



**Verification and certification report form for
CDM programme of activities
(Version 04.0)**

Complete this form in accordance with the instructions attached at the end of this form.

BASIC INFORMATION

Title and UNFCCC reference number of the programme of activities (PoA)	The Project of CCC program of Activities (PoA) for Distribution of Improved Cookstoves (ICS) in Developing South and Southeast Asia Countries (Myanmar) Ref. Number: 10471		
Version number(s) of the PoA-DD(s) to which this report applies	6.13		
Version number of the verification and certification report	2.0		
Completion date of the verification and certification report	08/09/2021		
Monitoring period number and duration of this monitoring period	First Monitoring Period Monitoring Duration- 31/08/2019 – 31/12/2020(inclusive of start & end date)		
Number and version number of the monitoring report to which this report applies	Monitoring Report Number: 1 Version of the Monitoring Report: 1.3		
Coordinating/managing entity (CME)	Climate Change Center		
Host Parties	Host Parties of the PoA	Is this a host Party to a CPA covered in this report? (yes/no)	
	The Republic of the Union of Myanmar	Yes	
Applied methodologies and standardized baselines	AMS-II.G Energy efficiency measures in thermal applications of non-renewable biomass, version 09		
Mandatory sectoral scopes	Sectoral Scope: 03		
Conditional sectoral scopes, if applicable	NA		
Estimated amount of GHG emission reductions or GHG removals for this monitoring period in the included CPAs covered in this report	370,813 tCO _{2e}		
Certified amount of GHG emission reductions or GHG removals for this monitoring period for the included CPAs covered in this report	Amount before 1 January 2013	Amount from 1 January 2013 until 31 December 2020	Amount from 1 January 2021
	0	385,267 tCO _{2e}	0
Name and UNFCCC reference number of the DOE	Earthood Services Private Limited UNFCCC reference no.- E0066		

Name, position and signature of the
approver of the verification and certification
report



Kaviraj Singh
Managing Director

SECTION A. Executive summary

The programme of activity titled “The Project of CCC program of Activities (PoA) for Distribution of Improved Cookstoves (ICS) in Developing South and Southeast Asia Countries (Myanmar)” aims at reducing the greenhouse gases emissions by distribution and installation of energy efficient Improved Cook Stoves (ICS) in the households of Republic of the Union of Myanmar (Myanmar).

The ICS aims to reduce the consumption of non-renewable biomass (i.e., fuel wood) during cooking and heating of water through the increment of heat transfer in the ICS. The PoA also aims to deliver other environmental and social benefits attached with the ICS. Therefore, the PoA results in reduction of GHG emissions than the pre-project scenario.

The verification of current monitoring period includes 10471-P1-0001-CP1 to 10471-P1-0006-CP1 which is part of this CDM registered PoA. Climate Change Center is the CME for the PoA /1,7/ and manages the distribution and management of this CPA.

Scope of Verification:

The verification is an independent and objective review and ex-post determination of the monitored reductions in GHG emissions by the DOE. The verification includes the implementation and operation of the PoA as set out in the revised accepted PoA-DD/1/ & revised accepted/registered CPA-DD in the monitoring period for the CPA included i.e., (10471-P1-0001-CP1) to (10471-P1-0006-CP1). The verification tests the data and assertions set out in the monitoring report based on the following:

1. The approved methodology AMS II.G version 09 “: “Energy Efficiency Measures in Thermal Applications of Non-Renewable Biomass”/3/, applied in the revised accepted PoA-DD/1/ & revised accepted CPA-DDs/5/
2. The revised accepted PoA DD/1/ & revised accepted CPA-DDs/5/ and monitoring plan
3. UNFCCC criteria referred to in the Kyoto Protocol criteria and the CDM modalities and procedures as agreed in the Bonn Agreement and the Marrakech Accords
4. The CDM Validation and Verification Standard for PoA Version 2.0/20/
5. The CDM Project Standard for PoA Version 2.0/21/ and Project Cycle Procedure for PoA Version 2.0/22/
6. Relevant decisions, guidance and clarifications of the CMP and CDM Executive Board and any other information and references relevant to the project activity’s reported emission reductions.

The verification has considered both quantitative and qualitative aspects on stated/reported emission reductions. The monitoring report (all versions) and corresponding supporting documentation was assessed in accordance with the rules defined by UNFCCC, as appropriate to the PoA. The verification is not meant to provide any consulting or recommendations to the CME/others. However, stated requests for clarifications and/or corrective actions may provide input for improvement of the monitoring activities.

Verification Process:

The verification process is conducted as per internal CDM Quality Manual, which includes the following Steps. It is to be noted that the verification process was conducted within the renewed guidelines of the EB during the pandemic;

1. Contract/agreement between CME and CPA implementers/7/ and appointment of verification team and technical review team (refer Section B.1 and B.2 of this report)
2. Completeness check of Monitoring Report
3. Publication of Monitoring Report at UNFCCC website
4. Desk review (refer Section D.1 of this report) of Monitoring Report and corresponding ER sheet by verification team and planning of remote audit (including sampling approach (refer Section D.4 of this report) to be applied)
5. Remote site audit (refer Section D.2 of this report) (physical implementation and interview with relevant stakeholders) by verification team consistent of Team Leader and all Technical Experts, as a minimum
6. Follow up activities e.g., interviews (refer Section D.3 of this report)
7. Reporting and closure of findings (CARs/CLs/FARs) and preparation of draft verification report (refer Section D.5 of this report)

8. Independent technical review (refer Section F of this report) of the draft verification report and final/revised documentation (e.g., Monitoring Report, corresponding ER sheet and evidence)
9. Reporting and closure of TR comments/findings (refer Section D.5 of this report) (CARs/CLs/FARs) and final approval for the decision made (refer Section G and H of this report).
10. Issuance of final verification report to contracted CME (or authorized representatives) and submission of request for issuance, as appropriate.

Verification Conclusion:

Based on the outcome of the verification process of the registered PoA “The Project of CCC program of Activities (PoA) for Distribution of Improved Cookstoves (ICS) in Developing South and Southeast Asia Countries (Myanmar)” and its 10471-P1-0001-CP1 to 10471-P1-0006-CP1 for the monitoring period 31/08/2019 to 31/12/2020 (both days inclusive) we confirm that the implementation of referenced registered PoA and CPA as stated in the Monitoring Report (final) Version 1.3 date 27/07/2021 is complying with applicable CDM rules and regulations. The GHG emission reductions were calculated correctly based on the applied methodologies and the monitoring plan contained in the revised accepted PoA-DD/1/.

Earthood Services Private Limited was able to certify that the emission reductions from the registered CDM PoA UN#10471 “The Project of CCC program of Activities (PoA) for Distribution of Improved Cookstoves (ICS) in Developing South and Southeast Asia Countries (Myanmar)” during the period 31/08/2019 – 31/12/2020 (both days inclusive) amount to 385,267 tCO₂e. Therefore, this is being submitted for request for issuance, as per UNFCCC procedures.

SECTION B. Verification team, technical reviewer and approver
B.1. Verification team members

No.	Role	Type of resource	Last name	First name	Affiliation (e.g. name of central or other office of DOE or outsourced entity)	Involvement in			
						Desk/document review	On-site inspection*	Interview(s)	Verification findings
1.	Team Leader	IR	Mahala	Deepika	Central Office	Y	N	Y	Y
2.	Verifier	IR	Vatsa	Vaishali	Central Office	Y	N	Y	Y
3.	Technical Expert	IR	Mahala	Deepika	Central Office	Y	N	Y	Y
4.	Meth. Expert	IR	Mahala	Deepika	Central Office	Y	N	Y	Y
5.	Local Expert	IR	Thura	Ye	Central Office	Y	N	N	Y

* Remote telephonic survey was conducted instead of physical on-site audit. Details for remote on-site survey have been discussed in detail in section D.2 of the report.

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 DOE or outsourced entity)
1.	Technical reviewer	IR	Garg	Shreya	Central Office
2.	TE to TR	IR	Garg	Shreya	Central Office
3.	Approver	IR	Singh	Kaviraj	Central Office

SECTION C. Application of materiality in conducting the verification

C.1. Consideration of materiality in planning the verification

No.	Risk that could lead to material errors, omissions or misstatements	Assessment of the risk		Response to the risk in the verification plan and/or sampling plan
		Risk level	Justification	
1.	Erroneous transfer of information from documented records (conformity letter form etc.) to distribution database	Low	CPAI enters the details in conformity letter at the time of installation. CPAI also conduct an internal check to verify the accuracy of data entry.	On a sampling basis, the records are checked with the information from database and substantiated by evidence shared by CME. The familiarity of CPAI representatives with database is also checked.
2.	Erroneous consideration of technical specifications of ICS	Low	The technical specifications are provided by manufacturer	Technical specifications of ICS model are checked against the document issued by manufacturer.

C.2. Consideration of materiality in conducting the verification

In accordance with CDM VVS for PoAs, Version 02.0 the prescribed thresholds for materiality for CDM PoAs are as under;

Type of PoA	PoAs comprising large-scale CPAs			PoAs comprising only small-scale CPAs	PoAs comprising only micro-scale CPAs
Emission Reductions (tCO _{2e})/year	500,000 or more	300,001 to 499,999	300,000 or less		
Materiality Threshold (as per CDM VVS for PoAs Version 02.0, para 308)	0.5%	1.0%	2.0%	5.0%	10.0%

The applicable materiality threshold is 10% as PoA comprises only micro-scale CPAs.

Particulars / Monitoring Report	MR Version (Public)	MR Version (Revised/Final)
Emission Reductions Achieved (tCO _{2e}) in this monitoring period	406,306 tCO _{2e}	385,267 tCO _{2e} *
Applicable Threshold (%) as per CDM VVS for PoAs Version 02.0	10.0%	10.0%

* The verification team has identified the impact of errors observed and those have been corrected by CME during verification for all monitoring parameter at individual and aggregate level.

Monitored Parameter (Symbol / Description)	Reporting Frequency	Number of Discrete Data* (Total) Total (100%)	Sample selected for verification Sample (100%)	Type of error identified	Impact on ERs	
					ERs impacted (Sample)	ERs impacted (Population based on extrapolation)
N _{y,i,j} Number of project devices of type i and batch j operating during year y.	At least once every two years	218,955(project database), 110 samples surveyed for operational rate	218,955 The number of ICS was cross checked from CPA database. 11 samples/end users have been interviewed.	None	NA	NA
$\eta_{new,i,j}$	The value shall be	15 samples	15 (100%)	None	NA	NA

Efficiency of the device of each type i and batch j implemented as part of the project activity	applied the test result conducted by the third party					
By=1,new,i,j,survey Quantity of woody biomass used by project devices in tonnes per device of type i.	Sample survey conducted during the first year of the introduction of the devices	160	11 samples/end users have been interviewed.	None	NA	NA
Life Span	The operating lifetime of the project device. The life span should be reported in cases where the PPs are opting to account the efficiency loss as per paragraph 27 of the applied methodology	1	1 (100%)	None	NA	NA
Date of commissioning of project device i Actual date of commissioning of the project device	Fixed and recorded at the time of commissioning/distribution	6	6 (100%)	None	NA	NA
Date of commissioning of batch j To establish the date of commissioning, the CPA Implementers may opt to group the devices in "batches" and the latest date of	Fixed and recorded at the time of commissioning/distribution	1	1	None	NA	NA

commissioning of a device within the batch shall be used as the date of commissioning for the entire batch						
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There was an error identified in the calculation of ER during the desk review of MR, ER Sheet and other supporting documents shared by CME. In response to that the CME has now correctly applied leakage factor and year fraction in the ER calculation for each of the CPA which has led to reduction in the total ERs significantly. CAR#05 was raised and resolved to address the issue.

Based on the above table it can be confirmed that the actual individual and aggregated material error is determined for the registered PoA as per CDM VVS for PoA/20/. The applicable threshold for materiality in accordance with CDM PoA VVS Version 2 para 308(d)/20/ is 10%.

SECTION D. Means of verification

D.1. Desk/document review

The desk review involves:

- A review of the data and information presented to verify their completeness.
- A review of the monitoring plan, the monitoring methodology including applicable tool(s) and, where applicable, the applied standardized baseline, 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 during the verification is provided under appendix 3 of this report.

D.2. On-site inspection

Duration of on-site inspection: NA				
No.	Activity performed on-site	Site location	Date	Team member
1.	NA	NA	NA	NA

*No site visit was conducted for this batched issuance due to outbreak of global pandemic Covid-19 and increased risk of exposure and contraction due to travel.

Para 339 of VVS for PoA, version 2.0 /20/ says that it is mandatory for the DOE to conduct an on-site inspection at verification for the included CPA if:

- It is the first verification for the DOE with regard to this CPA;
- More than three years have elapsed since the last on-site inspection conducted for verification for the CPA; or
- The CPA has achieved more than 300,000 tCO_{2e} of GHG emission reductions or net anthropogenic GHG removals since the last verification when an on-site inspection was conducted.

The site-visit for the current verification was mandatory, as no physical site visit has been conducted for any of the CPAs under the verification.

