation
NRB	Non Renewable Biomass
PE	Project Emissions
PoA-DD	Program of Activity Design Document
PS	Project Standard
PCP	Project Cycle Procedure
SD	Sustainable Development
SDG	Sustainable Development Goal
SHG	Self Help Group
QA/QC	Quality Assurance/Quality Control
UNFCCC	United Nations Framework Convention on Climate Change
VER	Verified Emission Reduction
VVB	Validation and Verification Body
VVS	Validation & Verification Standard

Appendix 2. Competence of team members and technical reviewers

Certificate of Competence							
Name	☒ Mr. ☐ Ms.	**Narendra Kumar. R**					
Qualification Procedure	*Fulfils the requirement as per the appointment of personnel procedure of 4KES for Validation and Verification of CDM/VCS/GS/GCC/GHG Projects.*						
Appointed to work as:							
	CDM Validator/Verifier	**Team Leader**	**Team Member**	**Technical Expert**	**Technical Reviewer**	**Financial Expert**	
Appointed	Yes	Yes	Yes	Yes	Yes	Yes	
Appointed Date	15-07-2023						
Authorized to work as Technical Expert for:							
Authorized Technical Area	**Sectoral Scope**		**TA Code**	**Technical Area within the scope**			
	Energy industries (renewable - / non-renewable sources)		1.1	Thermal energy generation			
	Energy industries (renewable - / non-renewable sources)		1.2	Renewables			
	Energy demand		3.1	Energy demand			
	Waste handling and disposal		13.1	Solid waste and wastewater			
	Waste handling and disposal		13.2	Manure			
Authorized to work as Local Expert for:							
Country/Countries	India						
Compliance check by: Swati S Acharya							

Certificate of Competence							
Name	☐ Mr. ☒ Ms.	**Swati S Acharya**					
Qualification Procedure	*Fulfils the requirement as per the appointment of personnel procedure of 4KES for Validation and Verification of CDM/VCS/GS/GCC/GHG Projects.*						
Appointed to work as:							
	CDM Validator/Verifier	**Team Leader**	**Team Member**	**Technical Expert**	**Technical Reviewer**	**Financial Expert**	
Appointed	Yes	No	Yes	Yes	No	No	
Appointed Date	15/07/2023						
Authorized to work as Technical Expert for:							
Authorized Technical Area	**Sectoral Scope**		**TA Code**	**Technical Area within the scope**			
	Energy industries (renewable - / non-renewable sources)		1.2	Renewables			
Authorized to work as Local Expert for:							
Country/Countries	India						
Compliance check by: Anand S. R.							

Certificate of Competence							
Name	☒ Mr. ☐ Ms.	**Ma Paa Puratchikkanal**					
Qualification Procedure		*Fulfils the requirement as per the appointment of personnel procedure of 4KES for Validation and Verification of CDM/VCS/GS/GHG Projects.*					
Appointed to work as:							
		CDM Validator/Verifier	**Team Leader**	**Team Member**	**Technical Expert**	**Technical Reviewer**	**Financial Expert**
Appointed		Yes	Yes	Yes	Yes	Yes	No
Appointed Date		27-04-2021					
Authorized to work as Technical Expert for:							
Authorized Technical Area		**Sectoral Scope**		**TA Code**		**Technical Area within the scope**	
		Energy industries (renewable - / non-renewable sources)		1.1		Thermal energy generation	
		Energy industries (renewable - / non-renewable sources)		1.2		Renewables	
		Energy demand		3.1		Energy demand	
		Construction		6.1		Construction	
		Waste handling and disposal		13.1		Solid waste and wastewater	
		Waste handling and disposal		13.2		Manure	
		Agriculture		15.1		Agriculture	
Authorized to work as Local Expert for:							
Country/Countries		India, Sri Lanka					
Compliance check by: Anand S. R.							