At the time of verification of the PoA, the country where DOE office is based, India, was witnessing the second highest number of COVID-19 infected people in the world, with the total number of infected cases reaching at 32.2 million /24/. Under such circumstances, the validation team has avoided the risk of exposure by not conducting the on-site visit due to outbreak of global pandemic Covid-19, increased risk of exposure and contact due to travel, as the affected cases in the country are spurting.

Also, it was duly assessed if the site visit can be postponed/25/. Communications on this topic were made with CME, and evidence was provided by CME that delay to the issuance would lead to delayed crediting of CERs. This would result in a contractual breach of (and termination/rescission of) underlying Emissions

Reductions Purchase Agreement and loss of future revenue for the CME as verified from ERPA/26/. On the basis of above, the validation team decided to follow the UN EB 106 Para 26 decision, and adopted an alternative approach for conducting on-site audit, which is discussed in the below paragraphs.

UN EB decision on Mandatory DOE on-site visits:

UN EB 106 report (Para 26) mentions the decision EB took on 20th March 2020, in relation to DOE on-site visit, applicable from 23rd March 2020 to 23rd June 2020/27/. The CDM Executive Board agreed on 23 June 2020, on an exceptional basis considering the COVID-19 pandemic, to extend the period during which CDM Designated Operational Entities (DOEs) may apply alternative measures of validation/verification to mandatory on-site inspections until 31 December 2020/27/ which was extended till 30/06/2021 in EB 108/28/. The Executive Board of the Clean Development Mechanism (CDM), at its 110th meeting, agreed to further extend the period in which DOEs may apply alternative measures of validation/verification to mandatory on-site inspections until 31 December 2021/29/.

Therefore, for the reasons provided above, and in line with UN EB guidelines, the assessment team conducted the renewal of PoA period using alternative means as defined in the CDM VVS-PoA, ver. 2.0/20/. DOE validation team applied standard auditing techniques for the renewal of PoA period, as discussed below.

Alternative means used by DOE:

The alternative means used by DOE for the purpose of verification of project details are listed below:

1. Telephonic interviews (via calls through Skype) with site personnel.
2. Interviews with the PP representatives to discuss the implementation of programme of activity and monitoring procedures for various parameters.
3. Photographic evidence for the project activity site, where tags are captured along with the monitoring equipment, showing the calibration dates for the equipment installed at the site.
4. Review of documentary evidence and supporting documents including Technical Manufacturer specifications, WBT Sheets, CPA Distribution database, training records, monitoring survey forms, monitoring survey sheet, sample size calculation sheet and calibration certificates and agreements between CME and other stakeholders. The entire list of documents reviewed for purpose of verification is available in Appendix 3 of this report.

D.3. Interviews

No.	Interviewee			Date	Subject	Team member
	Last name	First name	Affiliation			
1.	Cho	Aung	Climate Change Centre	20/05/2021-21/05/2021	Sampling Surveys	Deepika Mahala, Vaishali Vatsa
2.	Oh	Cio	SK Telecom	20/05/2021-21/05/2021	Implementation	Deepika Mahala, Vaishali Vatsa
3.	Kim	Hankyeol	Climate Change Centre	20/05/2021-21/05/2021	Implementation, Sales records	Deepika Mahala, Vaishali Vatsa
4.	NNK	Intazly	Climate Change Centre	20/05/2021-21/05/2021	Database management	Deepika Mahala, Vaishali Vatsa
5.	Kwon	Taeyoung	Climate Change Centre	20/05/2021-21/05/2021	Monitoring Report, Sampling methodology, ER calculations	Deepika Mahala, Vaishali Vatsa
6.	Zin	Thandar	Climate Change Centre	20/05/2021-21/05/2021	Monitoring Report, Sampling methodology, ER calculations	Deepika Mahala, Vaishali Vatsa
7.	Latt	U Zin	End-user	20/05/2021	DOE Field Survey	Deepika Mahala, Vaishali Vatsa
8.	Zaw	U Win	End-user	20/05/2021	DOE Field	Deepika Mahala,

					Survey	Vaishali Vatsa
9.	Aung	U	End-user	20/05/2021	DOE Field Survey	Deepika Mahala, Vaishali Vatsa
10.	Tote	Daw	End-user	20/05/2021	DOE Field Survey	Deepika Mahala, Vaishali Vatsa
11.	Chaw	Daw	End-user	20/05/2021	DOE Field Survey	Deepika Mahala, Vaishali Vatsa
12.	Hlaing	U Thin	End-user	20/05/2021	DOE Field Survey	Deepika Mahala, Vaishali Vatsa
13.	Nyunt	U	End-user	20/05/2021	DOE Field Survey	Deepika Mahala, Vaishali Vatsa
14.	Hla	U	End-user	20/05/2021	DOE Field Survey	Deepika Mahala, Vaishali Vatsa
15.	Lin	U	End-user	20/05/2021	DOE Field Survey	Deepika Mahala, Vaishali Vatsa
16.	Win	U	End-user	20/05/2021	DOE Field Survey	Deepika Mahala, Vaishali Vatsa
17.	Tun	U	End-user	20/05/2021	DOE Field Survey	Deepika Mahala, Vaishali Vatsa
18.	Moe	U	End-user	20/05/2021	DOE Field Survey	Deepika Mahala, Vaishali Vatsa
19.	Maung	U	End-user	20/05/2021	DOE Field Survey	Deepika Mahala, Vaishali Vatsa
20.	Hlaing	U	End-user	20/05/2021	DOE Field Survey	Deepika Mahala, Vaishali Vatsa
21.	Aung	U	End-user	21/05/2021	DOE Field Survey	Deepika Mahala, Vaishali Vatsa
22.	Aye	Daw	End-user	21/05/2021	DOE Field Survey	Deepika Mahala, Vaishali Vatsa
23.	Oo	U Aung	End-user	21/05/2021	DOE Field Survey	Deepika Mahala, Vaishali Vatsa
24.	Than	Daw	End-user	21/05/2021	DOE Field Survey	Deepika Mahala, Vaishali Vatsa
25.	Htaik	U	End-user	21/05/2021	DOE Field Survey	Deepika Mahala, Vaishali Vatsa
26.	Htay	U	End-user	21/05/2021	DOE Field Survey	Deepika Mahala, Vaishali Vatsa
27.	Oo	U Myint	End-user	21/05/2021	DOE Field Survey	Deepika Mahala, Vaishali Vatsa
28.	Nwae	Daw Yin	End-user	21/05/2021	DOE Field Survey	Deepika Mahala, Vaishali Vatsa

D.4. Sampling approach

CME Sampling Approach

For the purpose of sampling, CME has followed the CDM guidelines for Sampling and surveys for CDM project activities and programme of activities version 4.0/18/ and Standard for Sampling and surveys for CDM project activities and programmes of activities, Version 8.0/19/ which is in-line with the revised accepted PoA DD/1/. The CME has applied Stratified Random Sampling for across all the CPAs for different monitoring parameters as per validated revised accepted PoA DD/1/and revised accepted CPA DDs/5/. 95/10 confidence precision was applied by CME in the sampling which is appropriate as per the single sampling covering all the CPAs which are part of this batch under issuance.

DOE's Sampling Approach

In order to meet the requirements of Standard for Sampling and surveys for CDM project activities and programmes of activities version 9.0/33/, the verification team applied acceptance sampling in the verification (in accordance with para 28). The verification team selected random samples of CME's sampled records, checked the acceptability (or otherwise) of the data for each such record with CME's sample records, and then based on the number of records where there is agreement, determined if the CME's sample records meet the requirements.

The verification team determined the sample size for acceptance sampling by evaluating the following, using its own professional judgement and guidance in the Standard 'Sampling and Surveys for CDM Project Activities and programme of Activities' version 9.0 /33/:

- The proportion of discrepancies between the CME's data and verification team's (field or onsite inspection results) data that can be considered acceptable. This is referred to as the AQL (Acceptable Quality Level): 0.5% was considered in this verification.
- The proportion of discrepancies between the CME's data and verification team's (field or onsite inspection results) data that would be considered unacceptable. This is the UQL (Unacceptable Quality Level): 20% was considered in this verification.
- The producer risk: 10% was considered.
- The consumer risk: 10% was considered.

The CME has monitored 3 parameters through sampling:

1. $N_{y,i,j}$
2. $B_{y=1,new,i,j,survey}$
3. $n_{new,i,j}$

For $n_{new,i,j}$, the verification team has conducted no sampling and checked all 15 WBT sheets. However, for $N_{y,i,j}$ and $B_{y=1,new,i,j,survey}$, the verification has applied acceptance sampling.

Since, the CME had conducting two separate sampling surveys to determine these two parameters, the verification team has picked up a sample size of 11 (for each parameter) from Table (Sample size and acceptance number based on AQL, UQL, and producer and consumer risks) in the referred Standard /33/. Accordingly, acceptance number (c) thus determined for the sample size is 0. A sample size of 11 meets the criteria. The samples to be surveyed by DOE were randomly selected from the list of monitored samples using the random sample generator on Microsoft excel.

The current verification is for 10471-P1-0001-CP1 to 10471-P1-0006-CP1, which is the first monitoring period. In this monitoring period, the following was observed.

Accordingly, the verification team has verified 22 samples (11 for each parameter- $B_{y=1,new,i,j,survey}$ and $N_{y,i,j}$) collectively during the remote site visit and observed that the sampling survey results of the CME checked were found to be consistent with DOE's remote survey results. The sampling method used is in-line with the Standard: Sampling and surveys for CDM project activities and programme of activities /33/ and Guideline: Sampling and surveys for CDM project activities and programme of activities /18/. In all, the verification team remotely visited 22 households (11 for each parameter).

D.5. Clarification requests, corrective action requests and forward action requests 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	-	CAR#01	-
Remaining forward action requests from validation and/or previous verifications	-	-	-
CPAs considered for verification and covered in this report	-	-	-
Programme of activities	-	-	-
Compliance of the programme implementation with the registered PoA-DD	-	CAR#04	-
Implementation and operation of the management system	-	-	-
Post-registration changes	-	-	-
• Corrections	-	CAR#01	-
• 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 ¹			
• Changes to the programme design	-	-	-
• Addition of CPA inclusion template	-	-	-
• Change of coordinating/managing entity	-	-	-
• Changes specific to afforestation and reforestation activities	-	-	-
Component project activities	-	-	-
Compliance of the CPA implementation with the included CPA design document	-	CAR#02	-
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	-	-	-
• Data and parameters monitored	CL#01	CAR#03 CAR#04	-
• Implementation of sampling plan	-	CAR#03 CAR#07	-
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	-	-	-
• 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	-	CAR#05	-
• Comparison of actual GHG emission reductions or net GHG removals by sinks with estimates in included CPA	-	CAR#06	-
• Remarks on difference from estimated value in included CPA	-	-	-
Assessment of reported sustainable development co-benefits	-	-	-
Global stakeholder consultation	-	-	-
Others (please specify)	-	-	-

¹ 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).

Total	01	07	00
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SECTION E. Verification findings

E.1. General

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

Means of verification	The verification team has compared the final monitoring report /4/ with the applicable and latest monitoring report form, i.e. CDM-PoA-MR-FORM /6/.
Findings	CAR#01 was raised and resolved.
Conclusion	The final Monitoring Report was prepared using the latest and correct template i.e. CDM-PoA-MR-FORM Version 04.0. The verification team confirms that the monitoring report has been appropriately prepared using the applicable monitoring report form, and that all sections are completed inline to the guidelines.

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

No FAR was found to be raised during the validation of inclusion of CPAs. Also, this is the first verification of the PoA so no FAR is raised in the previous verification.