Appendix 3. Documents reviewed or referenced

No.	Title	References to the document
1.	MR (initial) version 1.0 MR (final) version 4.0	22/06/2023 30/12/2023
2.	ERs Excelsheet (corresponding to initial MR version 1.0) ERs Excelsheet (corresponding to final MR version 4.0)	22/06/2023 30/12/2023
3.	Validated VPA-DDs: VPA 0001 (version 8.0) VPA 0002 (version 3.0) VPA 0003 (version 3.0) VPA 0004 (version 3.0) VPA 0005 (version 3.0) VPA 0006 (version 3.0) VPA 0007 (version 3.0) VPA 0008 (version 3.0) VPA 0009 (version 3.0) VPA 0010 (version 3.0) VPA 0011 (version 3.0) VPA 0012 (version 3.0) VPA 0013 (version 3.0) VPA 0014 (version 3.0) VPA 0015 (version 3.0) VPA 0016 (version 2.0) VPA 0017 (version 2.0) VPA 0018 (version 2.0) VPA 0019 (version 2.0) VPA 0020 (version 2.0) VPA 0021 (version 2.0) VPA 0022 (version 2.0) VPA 0023 (version 2.0) VPA 0024 (version 2.0) VPA 0025 (version 2.0) VPA 0026 (version 2.0)	 12/01/2022 27/01/2023 27/01/2023 27/01/2023 27/01/2023 27/01/2023 27/01/2023 27/01/2023 27/01/2023 27/01/2023 27/01/2023 27/01/2023 27/01/2023 27/01/2023 27/01/2023 01/07/2023 01/07/2023 01/07/2023 01/07/2023 01/07/2023 01/07/2023 01/07/2023 01/07/2023 01/07/2023 01/07/2023 01/07/2023 01/07/2023
4.	Registered PoA-DD (version 5.1)	08/01/2022
5.	Validation report of the registered PoA (version 02)	28/07/2021
6.	VPA-DD of the registered VPA 01 (version 8.0)	12/01/2022
7.	Validation report of the registered VPA 01 (version 05)	14/01/2022
8.	Methodology (AMS II.G: Energy efficiency measures in thermal applications of non-renewable biomass, version 12)	14/12/2020
9.	Project database	
10.	Local Stakeholder Consultation report	
11.	Certification of Incorporation for Greenway Grameen Infra Pvt. Ltd.	02/12/2010
12.	Declaration Form for no double counting	01/03/2022
13.	Declaration on insolvency or legal/criminal notices placed against it or any of its Directors	29/07/2022
14.	Technical specifications (including the stove lifetime) of the Greenway Jumbo Stoves	
15.	Installation database	
16.	Agreement between Beneficiary and Greenway Grameen Infra Pvt. Ltd. (Greenway) for the households installed under 26 VPAs (VPA 01-VPA26) covered during the monitoring surveys.	
17.	Invoice from Greenway Grameen Infra Pvt. Ltd. to the beneficiary end-users for the households installed under 26 VPAs (VPA 01-VPA26)	
18.	Monitoring survey records for the households installed under 26 VPAs (VPA 01-VPA26)	
19.	WBT Tests conducted for the 15 ICS	