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

Title and UNFCCC reference number of the CPA included in the PoA as of the end of this monitoring period	Is the CPA considered for this verification? (yes/no)	The date when the CPA was included	Version of the PoA-DD	Confirmation that a request for issuance including the CPA has been published for the previous monitoring period (Y/N)
CCC PoA for distribution of ICS in developing countries (Myanmar): CPA 001 10471-P1-0001-CP1	Yes	27/08/2019	6.13	NA
CCC PoA for distribution of ICS in developing countries (Myanmar): CPA 002 10471-P1-0002-CP1	Yes	27/08/2019	6.13	NA
CCC PoA for distribution of ICS in developing countries (Myanmar): CPA 003 10471-P1-0003-CP1	Yes	27/08/2019	6.13	NA
CCC PoA for distribution of ICS in developing countries (Myanmar): CPA 004	Yes	27/08/2019	6.13	NA

10471-P1-0004-CP1				
CCC PoA for distribution of ICS in developing countries (Myanmar): CPA 005 10471-P1-0005-CP1	Yes	27/08/2019	6.13	NA
CCC PoA for distribution of ICS in developing countries (Myanmar): CPA 006 10471-P1-0006-CP1	Yes	27/08/2019	6.13	NA
CCC PoA for distribution of ICS in developing countries (Myanmar): CPA 011 10471-P1-0007-CP1	No	14/04/2020	6.13	NA
CCC PoA for distribution of ICS in developing countries (Myanmar): CPA 012 10471-P1-0008-CP1	No	14/04/2020	6.13	NA
CCC PoA for distribution of ICS in developing countries (Myanmar): CPA 013 10471-P1-0009-CP1	No	14/04/2020	6.13	NA
CCC PoA for distribution of ICS in developing countries (Myanmar): CPA 014 10471-P1-0010-CP1	No	14/04/2020	6.13	NA
CCC PoA for distribution of ICS in developing countries (Myanmar): CPA	No	14/04/2020	6.13	NA

015 10471-P1-0011-CP1				
CCC PoA for distribution of ICS in developing countries (Myanmar): CPA 016 10471-P1-0012-CP1	No	14/04/2020	6.13	NA
CCC PoA for distribution of ICS in developing countries (Myanmar): CPA 017 10471-P1-0013-CP1	No	14/04/2020	6.13	NA
CCC PoA for distribution of ICS in developing countries (Myanmar): CPA 018 10471-P1-0014-CP1	No	14/04/2020	6.13	NA
CCC PoA for distribution of ICS in developing countries (Myanmar): CPA 019 10471-P1-0015-CP1	No	14/04/2020	6.13	NA
CCC PoA for distribution of ICS in developing countries (Myanmar): CPA 020 10471-P1-0016-CP1	No	14/04/2020	6.13	NA
CCC PoA for distribution of ICS in developing countries (Myanmar): CPA 021 10471-P1-0017-CP1	No	14/04/2020	6.13	NA
CCC PoA for distribution of ICS in developing countries	No	14/04/2020	6.13	NA

(Myanmar): CPA 022 10471-P1-0018- CP1				
CCC PoA for distribution of ICS in developing countries (Myanmar): CPA 023 10471-P1-0019- CP1	No	14/04/2020	6.13	NA
CCC PoA for distribution of ICS in developing countries (Myanmar): CPA 024 10471-P1-0020- CP1	No	14/04/2020	6.13	NA
CCC PoA for distribution of ICS in developing countries (Myanmar): CPA 025 10471-P1-0021- CP1	No	14/04/2020	6.13	NA
CCC PoA for distribution of ICS in developing countries (Myanmar): CPA 026 10471-P1-0022- CP1	No	14/04/2020	6.13	NA
CCC PoA for distribution of ICS in developing countries (Myanmar): CPA 027 10471-P1-0023- CP1	No	14/04/2020	6.13	NA
CCC PoA for distribution of ICS in developing countries (Myanmar): CPA 028 10471-P1-0024- CP1	No	14/04/2020	6.13	NA
CCC PoA for distribution of ICS in developing	No	14/04/2020	6.13	NA

countries (Myanmar): CPA 029 10471-P1-0025- CP1				
CCC PoA for distribution of ICS in developing countries (Myanmar): CPA 030 10471-P1-0026- CP1	No	14/04/2020	6.13	NA
CCC PoA for distribution of ICS in developing countries (Myanmar): CPA 031 10471-P1-0027- CP1	No	14/04/2020	6.13	NA
CCC PoA for distribution of ICS in developing countries (Myanmar): CPA 032 10471-P1-0028- CP1	No	14/04/2020	6.13	NA
CCC PoA for distribution of ICS in developing countries (Myanmar): CPA 033 10471-P1-0029- CP1	No	14/04/2020	6.13	NA
CCC PoA for distribution of ICS in developing countries (Myanmar): CPA 034 10471-P1-0030- CP1	No	14/04/2020	6.13	NA
CCC PoA for distribution of ICS in developing countries (Myanmar): CPA 035 10471-P1-0031- CP1	No	14/04/2020	6.13	NA
CCC PoA for distribution of ICS	No	14/04/2020	6.13	NA

in developing countries (Myanmar): CPA 036 10471-P1-0032-CP1				
CCC PoA for distribution of ICS in developing countries (Myanmar): CPA 037 10471-P1-0033-CP1	No	14/04/2020	6.13	NA
CCC PoA for distribution of ICS in developing countries (Myanmar): CPA 038 10471-P1-0034-CP1	No	14/04/2020	6.13	NA
CCC PoA for distribution of ICS in developing countries (Myanmar): CPA 039 10471-P1-0035-CP1	No	14/04/2020	6.13	NA
CCC PoA for distribution of ICS in developing countries (Myanmar): CPA 040 10471-P1-0036-CP1	No	14/04/2020	6.13	NA
CCC PoA for distribution of ICS in developing countries (Myanmar): CPA 041 10471-P1-0037-CP1	No	14/04/2020	6.13	NA
CCC PoA for distribution of ICS in developing countries (Myanmar): CPA 042 10471-P1-0038-CP1	No	14/04/2020	6.13	NA
CCC PoA for	No	14/04/2020	6.13	NA

distribution of ICS in developing countries (Myanmar): CPA 043 10471-P1-0039- CP1				
CCC PoA for distribution of ICS in developing countries (Myanmar): CPA 044 10471-P1-0040- CP1	No	14/04/2020	6.13	NA
CCC PoA for distribution of ICS in developing countries (Myanmar): CPA 045 10471-P1-0041- CP1	No	14/04/2020	6.13	NA
CCC PoA for distribution of ICS in developing countries (Myanmar): CPA 046 10471-P1-0042- CP1	No	14/04/2020	6.13	NA
CCC PoA for distribution of ICS in developing countries (Myanmar): CPA 047 10471-P1-0043- CP1	No	14/04/2020	6.13	NA
CCC PoA for distribution of ICS in developing countries (Myanmar): CPA 048 10471-P1-0044- CP1	No	14/04/2020	6.13	NA
CCC PoA for distribution of ICS in developing countries (Myanmar): CPA 049 10471-P1-0045- CP1	No	14/04/2020	6.13	NA

CCC PoA for distribution of ICS in developing countries (Myanmar): CPA 050 10471-P1-0046-CP1	No	14/04/2020	6.13	NA
CCC PoA for distribution of ICS in developing countries (Myanmar): CPA 051 10471-P1-0047-CP1	No	14/04/2020	6.13	NA
CCC PoA for distribution of ICS in developing countries (Myanmar): CPA 052 10471-P1-0048-CP1	No	14/04/2020	6.13	NA
CCC PoA for distribution of ICS in developing countries (Myanmar): CPA 053 10471-P1-0049-CP1	No	14/04/2020	6.13	NA
CCC PoA for distribution of ICS in developing countries (Myanmar): CPA 054 10471-P1-0050-CP1	No	14/04/2020	6.13	NA
CCC PoA for distribution of ICS in developing countries (Myanmar): CPA 055 10471-P1-0051-CP1	No	14/04/2020	6.13	NA
CCC PoA for distribution of ICS in developing countries (Myanmar): CPA 056 10471-P1-0052-CP1	No	14/04/2020	6.13	NA

CCC PoA for distribution of ICS in developing countries (Myanmar): CPA 057 10471-P1-0053-CP1	No	14/04/2020	6.13	NA
CCC PoA for distribution of ICS in developing countries (Myanmar): CPA 058 10471-P1-0054-CP1	No	14/04/2020	6.13	NA

E.2. Programme of activities

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

Means of verification	<p>The programme of activity titled “The Project of CCC program of Activities (PoA) for Distribution of Improved Cookstoves (ICS) in Developing South and Southeast Asia Countries (Myanmar)” under this verification involves the reduction of greenhouse gases emissions by distribution and installation of energy efficient Improved Cook Stoves (ICS) for households in the Republic of the Union of Myanmar (Myanmar). The ICS aims to reduce the consumption of non-renewable biomass (i.e., fuel wood) during cooking and heating of water. The PoA also aims to deliver other environmental and social benefits attached with the ICS. Therefore, the PoA results in reduction of GHG emissions than the pre-project scenario.</p> <p>The verification of current monitoring period includes 10471-P1-0001-CP1 to 10471-P1-0006-CP1 which is part of this CDM registered PoA. Climate Change Centre is the CME for the PoA /7/ and manages the distribution and management of this CPA.</p> <p>The implementation of the 10471-P1-0001-CP1 to 10471-P1-0006-CP1 is within the geographical boundary of the PoA-DD that is the country Myanmar. The assessment team confirms that the distribution of cookstoves has been done only in Myanmar and therefore the geographical boundaries of the implemented PoA are inline to the revised accepted PoA-DD /1/.</p> <p>The technical specifications of the E-FREE cookstoves confirmed from the technical manufacturer specification/9/ document were found to be as follows:</p> <ul style="list-style-type: none"> • Dimension Height 10”x Diameters 11”& 8” • Material Clay and metal • Fuel type Firewood • Efficiency 28% <p>Further, based on the review of records of distribution by CME/11/, remote observations and interview conducted during the remote site visit, the verification team confirms that:</p> <ul style="list-style-type: none"> • The CPAs are implemented within the boundary of the PoA as described in the revised accepted PoA-DD/1/. • The CME is same as that mentioned in the revised accepted PoA-DD/1/. • The implementation and operation of the project activity has been conducted in accordance with the description contained in the revised accepted PoA-DD/1/ and revised accepted CPA-DDs/5/. • All physical features of the CPAs proposed in the revised accepted CPA-DDs/5/ are in place.
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	<p>The project participants/CPA implementer has operated the CPA as per the revised accepted CPA-DDs/5/.</p> <p>The information (including data and variables) as mentioned in the MR/4/ is found to be in line with the details provided in the revised accepted PoA-DD/1/.</p> <p>The verification team found the project description contained in MR to be complete and accurate and was found to be in-line with the revised accepted PoA-DD/01/.</p>
Findings	CAR#04 was raised and resolved
Conclusion	<p>In view of the information's verified through the remote audit survey and interviews, the verification team is able to confirm that all physical features (technology, project equipment (as applicable), and monitoring and metering equipment) of the registered CDM program of activities were in place and that the CME has operated the project activity as per the registered PoA-DD/1/ during the concerned monitoring period.</p> <p>The emission reductions achieved during the current monitoring period are 385,267 tCO₂e. Justification for this has been assessed in further sections of report.</p>

E.2.2. Implementation and operation of the management system

Means of verification	<p>Based on the review of records, interview of CME representatives and monitoring team, during the remote site visit, it is confirmed that the CME has implemented an appropriate management and operational system for monitoring and reporting of emissions.</p> <p>The CME Climate Change Centre managed the relevant activities prior and post registration of the PoA.</p> <p>The CME maintains a user manual wherein all CPA inclusions are listed, and training records are also maintained/12/.</p> <p>The CME has designed the management system in accordance with the CDM Project Standard for programmes of Activities (version 2.0) section 7.3.</p> <p>The CME has recorded following information in the database in line with the PoA DD/1/:</p> <ul style="list-style-type: none"> • Name of the user; • Address and contact number; • Serial number of the E-FREE cookstoves. • Age and gender. • Installation date; and • Number of people in the household <p>The other components of the management plan have also been followed in line with the registered PoA DD/1/.</p> <p>Original copies of completed survey forms/13/ and WBT reports /10/ are retained by the CPA implementers. The organizational structure and roles and responsibilities for monitoring are in line with the situation on the ground as confirmed through CME representative's interview during the remote site visit, and the structure is considered appropriate.</p>
Findings	None
Conclusion	The verification team from the desk review and remote survey assessment confirms that the monitoring management system of the PoA is in place with the responsibilities properly identified and established.

E.2.3. Post-registration changes**E.2.3.1. Corrections**

The CME requested for a post-registration change to update the fNRB value from 0.3 to 0.615 in-line to the newly approved Myanmar national default value which was approved by board on 23 December 2020 (ASB0049-2020). The changes are reflected at <https://cdm.unfccc.int/PRCContainer/DB/prcp723267294/view> in PoA-DD version 06.13 dated 25/01/2021 approved on 29/03/2021/30/.

E.2.3.2. Inclusion of a monitoring plan

NA

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

NA

E.2.3.4. Changes to the programme design

NA

E.2.3.5. Addition of CPA inclusion template

NA

E.2.3.6. Change of coordination/managing entity

NA

E.2.3.7. Changes specific to afforestation and reforestation activities

NA

E.3. Component project activities**E.3.1. Compliance of the CPA implementation with the included CPA design document**

Means of verification	<p>The programme of activity titled “The Project of CCC program of Activities (PoA) for Distribution of Improved Cookstoves (ICS) in Developing South and Southeast Asia Countries (Myanmar)” under this verification involves the reduction of greenhouse gases emissions by distribution and installation of energy efficient Improved Cook Stoves (ICS) for households in the Republic of the Union of Myanmar (Myanmar). The ICS aims to reduce the consumption of non-renewable biomass (i.e., fuel wood) during cooking and heating of water. The PoA also aims to deliver other environmental and social benefits attached with the ICS. Therefore, the PoA results in reduction of GHG emissions than the pre-project scenario.</p> <p>This monitoring report includes the implementation and monitoring of 6 CPAs- CPA 10471-P1-0001-CP1 to 10471-P1-0006-CP1. Climate Change Centre is the CME for the PoA /7/ and manages the distribution and management of this CPA. The Dry Zone Greening Department (DZGD) act as the CPA implementer of the project and their role involves distribution and monitoring the use of ICS as checked from the CPA and CPA Implementer Agreement/7/.</p> <p>The implementation of the 10471-P1-0001-CP1 to 10471-P1-0006-CP1 is within the geographical boundary of the PoA-DD that is the country Myanmar. The assessment team confirms that the distribution of cookstoves has been done only in Myanmar and therefore the geographical boundaries of the implemented PoA are inline to the revised accepted PoA-DD</p>
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/1/.