20.	Declaration of non-use of Official Development Assistance declaration	10/04/2022
21.	Memorandum of understanding between Greenway Grameen Infra Pvt. Ltd. and Sri Kshetra Dharmasthala Rural Development Project BC Trust (R.)	01/04/2020
22.	CDM Project Standard for PoA CDM Validation and Verification Standard for PoA	Version 03 Version 03
23.	GHG Emissions Reduction & Sequestration Product Requirements, Version 2.0 Community Services Activity Requirements, v1.2 Programme of Activity Requirements, Version 1.2 Stakeholder Consultation and Engagement Requirements, Version 1.2 Stakeholder Consultation and Engagement Guidelines, Version 1.2 Principles & Requirements, Version 1.2 Safeguarding Principles & Requirements, v1.2 https://globalgoals.goldstandard.org/all-documents/	
24.	Guideline for sampling and surveys for CDM project activities and programmes of activities, Version 04.0 Sampling and surveys for CDM project activities and programmes of activities, Version 09.0	
25.	TOOL 30: Calculation of the fraction of non-renewable biomass, Version 03.0 https://cdm.unfccc.int/methodologies/PAmethodologies/tools/am-tool-30-v3.0.pdf/history_view	
26.	Audit Samples	
27.	Monitoring Report Form https://www.goldstandard.org/project-developers/standard-documents	Version 1.1
28.	Training Records	
29.	Gold Standard Monitoring report template & MR filling instruction	Version 1.1
30.	1. 1996 IPCC Guidelines for National Greenhouse Gas Inventories: work book 2. 2006 IPCC Guidelines for National Greenhouse Gas Inventories: work book	Web Link
31.	Kyoto Protocol (1997)	Web Link
32.	State of forest report 2019	
33.	Employment records	
34.	WBT Protocol listed by Clean Cooking Alliance https://cleancooking.org/research-evidence-learning/standards-testing/protocols/	
35.	Indian Oil website https://iocl.com/indane-cooking-gas-overview	

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

Table 1. Remaining FAR from previous validation/verification

FAR ID	N/A	**Section no.**	Section B.1.1	**Date:** 03-09-2023
Description of FAR				
No FARs are included in the Section B.1.1 of the MR, however as per the GS Performance Review Report of the 1st Monitoring period, there are FARs to be addressed during this verification. Hence the additional details shall be provided in Section B.1.1 of the MR accordingly.				
Project participant response				**Date:** 14/09/2023
CME will submit the annual reports before the end of calendar years in case the verification is not completed before the end of Dec 2023. The VPAs (016-026) were design certified on 19/06/2023 therefore the deadline of first annual report will be 31/12/2023 subject to no verification submission. For VPA01-15 the first verification is already completed therefore annual report is not mandatory.				
Documentation provided by project participant				
Revised MR				
DOE assessment				**Date:** 14/09/2023
As the verification is expected to complete by end of year 2023, hence the requirement of submission of Annual report is not mandatory. The comment is closed.				

Table 2. CL from this verification

CL ID	01	**Section no.**	Section C	**Date:** 03-09-2023
Description of CL				
1. Section C: For the monitoring surveys, it is mentioned that "Usage cum Kitchen Surveys" are conducted biennially to determine usage, however the frequency of usage surveys is annual as per the registered VPA-DDs. Check and Clarify. 2. Section C: The dates of survey conducted for the monitoring period shall be clearly indicated in the MR. Hence it shall be concluded whether the required frequency was met during the monitoring period. Hence the additional information is requested in this regard.				
Project participant response				**Date:** 14/09/2023
1. The annual surveys were undertaken by the CME, the adequate revisions are made in the section C of the revised MR. The dates of previous survey and current surveys have been mentioned therein to demonstrate the compliance of annual monitoring. 2. The dates of previous survey and current surveys have been mentioned therein to demonstrate the compliance of annual monitoring.				
Documentation provided by project participant				
Revised MR				
DOE assessment				**Date:** 14/09/2023
1. The monitoring surveys were conduced on yearly basis and the corrections have been provided in the monitoring report. The annual surveys have been conducted inline with the VPA-DD and found appropriate. 2. The dates of survey conducted for the monitoring period has been indicated in the MR. The dates of previous monitoring survey and current survey have been indicated and found appropriate.				

CL ID	02	**Section no.**	Section D.2	**Date:** 03-09-2023
Description of CL				
1. Section D.2: The monitoring frequency is indicated as "Annually/Biennial", however it is not clear as which frequency was followed during the monitoring period. Clarify. Further the dates of survey shall be clarified so as to conclude whether the requirement monitoring frequency was followed during the monitoring period. 2. Section D.2: Please refer to the monitoring parameter table of the parameter ($\eta_{new,i,j}$), where the monitoring frequency is mentioned as both "Annual/Biennial", however it shall be clarified as which frequency was followed for this parameter during the monitoring period. The dates of the WBT test shall be clarified so as to conclude on the frequency followed for the WBTs. Further the efficiency value of 36.61% used, however it is 36.63% as per the ERs Excelsheet. Check.				
Project participant response				**Date:** 14/09/2023
1. Annual frequency for all the monitoring parameters has been complied with the monitoring plan for all the parameters irrespective of biennial monitoring requirements for some of the parameters as per the methodology. The annual monitoring has been indicated in the revised MR. 2. Annual frequency for the cited monitoring parameter has been complied with the monitoring plan and methodology. MR has been updated to indicate the demonstration of annual monitoring complied with.				
Documentation provided by project participant				
Revised MR				