The technical specifications/9/ of the E-FREE cookstoves are as follows:

- Dimension Height 10"x Diameters 11" & 8"
- Material Clay and metal
- Fuel type Firewood
- Efficiency 28%

Further, based on the review of records of distribution by CME/11/, remote observations and interview conducted during the remote site visit, the verification team confirms that:

- The CPA is implemented within the boundary of the PoA as described in the revised accepted PoA-DD/1/.
- The CME is same as that mentioned in the revised accepted PoA-DD/1/.
- Dry Zone Greening Department (DZGD) is the CPA-Implementer of the PoA.
- The implementation and operation of the project activity has been conducted in accordance with the description contained in the revised accepted PoA-DD/1/ and revised accepted CPA-DDs/5/.
- All physical features of the CPA proposed in the revised accepted CPA-DDs/5/ are in place.

The project participants/CPA implementer has operated the CPA as per the revised accepted CPA-DD/5/. The monitoring period in this monitoring report is from 31/08/2019 to 31/12/2020. The details of each CPA are as follows:

CPA no.	First ICS Installation date	Crediting period	No. of units (installed)	ERs Estimated	ERs achieved
10471-P1-0001-CP1	19/12/2018	31/08/2019 - 30/08/2026	36,514	60,120	65,200
10471-P1-0002-CP1	19/12/2018	31/08/2019 - 30/08/2026	36,067	64,774	63,603
10471-P1-0003-CP1	19/12/2018	31/08/2019 - 30/08/2026	36,132	64,221	63,434
10471-P1-0004-CP1	19/12/2018	31/08/2019 - 30/08/2026	36,808	60,799	64,320
10471-P1-0005-CP1	19/12/2018	31/08/2019 - 30/08/2026	36,816	60,572	64,673
10471-P1-0006-CP1	19/12/2018	31/08/2019 - 30/08/2026	36,618	60,327	64,037
	As checked from the conformity letters/23/	Checked from the UN website /31/	Check-ed from CPA distribution database/11/	Checked from ER sheet/16/	Checked from ER sheet/16/

The start date of crediting period, inclusion dates of the CPAs were checked from the UN website /31/. The First ICS Installation dates were checked from the screenshots of conformity letters/23/. It has been checked by the verification team that all the cookstove units installed under these 6 CPAs is micro-scale CDM unit and will be no larger than 1 % of the threshold of 180 GWh/year (thermal) for Type II.

Findings	CAR#02 was raised and resolved
Conclusion	<ul style="list-style-type: none"> • The verification team is in opinion that physical features of the CPAs have been implemented in accordance with the revised accepted CPA-DDs/5/. • It is also confirmed, through the review of the supporting documentation that physical features of the component CPAs have been implemented in accordance with the revised accepted CPA-DDs/5/. • The CPAs were also found to be completely operational in line with the revised

	accepted CPA-DDs/5/. The information provided in the relevant sections of the monitoring report appropriately describe the implementation and operational status of the PoA.
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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**

NA

E.3.2.2. Corrections

The CME requested for a post-registration change to update the fNRB value from 0.3 to 0.615 in-line to the newly approved Myanmar national default value which was approved by board on 23 December 2020 (ASB0049-2020). The changes are reflected in following versions of CPA-DDs:

CPA-Reference number	PRC-Reference Number	Revised CPA-DD Version	Approval date
10471-P1-0001-CP1	PRC-10471-002	8.2	12/04/2021
10471-P1-0002-CP1	PRC-10471-003	01.10	18/04/2021
10471-P1-0003-CP1	PRC-10471-004	01.10	18/04/2021
10471-P1-0004-CP1	PRC-10471-005	01.10	12/04/2021
10471-P1-0005-CP1	PRC-10471-006	01.10	18/04/2021
10471-P1-0006-CP1	PRC-10471-007	01.10	18/04/2021

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

NA

E.3.2.4. Inclusion of a monitoring plan

NA

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

NA

E.3.2.6. Changes to the project design

NA

E.3.2.7. Changes specific to afforestation and reforestation activities

NA

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

Means of verification	The monitoring plan as contained in revised accepted CPA DDs/5/ were reviewed against the monitoring requirements of the applied methodology AMS-II.G version 09 /3/ as well as revised accepted PoA-DD/1/ with reference to the technology involved.
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	Based on this review it was found that the monitoring plan contained in the revised accepted CPA DDs/5/ includes all the required parameters to be monitored in the context of the CPA design and description and allows proper determination of emission reductions in accordance with revised accepted PoA DD/1/ and applied methodology AMS-II.G version 09 /3/.
Findings	None
Conclusion	The monitoring plan is in accordance with the approved methodology, AMS-II.G version 09 /3/, that is included in revised accepted CPA-DDs/5/.

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

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, $\eta_{old,i,j}$, Fraction

Means of verification	The value of this parameter is a default value of 0.1 in-line to the applied methodology/3/. This was checked with the revised accepted PoA-DD/1/ and revised accepted CPA-DDs/5/.
Findings	None
Conclusion	The values in the Monitoring Report /4/ and corresponding Emission Reduction Spreadsheet /16/ are consistent with the revised accepted PoA-DD/1/ and revised accepted CPA-DDs/5/. The applied values are correct and justified.

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

Means of verification	The value of this parameter is 1.0 which is a default value sourced from applied methodology/3/. This was checked with the revised accepted PoA-DD/1/ and revised accepted CPA-DDs/5/.
Findings	None
Conclusion	The values in the Monitoring Report /4/ and corresponding Emission Reduction Spreadsheet /16/ are consistent with the revised accepted PoA-DD/1/ and revised accepted CPA-DDs/5/. The applied values are correct and justified.

Fraction of woody biomass saved by the project activity in year y that can be established as non-renewable biomass, $f_{NRB,y}$, Fraction

Means of verification	The value of this parameter is considered 0.615 which is a default value endorsed by designated national authorities and approved by the Board/32/. This was checked with the revised accepted PoA-DD/1/ and revised accepted CPA-DDs/5/.
Findings	None
Conclusion	The values in the Monitoring Report /4/ and corresponding Emission Reduction Spreadsheet /16/ are consistent with the revised accepted PoA-DD/1/ and revised accepted CPA-DDs/5/. The applied values are correct and justified.

Net calorific value of the non-renewable woody biomass that is substituted (IPCC default for wood fuel, 0.0156 TJ/tonnes, based on the gross weight of the wood that is 'air-dried'), $NCV_{biomass}$, TJ/tonne

Means of verification	The value of this parameter is considered as 0.0156 sourced from the applied methodology/3/. This was checked with the revised accepted PoA-DD/1/ and revised accepted CPA-DDs/5/.
Findings	None
Conclusion	The values in the Monitoring Report /4/ and corresponding Emission Reduction Spreadsheet /16/ are consistent with the revised accepted PoA-DD/1/ and revised accepted CPA-DDs/5/. The applied values are correct and justified.

Emission factor for the fossil fuels projected to be used for substitution of non-renewable woody biomass by similar consumer. Use a value of 63.7 tCO₂/TJ, $EF_{projected\ fossil\ fuel}$, tCO₂/TJ

Means of verification	The value of this parameter is considered 63.7 tCO ₂ /TJ which is a default value sourced from applied methodology/3/. This was checked with the revised accepted PoA-DD/1/ and revised accepted CPA-DDs/5/.
Findings	None

Conclusion	The values in the Monitoring Report /4/ and corresponding Emission Reduction Spreadsheet /16/ are consistent with the revised accepted PoA-DD/1/ and revised accepted CPA-DDs/5/. The applied values are correct and justified.
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Use of non-renewable woody biomass saved under the project activity to justify the baseline of other CDM project activities can also be a potential source of leakage. Increase in the use of non-renewable woody biomass outside the project boundary to create non-renewable woody biomass baselines can also be potential source of leakage. As an alternative to previous mentioned $B_{y,savings,i,j}$ can be multiplied by a net to gross adjustment factor of 0.95 to account for both leakage, Leakage, Fraction

Means of verification	The value of this parameter is considered 0.95 which is a default value sourced from applied methodology/3/. This was checked with the revised accepted PoA-DD/1/ and revised accepted CPA-DDs/5/.
Findings	None
Conclusion	The values in the Monitoring Report /4/ and corresponding Emission Reduction Spreadsheet /11/ are consistent with the revised accepted PoA-DD/1/ and revised accepted CPA-DDs/5/. The applied values are correct and justified.

E.3.4.2. Data and parameters monitored

Number of project devices of type i and batch j operating during year y, $N_{y,i,j}$, Number of units

Means of verification	Criteria/Requirements	Assessment/Observation															
	Measuring /Reading /Recording frequency	The number of stoves still operating has been monitored based on the sampling survey conducted at least once every two years.															
	Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	Yes															
	Monitoring equipment	Not applicable. This number of units are monitored via CPA distribution record and operational rate is monitored with sampling survey.															
	Calibration frequency /interval:	Not applicable															
	How were the values in the monitoring report verified?	<p>The values reported in the final MR /4/ (and corresponding ER sheet /16/) were verified through the survey sheets/14/ loaded into CPA database /11/. This data base records the unique ID of the ICS, name of the end user with its address, phone number and geocoordinates. Total number of ICS sold in each CPA are listed in the table below:</p> <table><tr><th>CPA</th><th>N_y</th></tr><tr><td>CPA 1</td><td>36,514</td></tr><tr><td>CPA 2</td><td>36,067</td></tr><tr><td>CPA 3</td><td>36,132</td></tr><tr><td>CPA 4</td><td>36,808</td></tr><tr><td>CPA 5</td><td>36,816</td></tr><tr><td>CPA 6</td><td>36,618</td></tr><tr><td>Total</td><td>218,955</td></tr></table> <p>All ICS sold till the end of the current monitoring period are included in the corresponding ER sheet of the CPA. However, the ICs have a lifespan of 2years. The CME followed para 28 of the applied methodology/3/ and replaced the stove in the households before the expiry of the stove. Some ICs were found to expire the lifespan. The households where the stoves have not been replaced after the expiry of the stove, no emission reductions are</p>	CPA	N _y	CPA 1	36,514	CPA 2	36,067	CPA 3	36,132	CPA 4	36,808	CPA 5	36,816	CPA 6	36,618	Total
CPA	N _y																
CPA 1	36,514																
CPA 2	36,067																
CPA 3	36,132																
CPA 4	36,808																
CPA 5	36,816																
CPA 6	36,618																
Total	218,955																

		<p>be claimed for the expiry date. The CME has identified such systems and deducted the ERs from the them from the total ERs as confirmed from the ER calculation sheet/16/.</p> <table border="1" data-bbox="734 291 1428 577"> <thead> <tr> <th>CPA</th> <th>Distribution (Dec 2018)</th> <th>Replacement (2019)</th> <th>Expiration (Dec 2020)</th> </tr> </thead> <tbody> <tr> <td>CPA 1</td> <td>4,841</td> <td>3,499</td> <td>1,342</td> </tr> <tr> <td>CPA 2</td> <td>9,067</td> <td>1,070</td> <td>7,997</td> </tr> <tr> <td>CPA 3</td> <td>6,068</td> <td>675</td> <td>5,393</td> </tr> <tr> <td>CPA 4</td> <td>8,615</td> <td>457</td> <td>8,158</td> </tr> <tr> <td>CPA 5</td> <td>2,424</td> <td>368</td> <td>2,056</td> </tr> <tr> <td>CPA 6</td> <td>4,679</td> <td>756</td> <td>3,923</td> </tr> <tr> <td>Total</td> <td>35,694</td> <td>6,825</td> <td>28,869</td> </tr> </tbody> </table> <p>The last column of the above clarifies the numbers of stoves that were distributed in Dec 2018. These stoves clearly completed 2 years in Dec 2020. However, most of the houses received a replacement stoves. The households not receiving a replaced stove have claimed 0 credits after the expiry. The calculation has been transparently shown in the ER sheet/16/.</p> <p>The CME has monitored the operational rate of the stoves through sampling surveys. The sampling plan has been applied to the total number of stoves installed in this CPA database/11/. Stratified random sampling was applied by the CME for selection of the monitoring samples with 95/10 confidence/precision level which is in accordance with the revised accepted PoA-DD/1/ and CPA-DDs/5/. Total number of cookstoves found in operation, after applying the result of sample, i.e, all the 110 CME monitored samples were found to be operational which means that all of ICS are still in operation in the current monitoring period. This number of ICS in operation was verified from sampling results and found in order/15/. The verification team confirms based on the remote site inspection interviews and review of documented procedure that the selected survey and data collection method is correctly applied. The value calculated for the ICS in operation has been correctly reported in the monitoring report/4/ and ER sheet/16/ and monitoring methods were also found in-line with the monitoring plan of revised accepted CPA-DDs/5/.</p>	CPA	Distribution (Dec 2018)	Replacement (2019)	Expiration (Dec 2020)	CPA 1	4,841	3,499	1,342	CPA 2	9,067	1,070	7,997	CPA 3	6,068	675	5,393	CPA 4	8,615	457	8,158	CPA 5	2,424	368	2,056	CPA 6	4,679	756	3,923	Total	35,694	6,825	28,869
CPA	Distribution (Dec 2018)	Replacement (2019)	Expiration (Dec 2020)																															
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CPA 6	4,679	756	3,923																															
Total	35,694	6,825	28,869																															
	If applicable, has the reported data been cross-checked with other available data?	The number of ICS in operation reported in CPA Database /11/ were randomly cross checked verified during the remote site visit with the sales receipt with household users and also through interview of the household owner and found consistent.																																
	Does the data management ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?	Yes. The QA/QC procedure are in place, internal checks have been done by the CPA implementer and established during the onsite assessment. During the telephonic interview, the assessment team has duly verified the CME's QA/QC procedures in which the data transfer from hard copies to excel sheets were cross checked by the senior management from the hard copies to ascertain the reliability and correctness of the entered data in the excel sheet																																

	In case project participants have temporarily not monitored the parameter, has either i) a deviation been approved by the CDM EB or ii) has the parameter been estimated as stipulated by Appendix 1 to the CDM Project Standard?	No such issues
Findings	CL#01 was raised and resolved.	
Conclusion	The parameter has been monitored appropriately, in accordance with the registered monitoring plan (as per measurement methods and procedures to be applied) and applied methodology. The monitoring results were recorded consistently as per the approved frequency in the monitoring plan.	

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

Means of verification	Criteria/Requirements	Assessment/Observation																				
	Measuring /Reading /Recording frequency	The parameter is measured annually.																				
	Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	Yes																				
	Monitoring equipment	Scales, thermometer, Moisture meter, thermocouple are used as the monitoring equipment.																				
	Calibration frequency /interval:	<div>The name and calibration details of the equipment/17/ used while the WBT were conducted are given below:</div> <table><tr><td>Type</td><td>Thermometer</td></tr><tr><td>Model Name</td><td>Center 375/376</td></tr><tr><td>Accuracy</td><td>at (23±5°C) ±(0.05% reading + 0.1°C)</td></tr><tr><td>Serial Number</td><td>210607821, 210204626, 210607791, 210204625, 190313802, 190313804, 190313826, 190313795</td></tr><tr><td>Calibration Frequency</td><td>Annual</td></tr><tr><td>Last Calibration</td><td>27/08/2020</td></tr><tr><td>Validity</td><td>26/08/2021</td></tr></table> <div><table><tr><td>Type</td><td>Probe(thermocouple)</td></tr><tr><td>Model Name</td><td>TP-R04(with Centre 375/376)</td></tr><tr><td>Accuracy</td><td>IEC751, class A ±0.15°C±0.002t (t: measurement temperature)</td></tr></table></div>	Type	Thermometer	Model Name	Center 375/376	Accuracy	at (23±5°C) ±(0.05% reading + 0.1°C)	Serial Number	210607821, 210204626, 210607791, 210204625, 190313802, 190313804, 190313826, 190313795	Calibration Frequency	Annual	Last Calibration	27/08/2020	Validity	26/08/2021	Type	Probe(thermocouple)	Model Name	TP-R04(with Centre 375/376)	Accuracy	IEC751, class A ±0.15°C±0.002t (t: measurement temperature)
	Type	Thermometer																				
Model Name	Center 375/376																					
Accuracy	at (23±5°C) ±(0.05% reading + 0.1°C)																					
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Type	Probe(thermocouple)																					
Model Name	TP-R04(with Centre 375/376)																					
Accuracy	IEC751, class A ±0.15°C±0.002t (t: measurement temperature)																					

		Serial Number	210607880, 210204629, 210607879, 210204628, 191313905, 190313892, 190313930, 190313878					
		Calibration Frequency	Annual					
		Last Calibration	27/08/2020					
		Validity	26/08/2021					
		Type	Scale					
		Model Name	Ohaus V500P6KR					
		Accuracy	d=1g, e=1g					
		Serial Number	8120420010					
		Calibration Frequency	Annual					
		Last Calibration	27/08/2020					
Validity	26/08/2021							
		Type	Moisture meter for wood					
		Model Name	Testo 606-1					
		Accuracy	(nominal temperature 25°C, ±1 Digit) Conductivity measurement ±1%					
		Serial Number	59008018					
		Calibration Frequency	Annual					
		Last Calibration	27/08/2020					
		Validity	26/08/2021					
		How were the values in the monitoring report verified?		The value of 26.5% was reported in the final MR /4/ (and corresponding ER sheet /16/) and was verified through the WBT results/10/ and survey sheets/14/. The monitoring of this parameter has been calculated based on the result of the sampling survey. The sampling plan has been applied to the total number of stoves installed in CPA database. Stratified random sampling was applied by the CME for selection of the monitoring samples with 95/10 confidence/precision level which is in accordance with the revised accepted PoA-DD/1/ and revised accepted CPA-DDs/5/. There were 15 samples taken and the average value from them was finally assigned as the efficiency of the stoves. The values of individual samples are as follows:				
				Stove 1	Stove 2	Stove 3	Stove 4	Stove 5
				26.3%	26.3%	27.4%	26.6%	26.7%

	Stove 6	Stove 7	Stove 8	Stove 9	Stove 10	
	26.5%	25.9%	26.6%	26.6%	25.9%	
	Stove 11	Stove 12	Stove 13	Stove 14	Stove 15	
	26.9%	26.3%	26.9%	26.4%	26.5%	
	The value has been checked in the monitoring report/4/ and ER sheet/16/ and found correctly reported and monitored in accordance with the monitoring plan of revised accepted PoA-DD/1/.					
	If applicable, has the reported data been cross-checked with other available data?	Yes. The reliability of WBT sample conducted by CME were randomly cross checked, by interviewing the end user if WBT was conducted at their household, during the remote site visit by the assessment team and found consistent with the results reported.				
	Does the data management ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?	Yes. The QA/QC procedure are in place, internal checks have been done by the CPA implementer and established during the onsite assessment. During the telephonic interview, the assessment team has duly verified the CME's QA/QC procedures in which the data transfer from hard copies to excel sheets were cross checked by the senior management from the hard copies to ascertain the reliability and correctness of the entered data in the excel sheet				
In case project participants have temporarily not monitored the parameter, has either i) a deviation been approved by the CDM EB or ii) has the parameter been estimated as stipulated by Appendix 1 to the CDM Project Standard?	No such issues					
Findings	None					
Conclusion	The parameter has been monitored appropriately, in accordance with the registered monitoring plan (as per measurement methods and procedures to be applied) and applied methodology. The monitoring results were recorded consistently as per the approved frequency in the monitoring plan.					

Quantity of woody biomass used by project devices in tonnes per device of type i.,
By=1,new,i,j,survey, Tonnes

Means of verification	Criteria/Requirements	Assessment/Observation
	Measuring /Reading /Recording frequency	This is a measured parameter determined through sample survey conducted during the first year from the time stove distribution is completed.

	Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	Yes																						
	Monitoring equipment	Electronic weighting scales <table border="1" data-bbox="917 309 1524 533"> <tr> <td>Type</td> <td colspan="2">Scale</td> </tr> <tr> <td>Model Name</td> <td colspan="2">DRETEC KS-514</td> </tr> <tr> <td>Accuracy</td> <td colspan="2">d=1g, e=1g</td> </tr> <tr> <td>Serial Number</td> <td colspan="2">19E21825</td> </tr> <tr> <td>Calibration Frequency</td> <td colspan="2">Annual</td> </tr> <tr> <td>Last Calibration</td> <td colspan="2">27/08/2020</td> </tr> <tr> <td>Validity</td> <td colspan="2">26/08/2021</td> </tr> </table>		Type	Scale		Model Name	DRETEC KS-514		Accuracy	d=1g, e=1g		Serial Number	19E21825		Calibration Frequency	Annual		Last Calibration	27/08/2020		Validity	26/08/2021	
Type	Scale																							
Model Name	DRETEC KS-514																							
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Serial Number	19E21825																							
Calibration Frequency	Annual																							
Last Calibration	27/08/2020																							
Validity	26/08/2021																							
	Calibration frequency /interval:	Annual																						
	How were the values in the monitoring report verified?	<p>The parameter has been determined through sampling surveys. The sampling has been conducted in line with Standard for Sampling and surveys for CDM project activities and programmes of activities/19/ and CDM guidelines for Sampling and surveys for CDM project activities and programmes of activities/18/. The value derived from the survey results/14/ is:</p> <table border="1" data-bbox="917 981 1524 1079"> <tr> <td>$B_{y=1,new,i,j,survey}$</td> <td>kg/day</td> <td>3.815</td> </tr> <tr> <td>$B_{y=1,new,i,j,survey}$</td> <td>ton/year</td> <td>1.392</td> </tr> </table> <p>The value has been checked from the monitoring survey sheet/14/.</p> <p>The value has been checked in the monitoring report/4/ and ER sheet/16/ and found to be consistently reported.</p> <p>There is no default value for this parameter in the applied methodology/3/.</p> <p>The default value of 3.29 for $B_{old,p}$ was sourced from SSC WG 33, Annex 8 at the time of CPA inclusion. This value of B_{old} yielded a value of 1.18tonnes/year for $B_{y=1 new}$. It was noted that the value used was not country specific but applicable to entire Asia. The value(1.392tonnes/years) derived from the survey conducted at the time of first verification was specifically determined for Myanmar. The applied methodology/3/ and the registered PoA DD/1/, CPA DDs/5/ also require the parameter to be determined at the time of first verification.</p> <p>The CME has followed the requirements of PoA DD/1/, CPA DDs/5/ and applied methodology/3/ and determined the value meeting the sampling standard requirement.</p> <p>Moreover, the registered CPA DDs/5/ page 13 clearly stated that the value is just being used to calculate estimated emission reductions and the actual value will be calculated at the time of first verification. The increase of monitored value as</p>		$B_{y=1,new,i,j,survey}$	kg/day	3.815	$B_{y=1,new,i,j,survey}$	ton/year	1.392															
$B_{y=1,new,i,j,survey}$	kg/day	3.815																						
$B_{y=1,new,i,j,survey}$	ton/year	1.392																						

CDM-PoA-VCR-FORM

		<p>compared to assumed value was found to be acceptable.</p> <p>The survey results met the required reliability requirement. The survey results were verified through acceptance sampling by interviewing 11 samples. No discrepancy was observed, and applied value was confirmed.</p>
	If applicable, has the reported data been cross-checked with other available data?	Yes. The monitoring sheet was cross checked with the monitoring forms/13/ for 11 sampled end users.
	Does the data management ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?	Yes. The QA/QC procedure are in place, internal checks have been done by the CPA implementer and established during the onsite assessment. During the telephonic interview, the assessment team has duly verified the CME's QA/QC procedures in which the data transfer from hard copies to excel sheets were cross checked by the senior management from the hard copies to ascertain the reliability and correctness of the entered data in the excel sheet
	In case project participants have temporarily not monitored the parameter, has either i) a deviation been approved by the CDM EB or ii) has the parameter been estimated as stipulated by Appendix 1 to the CDM Project Standard?	No such issues
Findings	None	
Conclusion	The parameter has been monitored appropriately, in accordance with the registered monitoring plan (as per measurement methods and procedures to be applied) and applied methodology. The monitoring results were recorded consistently as per the approved frequency in the monitoring plan.	

The operating lifetime of the project device. The life span should be reported in cases where the PPs are opting to account the efficiency loss as per paragraph 27 of the applied methodology, Life Span, Number of years

Means of verification	Criteria/Requirements	Assessment/Observation
	Measuring /Reading /Recording frequency	Measured
	Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	Not applicable.
	Monitoring equipment	Not applicable
	Calibration frequency /interval:	Not applicable
	How were the values in the monitoring report verified?	<p>The life span of the project device stove is estimated to be 2 years according to the device manufacturer/9/ and in order to maintain high performance and efficiency of the devices, they will be replaced every two years through the crediting period of the CPA regardless of the devices' operation condition.</p> <p>The life span of project device was determined based on the date of the conformity letter in each CPAs/23/. The ICS users signed the letter at the time of ICS handover. For measuring a life span of the stoves included in this report, the CME considers all stoves as</p>

		<p>a single batch. As a batch, the date of the last cook stove delivered was the start date for forming a vintage of stoves.</p> <p>It was confirmed from the ER sheet/16/ that the CME has not claimed for the households which have not received a replaced stove.</p>
	If applicable, has the reported data been cross-checked with other available data?	Not applicable
	Does the data management ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?	Not applicable
	In case project participants have temporarily not monitored the parameter, has either i) a deviation been approved by the CDM EB or ii) has the parameter been estimated as stipulated by Appendix 1 to the CDM Project Standard?	No such issues
Findings	None	
Conclusion	The parameter has been monitored appropriately, in accordance with the registered monitoring plan (as per measurement methods and procedures to be applied) and applied methodology. The monitoring results were recorded consistently as per the approved frequency in the monitoring plan.	