DOE assessment	Date: 14/09/2023
1. The monitoring survey frequency along with the dates of survey is now indicated in the Section D.2 of the MR, hence the issue is closed. 2. It is now clearly indicated as which frequency is followed for which parameter in Section D.2 of the MR. The dates of the WBT has now been provided in the MR. The efficiency of the ICS obtained based on the WBT has now been provided in the MR. Hence the issue is closed.	

CL ID	03	Section no.	Section E.1	Date: 03-09-2023
Description of CL				
1. Section E.1: It has been observed that some of the VPA database does not have the column for the "WBT replacement date", while other VPAs have the same. Clarify on the reasons on the differences observed. 2. The following error is observed in the Column D in the "VPA#010" spreadsheet of the submitted ERs Excelsheet:				

824	823	Nagaraja	8970441369	Marigondanahalli,Hor	DAVANGERE
825	824	YALLAMMA	8197520861	MUGBALA ,Hosakot	BANGALORE RURAL
826	825	SUNITHA	8861988571	MUGBALA ,Hosakot	BANGALORE RURAL
827	826	LAKSHMI	8904652281	MUGBALA ,Hosakot	BANGALORE RURAL
828	827	N Manjula	9481249794	Kadehude,Challakere-	JAGALUR

Check and provide appropriate corrections, wherever required.

Project participant response	Date: 14/09/2023
1. Please note that the WBT samples were drawn as per the age group of ICS distributed to keep the sampling representative across all age groups. Since the parameter is a mean parameter as per the definitions of parameters indicated in the CDM sampling standard, the number of samples were not enough to bifurcate them across all VPAs unlike the proportion parameter. Therefore, the WBT was not across all VPAs but across PoA with the representativeness among all age groups. 2. The errors indicated in the database by the VVB are the formatting errors, the errors are corrected in the revised database attached herewith.	
Documentation provided by project participant	
Revised MR & Reviser ER sheet with the database	
DOE assessment	**Date:** 14/09/2023
1. The samples for the monitoring survey and WBT have been selected on random sampling, hence WBTs have been selected randomly from the VPAs. Hence the WBT replacement date is not available in all the VPA database. Hence the justification provided is found appropriate and the comment is closed. 2. The formatting errors are now corrected in the Excelsheet and hence the comment is closed.	

CL ID	04	Section no.	Section G	Date: 03-09-2023
Description of CL				
Section G.1: No details have been provided corresponding to the "input and grievances mechanism" and the grievances received (if any) during the monitoring period. Clarify.				
Project participant response				**Date:** 14/09/2023
CME has the implemented input and grievances mechanism as per the established standard operating procedure of the organization, the grievance register and the governing procedure have been submitted to VVB along the responses. The MR has been updated to indicate the same.				
Documentation provided by project participant				
Revised MR, Grievance Register and Procedure				
DOE assessment				**Date:** 14/09/2023
The additional details related to the input and grievance mechanism has now been provided in the monitoring report. Hence the comment is closed.				