Actual date of commissioning of the project device, Date of commissioning of project device i, date

Means of verification	Criteria/Requirements	Assessment/Observation													
	Measuring /Reading /Recording frequency	Fixed and recorded at the time of commissioning/distribution													
	Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	Yes													
	Monitoring equipment	Not applicable													
	Calibration frequency /interval:	Not applicable													
	How were the values in the monitoring report verified?	<p>The date of each CPA was determined based on the first stove distribution date, and this was checked through the Conformity letter signed between CME and End-user/23/. The dates of each CPA are as follows:</p> <table><tr><th>CPA</th><th>Date</th></tr><tr><td>CPA 1</td><td>19/12/2018</td></tr><tr><td>CPA 2</td><td>19/12/2018</td></tr><tr><td>CPA 3</td><td>19/12/2018</td></tr><tr><td>CPA 4</td><td>19/12/2018</td></tr><tr><td>CPA 5</td><td>19/12/2018</td></tr><tr><td>CPA 6</td><td>19/12/2018</td></tr></table> <p>The first date of distribution for each CPA was found to</p>	CPA	Date	CPA 1	19/12/2018	CPA 2	19/12/2018	CPA 3	19/12/2018	CPA 4	19/12/2018	CPA 5	19/12/2018	CPA 6
CPA	Date														
CPA 1	19/12/2018														
CPA 2	19/12/2018														
CPA 3	19/12/2018														
CPA 4	19/12/2018														
CPA 5	19/12/2018														
CPA 6	19/12/2018														

		be mentioned in the table above which was confirmed from the distribution database/11/. This date gives the actual date of commissioning of the project device.
	If applicable, has the reported data been cross-checked with other available data?	NA
	Does the data management ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?	NA
	In case project participants have temporarily not monitored the parameter, has either i) a deviation been approved by the CDM EB or ii) has the parameter been estimated as stipulated by Appendix 1 to the CDM Project Standard?	No such issues
Findings	None	
Conclusion	The parameter has been monitored appropriately, in accordance with the registered monitoring plan (as per measurement methods and procedures to be applied) and applied methodology. The monitoring results were recorded consistently as per the approved frequency in the monitoring plan.	

To establish the date of commissioning, the CPA Implementers may opt to group the devices in “batches” and the latest date of commissioning of a device within the batch shall be used as the date of commissioning for the entire batch, Date of commissioning of batch j, date

Means of verification	Criteria/Requirements	Assessment/Observation
	Measuring /Reading /Recording frequency	Fixed and recorded at the time of commissioning/distribution
	Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	Yes
	Monitoring equipment	Not applicable
	Calibration frequency /interval:	Not applicable
	How were the values in the monitoring report verified?	The commissioning date of batch is 30/09/2019 which is the last date of the commissioning of the device within the batch. This was checked from the ER Calculation Sheet/16/ and date of the last stove was confirmed from the conformity letters/23/.
	If applicable, has the reported data been cross-checked with other available data?	NA

	Does the data management ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?	NA
	In case project participants have temporarily not monitored the parameter, has either i) a deviation been approved by the CDM EB or ii) has the parameter been estimated as stipulated by Appendix 1 to the CDM Project Standard?	No such issues
Findings	None	
Conclusion	The parameter has been monitored appropriately, in accordance with the registered monitoring plan (as per measurement methods and procedures to be applied) and applied methodology. The monitoring results were recorded consistently as per the approved frequency in the monitoring plan.	

E.3.4.3. Implementation of sampling plan

Means of verification	<p>The CME has followed the CDM guidelines for Sampling and surveys for CDM project activities and programmes of activities version 4.0/18/ which is in-line to the registered PoA DD/1/.</p> <p>The assessment of CME's sampling is discussed below: The CME has applied stratified random sampling. According to Sampling and Survey standards,' version 8.0/19/, the sampling plan applied by the CME for the following CPAs are found to be appropriate. As per the sampling plan stated in the PoA DD/1/, a minimum 95% confidence interval and a 10% margin of error requirement is achieved for the sampled parameters. Since the sampling has been done across the CPAs all the CPAs have microscale CDM units, the CME has taken 95/10 as the confidence precision levels which is found to be in line with the registered monitoring plan/1,5/.</p> <p>Target Population- CME has considered all the stoves distributed within the monitoring period as the target population.</p> <p>Sampling Method- The method used in sampling was Stratified random sampling.</p> <p>Sample Size for Parameter of Interest: The sampling is applied to the following monitoring parameters:</p> <ol style="list-style-type: none"> 1. $N_{y,i,j}$ 2. $n_{new,i,j}$ 3. $B_{y=1,new,i,j,survey}$: <p>The sample size is chosen using the equation inline to CDM guidelines for Sampling and surveys for CDM project activities and programmes of activities/18/.</p> <p>In this regard, sample size calculation spreadsheet /15/ was checked and found correct as per the registered monitoring plan. The complete details are given in E.3 section of Monitoring Report/4/.</p> <p>Implementation of Sampling Survey and Field Test Records:</p> <p>The team leader through the interviews of the CME representative and monitoring personnel via skype call during remote survey confirmed that in addition to simply asking the survey questions to the end users, the surveyors were also trained to evaluate the results of sampling. Therefore, the implementation of surveys and</p>
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	tests was considered reliable.											
	Monitoring survey (by CME) duration: The monitoring survey (field survey / tests) was carried out by CME representatives between following duration for the current monitoring period.											
	<table border="1"> <tr> <th>CPA Ref.No.</th> <th>Technology</th> <th>From</th> <th>To</th> </tr> <tr> <td>10471-P1-0001-CP1 to 10471-P1-0006-CP1</td> <td>E-free Cookstove</td> <td>01/09/2020</td> <td>15/09/2020</td> </tr> </table>	CPA Ref.No.	Technology	From	To	10471-P1-0001-CP1 to 10471-P1-0006-CP1	E-free Cookstove	01/09/2020	15/09/2020			
	CPA Ref.No.	Technology	From	To								
	10471-P1-0001-CP1 to 10471-P1-0006-CP1	E-free Cookstove	01/09/2020	15/09/2020								
Reliability and precision calculation: The verification team has verified the ER calculation spreadsheet /16/ with the monitored data, where the actual achieved precision is calculated against the Guidelines outlined under "Guideline for sampling and surveys for CDM project activities and Programme of Activities" Version 4.0 /18/ and confirms that the calculation of achieved reliability was done correctly. All parameters of interest are included in the ER spreadsheet/16/ for the included CPAs. These were checked for the input values as well as formula applied and were found consistent. The reliability (demonstration of precision achieved after the survey results) is depicted in the ER calculation sheets /16/ corresponding to final Monitoring Report /4/, which were also found correct. Following reliability calculation performed by CME has been reviewed by the assessment team and found correct. Sample estimates of all three parameters are within the required reliability precision. It is also confirmed that reliability and precision check is carried out and lower/upper bound limit is applied conservatively, wherever the required precision is not achieved.												
<table border="1"> <tr> <th>Parameter</th> <th>Responded Samples</th> <th>Value of parameter obtained</th> </tr> <tr> <td>$N_{y,i,j}$</td> <td>110</td> <td>218,955</td> </tr> <tr> <td>$n_{new,i,j}$</td> <td>15</td> <td>26.5%</td> </tr> <tr> <td>$B_{y=1,new,i,j,survey}$</td> <td>160</td> <td>1.392</td> </tr> </table>	Parameter	Responded Samples	Value of parameter obtained	$N_{y,i,j}$	110	218,955	$n_{new,i,j}$	15	26.5%	$B_{y=1,new,i,j,survey}$	160	1.392
Parameter	Responded Samples	Value of parameter obtained										
$N_{y,i,j}$	110	218,955										
$n_{new,i,j}$	15	26.5%										
$B_{y=1,new,i,j,survey}$	160	1.392										
	The verification team has verified the ER calculation spreadsheets /16/ with the monitored data, where the actual achieved precision is calculated against the Guidelines outlined under "Guidelines for sampling and surveys for CDM project activities and programme of activities"/18/ and can confirm that the calculation of achieved reliability was done correctly.											
Findings	CAR#03 and CAR#07 was raised and resolved											
Conclusion	The verification team confirmed that the sampling plan and the parameter values are in accordance with the monitoring plan provided in PoA DD /1/.											

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

Means verification	of	The registered monitoring plan (of respective CPA DDs/5/ and PoA DD/1/) does not state the calibration requirements for any of the parameter. Though the calibration details of the WBT equipment have been checked. following information was verified with the calibration certificates/17/;					
		Equipment	Serial Number	Calibration Date	Valid Till	Frequency	Valid during current MP
	Electronic Weighing Scale	19E21825	27/08/2020	26/08/2021	Annual	Yes	
	Thermometer	210607821, 210204626, 210607791,	27/08/2020	26/08/2021	Annual	Yes	

		210204625, 190313802, 190313804, 190313826, 190313795				
	Thermocouple	210607880, 210204629, 210607879, 210204628, 191313905, 190313892, 190313930, 190313878	27/08/2020	26/08/2021	Annual	Yes
	Scale	8120420010	27/08/2020	26/08/2021	Annual	Yes
	Moisture Meter	59008018	27/08/2020	26/08/2021	Annual	Yes
	All field tests were carried out only after calibration was conducted as verified from the monitoring survey sheets/14/provided by the CME. It is noteworthy that registered monitoring plan/1/ does not specify any calibration frequency however, CME has maintained an annual frequency.					
Findings	None					
Conclusion	The verification team confirms that CME applied good practices while using the monitoring equipment and these were under the state of calibration/17/. There is no specific requirement prescribed in this regard in the registered monitoring plan/1/ and in the monitoring methodology/3/. The monitoring devices were found to be calibrated during the field test/17/.					

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	<p>The expressions used were found consistent with the revised accepted PoA DD/1/, revised accepted CPA DDs/5/ and the applied methodologies AMS-II.G., version 09.</p> <p>According to paragraph 17 of methodology AMS-II.G. version 09, emission reductions shall be calculated as:</p> $ER_y = \sum_i \sum_j ER_{y,i,j} - LE_y$ <p>Where,</p> <p>i = Indices for the situation where more than one type of project device is introduced to replace the pre-project devices</p> <p>j = Indices for the situation where there is more than one batch of project device</p> <p>ER_y = Emission reductions during year y in t</p> <p>$ER_{y,i,j}$ = Emission reductions by project device of type i and batch j during year y in t CO₂e</p> <p>LE_y = Leakage emissions in the year y</p> <p>So, now</p> $ER_{y,i,j} = B_{y,savings,i,j} \times N_{y,i,j} \times \mu_y \times f_{NRB,y} \times NCV_{biomass} \times EF_{projected\ fossil\ fuel} \times LAF$ <p>Where,</p>
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	<p> $B_{y,savings}$ = Quantity of woody biomass that is saved in tonnes per cookstove device of type i and batch j during year y </p> <p> $N_{y,i,j}$ = Number of project devices of type i and batch j operating during year y </p> <p> μ_y = Adjustment to account for any continued use of pre-project devices during the year y </p> <p> $f_{NRB,y}$ = Fraction of woody biomass that can be established as non-renewable biomass </p> <p> $NCV_{biomass}$ = Net calorific value of the non-renewable woody biomass, briquettes or charcoal used in project devices </p> <p> $EF_{projected_fossil\ fuel}$ = Emission factor for the fossil fuels projected to be used for substitution of non-renewable woody biomass by similar consumers </p> <p> LAF = Leakage adjustment factor </p> <p> In line with the applied methodology AMS-II.G version 09.0, Water Boiling Test (WBT) has been chosen to determine $B_{y,savings,i,j}$ with the equations given below, </p> $B_{y,savings,i,j} = B_{y=1,new,i,j,survey} \times \left(\frac{\eta_{new,i,j}}{\eta_{old,i,j}} - 1 \right)$ <p> Where, </p> <p> $B_{y=1,new,i,j,survey}$ = Quantity of woody biomass used by project devices in tonnes per device of type i </p> <p> $\eta_{new,i,j}$ = Efficiency of the device of each type i and batch j implemented as part of the project activity </p> <p> $\eta_{old,i,j}$ = Efficiency of pre-project device, which is a three-stone fire using firewood </p> <p> Detailed assessment of all the parameters used to calculate emission reductions is provided under section E.3.4.2. </p> <p> The calculations presented in the monitoring report /4/ and the corresponding ER sheet /16/ were found appropriate and complying with provisions prescribed in the registered monitoring plan/1/ of the respective revised accepted CPA-DDs/5/, PoA-DD/1/ and applied methodology/3/. </p> <p> The verification team affirms that an audit trail that contains the evidence and records that validated the stated figures were checked and found legitimate. </p>
Findings	None
Conclusion	<p>The verification team verified that</p> <ol style="list-style-type: none"> A complete set of data for the monitoring period was available for the monitoring period and the verification of each monitoring parameter is elaborated under Section E.3 of this report. The complete monitoring data is also presented in the corresponding ER calculations sheet /16/ of final Monitoring Report /4/. The information provided in the monitoring report was cross checked with other sources, wherever appropriate and available, and such information is also included under Section E.3 of this report. The calculations of baseline emissions as presented in the corresponding ER calculations sheet /16/ of final Monitoring Report /4/ were checked and found to be consistent with the formulae and methods described in the registered monitoring plan of each relevant CPA DDs/5/, revised accepted PoA DD/1/ and the applied methodology/3/. All assumptions used in the emission calculations were found appropriate and therefore justified Appropriate emission factors, IPCC default factors and other reference values have been correctly applied. This has also been elaborated under

	<p>Section E.3.4.1 of this report.</p> <p>f) No standardized baseline was prescribed in the revised accepted PoA DD/1/ and therefore it has not been applied.</p> <p>g) There is no pro-rate approach was applied in the current monitoring period as entire monitoring period falls into period that is after the end of first commitment period of Kyoto Protocol.</p>
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E.3.6.2. Calculation of project GHG emissions or actual net GHG removals by sinks

Means of verification	The PoA- DD/1/, revised accepted CPA-DDs/5/and applied monitoring methodologies does not prescribe any project emissions to be considered. The project emissions already accounted in the equation referred for calculation of emission reductions. The remote site visit and project design also did not reveal any potential source to be considered in this regard.
Findings	None
Conclusion	No project emissions were calculated, and the approach used is found to be correct.

E.3.6.3. Calculation of leakage GHG emissions

Means of verification	The revised accepted PoA-DD/1/, revised accepted CPA-DDs/5/ and applied monitoring methodology/3/ does not prescribe any leakage emissions to be considered. The review of the project design and interview of the CME representative during the remote site visit also did not reveal any potential source to be considered in this regard. However, the leakage factor of 0.95 has been considered for the calculation of baseline emissions and Bold has been multiplied by a net to gross adjustment factor to account for leakages.
Findings	None
Conclusion	No additional leakage emissions (other than what is already considered in baseline calculations) were required in accordance with the methodologies.

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

Means of verification	As discussed in the above sections, the entire emission reductions from the PoA were based on baseline emissions. The calculations presented in this regard in the final monitoring report and corresponding ER calculations sheet were found appropriate and complying with the provisions prescribed in the registered monitoring plan of revised accepted CPA DDs/5/, PoA DD/1/ and applied methodology/3/. The verification team confirms that an audit trail that contains the evidence and records that validated the stated figures were checked and found acceptable.
Findings	CAR#05 was raised and resolved.
Conclusion	<p>The verification team confirms that:</p> <ul style="list-style-type: none"> a) The complete data was available and is duly reported. b) As indicated above, the description with regard to cross-check of reported data is included under respective parameter (refer Section E.3.4.2 of this report); c) Appropriate methods and formulae for calculating baseline GHG emissions or baseline net GHG removals, project emissions and leakage emissions were followed. d) Appropriate emission factors, IPCC default factors and other reference values were correctly applied. e) There is no pro-rata approach was applied in the current monitoring period as entire monitoring period falls into period that is after the end of first commitment period of Kyoto Protocol. <p>The total number of ERs achieved during the current monitoring period is 385,267 tCO₂e.</p>

Title and UNFCCC reference number of the CPA	Baseline emissions or baseline net GHG removals by sinks (tCO ₂ e)	Project emissions or actual net GHG removals by sinks (tCO ₂ e)	Leakage (tCO ₂ e)	GHG emission reductions or net GHG removals by sinks (tCO ₂ e)		
				Amount achieved before 1 January 2013	Amount achieved from 1 January 2013	Amount achieved in the entire monitoring period
CCC PoA for distribution of ICS in developing countries (Myanmar): CPA 001 10471-P1-0001-CP1	65,200	0	0	0	65,200	65,200
CCC PoA for distribution of ICS in developing countries (Myanmar): CPA 002 10471-P1-0002-CP1	63,603	0	0	0	63,603	63,603
CCC PoA for distribution of ICS in developing countries (Myanmar): CPA 003 10471-P1-0003-CP1	63,434	0	0	0	63,434	63,434
CCC PoA for distribution of ICS in developing countries (Myanmar): CPA 004 10471-P1-0004-CP1	64,320	0	0	0	64,320	64,320
CCC PoA for distribution of ICS in developing countries (Myanmar): CPA 005 10471-P1-0005-CP1	64,673	0	0	0	64,673	64,673

CCC PoA for distribution of ICS in developing countries (Myanmar): CPA 006 10471-P1-0006-CP1	64,037	0	0	0	64,037	64,037
Total	385,267	0	0	0	385,267	385,267

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

Means of verification	<p>As verified and evident from the final Monitoring Report/4/ and corresponding ER calculations sheet/16/, the actual emission reductions achieved by 4 CPAs (10471-P1-0001-CP1,10471-P1-0004-CP1,10471-P1-0005-CP1,10471-P1-0006-CP1) that is included in the current monitoring period were found to be more than the estimated quantity in the revised accepted CPA DDs/5/ for the comparable period. The reason was found to be the value of $B_{y=1,new,i,j,survey}$. The default value of 1.18 tonnes/year was considered for parameter $B_{y=1,new,i,j,survey}$ for the calculation of ex-ante ERs. However, the actual value which was determined after the monitoring was found to be 1.392 tonnes/year. Another factor that led to the increase in the ERs is the high number of stoves operating during the year in these CPAs as compared to the estimated value. Thus, the achieved ERs for these CPAs were more than the ex-ante estimation.</p> <p>For the remaining 2 CPAs (10471-P1-0002-CP1 10471-P1-0003-CP1) the achieved ERs were found to be less than the estimated emission reductions, thus no justification was sought for these two. The overall achieved ERs for the PoA were found to be more than the estimated ERs, the reason for which is explained above.</p> <p>Please refer to the table below for the details related to estimated and achieved ERs CPA-wise.</p>
Findings	CAR#06 was raised and resolved
Conclusion	The actual emission reductions achieved in monitoring period is more than the estimated quantity of ERs for the same period due to the higher number of stoves operating during the year under 4 CPAs (10471-P1-0001-CP1,10471-P1-0004-CP1,10471-P1-0005-CP1,10471-P1-0006-CP1)as compared to the stated number in the revised accepted CPA-DDs/5/.The reason for increase is assessed in detail above. The justification provided by the CME was found to be sufficient and thus it was accepted by the verification team.

Title and UNFCCC reference number of the CPA	Actual values achieved by the CPAs during this monitoring period	Value estimated in ex ante calculation in the included CPA-DD(s)
CCC PoA for distribution of ICS in developing countries (Myanmar): CPA 001 10471-P1-0001-CP1	65,200	60,120
CCC PoA for distribution of ICS in developing countries (Myanmar): CPA 002 10471-P1-0002-CP1	63,603	64,774

CCC PoA for distribution of ICS in developing countries (Myanmar): CPA 003 10471-P1-0003-CP1	63,434	64,221
CCC PoA for distribution of ICS in developing countries (Myanmar): CPA 004 10471-P1-0004-CP1	64,320	60,799
CCC PoA for distribution of ICS in developing countries (Myanmar): CPA 005 10471-P1-0005-CP1	64,673	60,572
CCC PoA for distribution of ICS in developing countries (Myanmar): CPA 006 10471-P1-0006-CP1	64,037	60,327
Total	385,267	370,813

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

Means of verification	The achieved emission reduction was compared with the ex-ante estimated ERs and was found to be more than the ex-ante estimated ERs. The same has been assessed in detail under E.3.6.5. above.
Findings	None
Conclusion	The actual emission reductions achieved in monitoring period is more than the estimated quantity of ERs for the same period due to the higher number of stoves operating during the year under 4 CPAs (10471-P1-0001-CP1,10471-P1-0004-CP1,10471-P1-0005-CP1,10471-P1-0006-CP1)as compared to the stated number in the revised accepted CPA-DDs/5/. The reason for increase is discussed under section E.3.6.5. of this report. The justification provided by the CME was found to be sufficient and thus it was accepted by the verification team.

E.3.7. Assessment of reported sustainable development co-benefits

Means of verification	This section was not applicable as no such document was found to be developed and published on the UNFCCC CDM website by the CME. Thus, in-line to para 361(a) of the VVS for PoA Version 2.0 /20/ PP had not monitored the sustainable development co-benefits.
Findings	None
Conclusion	Not applicable as it was not monitored by CME.

E.3.8. Global stakeholder consultation

Means of verification	The monitoring report for the current monitoring period was published on 18/03/2021 for comment period 19/03/2021-03/04/2021
Findings	None
Conclusion	No comments were received during the comment period as checked from the UNFCCC project webpage/31/.

SECTION F. Internal quality control

A draft verification report prepared by verification team is reviewed by an independent technical review team (one or more members) to confirm whether all the internal procedures established and implemented by ESPL were duly complied with and such opinion/conclusion were reached in an objective manner that complies with the applicable CDM rules/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. During the technical review process, additional findings may be identified, or the closed findings may be opened, which needs to be satisfactorily resolved before the request for issuance is submitted to UNFCCC.

The independent technical reviewer may either approve the report as such or reject/return the same in such case providing the comments/findings/issues that needs to be resolved by the verification team. The decision taken by the Technical Reviewer is final and is authorized by the Managing Director on behalf of Earthood Services Private Limited.

SECTION G. Verification opinion

Earthood Services Private Limited (ESPL), contracted by Climate Change Center (the CME for the PoA), has performed the first independent verification of the emission reductions for the registered CDM PoA “The Project of CCC program of Activities (PoA) for Distribution of Improved Cookstoves (ICS) in Developing South and Southeast Asia Countries (Myanmar)” for the first monitoring period 31/08/2019 to 31/12/2020 (both days inclusive) as reported in the Monitoring Report (public) Version 01 dated 03/03/2021. The CME is responsible for the collection of data in accordance with the monitoring plan and the reporting of GHG emissions reductions from the project activity. This verification report is for the 10471-P1-0001-CP1 to 10471-P1-0006-CP1 which were included at the UNFCCC webpage at the end of the current monitoring period.

ESPL confirms that the monitoring system is in place and the emission reductions are calculated without material misstatements. This verification report has been prepared using the latest available template specified by UNFCCC and complies with the instructions to follow of CDM VVS-PoA Version 02. steps indicated under Section A of this report. The verification process has resulted in conclusion that the included CPA confirm to the revised accepted PoA DD as well as comply with applicable CDM rules and regulations and in accordance with applied monitoring methodologies, AMS II.G Version 09. As a result, it is confirmed that the emission reductions from the CDM PoA 10471 “The Project of CCC program of Activities (PoA) for Distribution of Improved Cookstoves (ICS) in Developing South and Southeast Asia Countries (Myanmar)” are correctly reported in the Monitoring Report (final) Version 1.3 dated 27/07/2021 and corresponding ER sheets for the monitoring period 31/08/2019 to 31/12/2020 (both days inclusive) amount as 385,267 tCO_{2e}. Therefore, this will be submitted as part of request for issuance as per CDM PCP Version 02.

SECTION H. Certification statement

The verification approach is based on the understanding of the risks associated with reporting of GHG emission data and the controls in place to mitigate these. ESPL planned and performed the verification by obtaining evidence and other information and explanations that ESPL considered necessary to give reasonable assurance that reported GHG emission reductions are fairly stated.

In our opinion the GHG emissions reductions reported for the PoA for the monitoring period 31/08/2019 to 31/12/2020 (both days inclusive) are fairly stated in the Monitoring Report (final) Version 1.3 dated 27/07/2021.

ESPL, based on outcome of verification activities, certify in writing that, during the monitoring period 31/08/2019 to 31/12/2020 (both days inclusive), the registered CDM PoA “The Project of CCC program of Activities (PoA) for Distribution of Improved Cookstoves (ICS) in Developing South and Southeast Asia Countries (Myanmar)” and the included 10471-P1-0001-CP1 to 10471-P1-0006-CP1 in the registered CDM PoA achieved the verified amount of 385,267 tCO_{2e} reductions in anthropogenic emissions by sources of greenhouse gases that would not have occurred in the absence of the CPA.