Table 3. CAR from this verification CAR ID	01	Section no.	KPI section	Date: 03-09-2023
Description of CAR				
1. MR ('Table of contents' section): Please check the table of contents section on the 1st page of MR, where the section number has been presented as "0" for all the sections, which does not look logical. Check and the original MR template shall be restored. 2. MR ('Key Project Information' section): The VPA 026 and some other VPAs has been repeated two times in the KPI section and hence which may be corrected. Check. 3. MR ('Key Project Information' section): The version of the VPA-DDs are not correct in the KPI section of the monitoring report. Check. Similarly the VPAs registration date for some of the VPAs are indicated as both "03/11/2022" and "19/06/2023". Check. 4. The monitoring period number shall be corrected in the KPI section accordingly. Further the end of monitoring period is "30/05/2023" in the KPI section, while the same is "30/04/2023" in the ERs Excelsheet. Check.				
Project participant response				**Date:** 14/09/2023
1. This was a formatting error and corrected by the CME. Refer the revised MR. 2. The errors are corrected by the CME as indicated by the VVB, refer the revised MR attached. 3. The versions of the VPA DDs are updated based on the date of design certification, since the MR was prepared before the finalization of design certification so the obsolete versions were retained therein. 4. The monitoring period date have been consistently revised across all the documents and the end date is now indicated as 10 May 2023, the ERs are updated due to this correction. The revised MR and ER sheet are attached herewith.				
Documentation provided by project participant				
Revised MR and ER sheet				
DOE assessment				**Date:** 14/09/2023
1. The table of contents section on the 1st page of MR is now corrected and inline with the MR filling guidelines. 2. The corrections in the numbering of the VPAs have now been provided in the KPI section of the MR. Hence the comment is closed. 3. The version of the VPA-DDs are now correctly presented in the KPI section of the MR. Further the registration date of the VPAs are now corrected in the KPI section of the monitoring report. 4. The monitoring period number as well as the end date of the monitoring period is now corrected in the KPI section of the MR/ERs Excelsheet. The comment is closed.				

CAR ID	02	Section no.	Table 1	Date: 03-09-2023
Description of CAR				

1. From the description provided for SDG5, it is not clear as whether the value (2.62 hours) is the time savings in the fuel wood collection. Check and appropriate corrections may be provided accordingly. 2.The relevant evidences of the employment generation as per the Table-1 shall be submitted.
Project participant response **Date:** 14/09/2023
1. We accept that this was an error in the MR, while computing the data from the survey the error was occurred. The error has been updated now based on the finding of VVB. 2. The letter issued by the HR along with the contracts of the employees are attached herewith to verify the employment details.
Documentation provided by project participant
Revised MR, The letter issued by the HR along with the contracts of the employees
DOE assessment **Date:** 14/09/2023
1. The correct description related to the SDG5 is now provided in the MR/ERs Excelsheet. The comment is closed. 2. The relevant evidences (including the summary of employments and sample contracts) on the employment is now provided and hence the issue is closed. The comment is closed.

CAR ID	03	**Section no.**	Table 2	**Date:** 03-09-2023
Description of CAR				
The emission reductions for the VPA 16 – VPA 26 in the Table 2 does not match with the ERs Excel sheet. Check and appropriate revisions shall be provided.				
Project participant response				**Date:** 14/09/2023
This was an error occurred while transferring the information from ER sheet to MR, the MR has been updated now in line with the VPA wise and vintage wise breakup of the ERs achieved during the monitoring period.				
Documentation provided by project participant				
Revised MR				
DOE assessment				**Date:** 14/09/2023
The emission reductions in the Table 2 of the MR matches with the emission reductions value as available in the ERs Excelsheet. The comment is closed.				

CAR ID	04	**Section no.**	Section C	**Date:** 03-09-2023
Description of CAR				
1. The monitoring period is from “29/04/2022 – 30/05/2023, however please check Cell B3 of “ER Calculator” spreadsheet, where the end date is provided as “30 April 2023”. Hence the average age of the VPAs and number of days shall be corrected accordingly.				
Project participant response				**Date:** 14/09/2023
The error identified in the ER and the VPA database, the same has been updated by the CME and the updated ERs are consistently reported after correction across all respective sections in the MR.				
Documentation provided by project participant				
Revised MR & Revised ER sheet				
DOE assessment				**Date:** 14/09/2023
The error related to the end date of monitoring period is now corrected in the ERs Excelsheet and accordingly the average age of the VPAs and number of days have been corrected. The comment is closed.				

CAR ID	05	**Section no.**	Section D.1	**Date:** 03-09-2023
Description of CAR				
1. The “State of forest report 2011” is referenced in the ex-ante parameter table of the parameter (fNRB,y) in Section D.1, however a more recent report (year 2019) referred in the registered VPA-DDs. Check.				
Project participant response				**Date:** 14/09/2023

This was an error and the reference has been updated by the CME with the correct year as per the VPA DDs.
Documentation provided by project participant
Revised MR
DOE assessment **Date:** 14/09/2023
The correct reference of the State of forest report 2019 has now been provided in the Section D.1 of the MR, which is also inline with the registered VPA-DDs. Hence the comment is closed.

CAR ID	06	**Section no.**	Section D.3	**Date:** 03-09-2023
Description of CAR				
1. The values presented for the "$\eta_{new,l,j}$" and "Gender Equality: Number of Hours" does not match with the values as available in the "ER Calculator" spreadsheet and "Survey Responses" spreadsheet. Check.				
Project participant response				**Date:** 14/09/2023
The value is updated based on the observation of VVB and the updated MR with the correct value is attached herewith.				
Documentation provided by project participant				
Revised MR				
DOE assessment				**Date:** 14/09/2023
The values related to the "$\eta_{new,l,j}$" and "Gender Equality: Number of Hours" now matches with the values as available in the "ER Calculator" spreadsheet and "Survey Responses" spreadsheet and hence found correct. The comment is closed.				

CAR ID	07	**Section no.**	Section D.4	**Date:** 03-09-2023
Description of CAR				
1. The version 08 of the "Sampling and surveys for CDM project activities and programmes of activities" has been followed as per Section D.4, however the version 09 has been applied as per the registered VPA-DDs. Check on the differences observed. 2. Further the end date of monitoring period is presented as "30/04/2023" in Section D.4, while the same is "30/05/2023" as per the KPI section of the MR. Appropriate revisions shall be provided, wherever required.				
Project participant response				**Date:** 14/09/2023
1. The reference of version 09 of 'Sampling and surveys for CDM project activities and programmes of activities' has been updated. Refer the revised MR attached herewith. 2. The dates are now corrected in the MR,				
Documentation provided by project participant				
Revised MR				
DOE assessment				**Date:** 14/09/2023
1. The correct version of the sampling and surveys is now provided in the MR, which is also inline with the registered VPA-DDs. Hence the comment is closed. 2. The end of monitoring period is now consistently provided throughout the MR, hence the comment is closed.				

CAR ID	08	**Section no.**	Section E.4	**Date:** 03-09-2023
Description of CAR				
1. For the SDG03, the baseline estimate presented in Section E.4 does not match with the Baseline estimate available in the Section E.1 of the MR. Appropriate corrections shall be provided, wherever required in the MR. 2. For the SDG5, the Net Benefit presented in Section E.4 does not match with the Net Benefit as per the Table 1 of the MR. Appropriate corrections shall be provided, wherever required in the MR.				
Project participant response				**Date:** 14/09/2023
1. The baseline estimate is corrected throughout the MR. 2. The Net Benefit is corrected in the MR.				

Documentation provided by project participant	
Revised MR	
DOE assessment	**Date:** 14/09/2023
1. The baseline estimate related to SDG03 is now consistently corrected throughout the MR. Hence the comment is closed. 2. The Net Benefit related to the SDG05 is ow consistently corrected throughput the MR. Hence the comment is closed.	

Table 4. FAR from this verification

No FAR raised during this verification.

~~**FAR ID**~~	~~xx~~	~~**Section No.**~~		~~**Date:** DD/MM/YYYY~~
~~**Description of FAR**~~				
~~**Project participant response**~~				~~**Date:** DD/MM/YYYY~~
~~**Documentation provided by project participant**~~				
~~**DOE assessment**~~				~~**Date:** DD/MM/YYYY~~

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