The verified amount of emission reductions is stated below as per CPA and as per commitment period;

CPA (included in this request)	Emission Reductions (Amount) in this monitoring period (in tCO _{2e})	
	Up to 31/12/2012 (1st commitment period)	01/01/2013 onwards
10471-P1-0001-CP1	-	65,200
10471-P1-0002-CP1	-	63,603
10471-P1-0003-CP1	-	63,434
10471-P1-0004-CP1	-	64,320
10471-P1-0005-CP1	-	64,673
10471-P1-0006-CP1	-	64,037
Total	-	385,267 tCO_{2e}

Appendix 1. Abbreviations

Abbreviations	Full texts
AQL	Acceptable Quality Level
CAR	Corrective Action Request
CDM	Clean Development Mechanism
CDM PCP	Clean Development Mechanism Project Cycle Procedure
CDM PS	Clean Development Mechanism Project Standard
CDM VVS	Clean Development Mechanism Validation and Verification Standard
CER	Certified Emission Reduction
CL	Clarification Request
CME	Coordinating or Managing Entity
CPA	Component Project Activity
CP	Crediting period
DOE	Designated Operational Entity
DNA	Designated National Authority
EB	Executive Board
ESPL	Earthood Services Private Limited
FAR	Forward Action Request
GHG	Greenhouse Gas(es)
ICS	Improved Cook Stove
IPCC	Intergovernmental Panel on Climate Change
POA	Programme of Activity
PO	Partner Organization
PSU	Primary Sampling Unit
RMP	Registered Monitoring Plan
TA	Technical Area (with in Sectoral Scope)
TR	Technical Reviewer
VVS	Validation and Verification Standard
UNFCCC	United Nations Framework Convention on Climate Change
UQL	Unacceptable Quality Level
WBT	Water Boiling Test

Appendix 2. Competence of team members and technical reviewers

Competence Statement	
Name	Deepika Mahala
Country	India
Education	M. Sc. (Environmental Management), GGSIP University B.Sc. Hons. (Chemistry), Sri Venkateshwar College, DU
Experience	5 Years +
Field	Climate Change
Approved Roles	
Team Leader	YES
Validator	YES
Verifier	YES

Methodology Expert	ACM0002, AMS.I.D., AMS.I.A, AMS.III.AV, AMS.II.G		
Local expert	YES (India)		
Financial Expert	NO		
Technical Reviewer	YES		
TA Expert	YES (TA 1.2 & TA 3.1)		
Reviewed by	Shreya Garg	Date	15/04/2021
Approved by	Anshika Gupta	Date	15/04/2021

Competence Statement			
Name	Vaishali Vatsa		
Education	M.Sc. (Environmental Studies and Resource Management), TERI University		
Experience	4 months		
Field	Climate Change		
Approved Roles			
Team Leader	NO		
Validator	Yes		
Verifier	Yes		
Methodology Expert	NO		
Local expert	NO		
Financial Expert	NO		
Technical Reviewer	NO		
TA Expert (X.X)	NO		
Trainee	NO		
Reviewed by	Shreya Garg	Date	30/12/2019
Approved by	Anshika Gupta	Date	02/01/2020

Competence Statement			
Name	Ye Thura		
Country	Myanmar		
Education	Bachelor's in Agricultural Science		
Experience	17+ years		
Field	Fertilizers Industry		
Approved Roles			
Team Leader	No		
Validator	No		
Verifier	No		
Methodology Expert	No		
Local expert	Yes (Myanmar)		
Financial Expert	No		
Technical Reviewer	No		
TA Expert	No		
Reviewed by	Shreya Garg	Date	14/08/2018
Approved by	Anshika Gupta	Date	14/08/2018

Competence Statement			
Name	Shreya Garg		
Country	India		
Education	M.Sc. (Climate Science & Policy), TERI University		
Experience	6 Years +		
Field	Climate Change		
Approved Roles			
Team Leader	YES		
Validator	YES		
Verifier	YES		
Methodology Expert	AMS.I.A., AMS.I.C., AMS.I.D., AMS.I.F., AMS.II.D., AMS.II.G., AMS.II.J., AMS.III.AV., ACM0002, ACM0012		
Local expert	YES (India)		
Financial Expert	NO		
Technical Reviewer	YES		
TA Expert	YES (TA 1.2, TA 3.1)		
Reviewed by	Abhishek Mahawar	Date	01/03/2018
Approved by	Ashok Gautam	Date	01/03/2018

Appendix 3. Documents reviewed or referenced

No.	Author	Title	References to the document	Provider
1	Climate change Centre	Revised accepted PoA-DD	Version: 06.13 Dated: 25/01/2021	Others
2	Climate change Centre	Validation report for registered PoA DD	Version: 3.2 Dated: 03/05/2019	Others
3	UNFCCC	AMS-II.G. Energy efficiency measures in thermal applications of non-renewable biomass	Version 9.0	Others
4	Climate change Centre	Monitoring Report (final)	Version 1.3 Dated 27/07/2021	CME
5	UNFCCC	Revised accepted: CPA-DD (10471-P1-0001-CP1) CPA-DD (10471-P1-0002-CP1) CPA-DD (10471-P1-0003-CP1) CPA-DD (10471-P1-0004-CP1) CPA-DD (10471-P1-0005-CP1) CPA-DD (10471-P1-0006-CP1)	Version: 8.2, Version:01.10 Version: 01.10 Version: 01.10 Version: 01.10 Version: 01.10 Dated: 25/01/2021	Others
6	UNFCCC	CDM-PoA-MR-FORM	Version 4.0	Others
7	Climate change	Agreement between CME and CPA-implementer (Dry Zone Greening	March,2018	CME

	Centre	Department which will act as CPA implementer)		
8	Climate change Centre	Agreement with Myanmar ceramic Society to confirm the responsibility of the local stove manufacturer	25/04/2018	CME
9	Myanmar Ceramic Society	Technical manufacturer specification of E-free cookstoves	-	CME
10	Climate change Centre	WBT Sheets	February,2021	CME
11	Climate change Centre	CPA Distribution Database 10471-P1-0001-CP1 10471-P1-0002-CP1 10471-P1-0003-CP1 10471-P1-0004-CP1 10471-P1-0005-CP1 10471-P1-0006-CP1	Various	CME
12	Climate change Centre	Training Records	Various	CME
13	Climate change Centre	Monitoring Survey forms	01/09/2020-15/09/2020	CME
14	Climate change Centre	Monitoring Survey Sheet	01/09/2020-15/09/2020	CME
15	Climate change Centre	Sample Size calculation sheet	-	CME
16	Climate change Centre	ER Calculation Sheet	Version 1.3 Dated: 25/08/2021	CME
17	OTS Private Limited	Calibration Certificates - Thermometer - Thermocouple - Scale - Moisture meter - Electronic weighing scale	Dated: 27/08/2020	CME
18	UNFCCC	CDM guidelines for Sampling and surveys for CDM project activities and programmes of activities	Version 4.0	Others
19	UNFCCC	Standard for Sampling and surveys for CDM project activities and programmes of activities	Version 8.0	Others
20	UNFCCC	VVS for PoA	Version 2.0	Others
21	UNFCCC	PS for PoA	Version 2.0	Others
22	UNFCCC	PCP for PoA	Version 2.0	Others
23	Climate change Centre	Conformity letters for CPAs	Various	CME
24	Worldometer	https://www.worldometers.info/coronavirus/countries-where-coronavirus-has-spread/	15/08/2021	Others
25	ESPL	OSV Exemption Form	Dated: 19/05/2021	Others
26	Climate change centre	ERPA	Dated: June,2018	CME
27	UNFCCC	EB announcement https://cdm.unfccc.int/newsroom/latest-news/releases/2020/01041_index.html	23/06/2020	Other
28	UNFCCC	EB-108 Meeting report	Version: 01.0	Others

		Link: https://cdm.unfccc.int/filestorage/X/B/L/XBL3H024J87AVRZP19YUO6IGEDSMQT/eb108%20meeting%20report.pdf?t=UEd8cXo1aTg5fDC2saHig_-nqiSYfbDbkZfD		
29	UNFCCC	https://cdm.unfccc.int/newsroom/latest-news/releases/2020/01041_index.html	-	Other
30	UNFCCC	PRC-10471-001 Link: https://cdm.unfccc.int/PRCContainer/D/B/prcp723267294/view	-	Other
31	UNFCCC	PoA-webpage: https://cdm.unfccc.int/ProgrammeOfActivities/poa_db/LGABR9Q0JYH68VN5WI7MUXTEKDCSOP/view	-	Other
32	UNFCCC	ASB0049 Link: https://cdm.unfccc.int/filestorage/e/x/t/extfile-20201224094626177-ASB0049-2020_TSB0015.pdf/ASB0049-2020_TSB0015.pdf?t=enZ8cXk0aHF3fDB94vMHZqXDAWn06RIgFC38	Version 1.0	Other
33	UNFCCC	Standard for Sampling and surveys for CDM project activities and programmes of activities	Version 9.0	Others
34	UNFCCC	SSC WG 33- Annex 8 https://cdm.unfccc.int/Panels/ssc_wg/meetings/033/ssc_033_an08.pdf	-	Others

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

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

FAR ID	01	Section no.	E.2	Date : DD/MM/YYYY
Description of FAR				
NA				
Project participant response				Date : DD/MM/YYYY
NA				
Documentation provided by project participant				
NA				
DOE assessment				Date: DD/MM/YYYY
NA				

Table 2. CL from this verification

CL ID	01	Section no.	E.3.4.2.	Date : 18/05/2021
Description of CL				
For parameter $N_{y,l,j}$, CME shall explain how vintage of different stoves have been taken under consideration.				
Project participant response				Date : 21/05/2021
For parameter $N_{y,l,j}$, the number of stoves still operating have been monitored based on the sampling survey. Based on the survey result, we have counted cook stoves that are actually operating.				
Documentation provided by project participant				

DOE assessment	Date: 17/06/2021
The CME shall explain how the age has been taken under consideration for sampling.	
Project participant response	Date : 27/07/2021
<p>All cook stoves distributed from December 19, 2018, to September 30, 2019, were included in the monitoring report as one batch. When the sampling was conducted in September 2020, only vintage year 1 of the batch existed based on the last distribution date. Thus, we only considered the vintage year 1 for the sampling.</p> <p>Regarding the Batch A and B, We divided one batch as we defined as above into Batch A and Batch B to manage the cook stove distribution schedule according to the production schedule. Batch A and B are divided for internal reason, and it is true that only one batch is included in this monitoring report. We submitted an updated database document integrating Batch A and B for avoiding confusion in communication.</p>	
Documentation provided by project participant	
Conformity letter to confirm the first and last distribution date of cook stoves.	
DOE assessment	Date: 12/08/2021
<p>CME has considered all the stoves distributed from December,2018 to September,2019 as one batch. The consideration of only vintage year 1 of the batch was found to be acceptable as the last stove was distributed on 30/09/2019 and the Sampling was conducted in September,2020.</p> <p>The first and last date of stove distribution was confirmed from the conformity letters provided by the CME.</p> <p>CL opened</p> <p>The lifetime of the stove is 2 years and the stove installation stated on 19/12/2018. This implies that few stoves would have ended their lifetime in the current MP. Give an explanation on what measures were adopted, were the stoves replaced etc in such cases.</p>	
Project participant response	Date : 25/08/2021
<p>We revised the ER calculation in line with considering the lifetime of the stoves. Based on the distribution date, we excluded the emission reduction from the stoves which ended their 2-year lifetime during the current monitoring period.</p> <p>We found the number of the stoves that are used without being replaced even after the end of their lifespan and excluded the ER amounts occurred from the time when the life of the stove passed two years until December 31 2020, the last date of the monitoring period of this report from using of the corresponding stoves.</p> <p>We provided the revised ER calculation sheet and a sample conformity letter containing the information, such as the distribution date and replacement date of the stove to better understand the number of stoves we used for calculation.</p>	
Documentation provided by project participant	
<ol style="list-style-type: none"> 1. Revised MR ver. 1.3 2. Revised ER calculation sheet ver. 1.3 3. Sample conformity letters 	
DOE assessment	Date: 01/09/2021
<p>The revised CPA-wise distribution database was reviewed by the DOE and it was observed that CME has now clearly listed down the stoves which got expired within the current monitoring period i.e., whose lifetime ended on or before 31/12/2020. The ER calculation has been revised as per the updated number of stoves. The approach followed by CME was found to be acceptable as this accounted ERs for stoves which are within the 2-year life-time of the E-free stove.</p> <p>Thus, CL#01 stands closed.</p>	

Table 3. CAR from this verification

CAR ID	01	Section no.	E.1.1.	Date : 18/05/2021
Description of CAR				
1. The PoA DD version referred on page 1 of the MR and under section A.1.2. of the MR is not the				

latest.

2. The template version used for MR is not the latest.
3. CME shall add reference under section A.1.1. of the MR
4. As per the template guideline, indicate whether a sampling approach was applied for monitoring of a group of CPAs, or each CPA covered in this monitoring report under section B.1. of the MR
5. CME shall provide the approval dates and reference numbers of the post-registration changes under section B.2.1. and C.3.2. of the MR

Project participant response	Date : 25/06/2021
1~2. We applied the lasted version of the PoA DD version and used the lasted template version for MR report	
3~5. We have updated information and applied it to the MR report based on the feedback.	
Documentation provided by project participant	
-	
DOE assessment	Date: 17/06/2021
<ol style="list-style-type: none"> 1. CME has now mentioned the latest version of PoA-DD i.e., version 06.13 available on PoA webpage. 2. CME has now revised the MR template and used the latest template available on UN webpage. 3. CME has now added the reference number under section A.1.1. However, the reference number of Generic CPA mentioned under this section is not in-line to the one mentioned in the CPA-DD on page 12 4. No information related to sampling approach could be found under section B.1 of MR (Version 1.1) 5. In-line to the template guidelines only PRC reference numbers have been added to the respective section. However, no approval dates could be found. 	
Project participant response	Date : 27/07/2021
<ol style="list-style-type: none"> 1. We applied the lasted version of the PoA-DD version (version 06.13) available on PoA webpage. 2. We revised the MR template and used the latest version on the UN webpage 2. We added reference under section A.1.1 of the MR based on the CPA-DD on page 12 3. We inserted sentences that stated a sampling approach was applied for monitoring of a group of CPAs covered in this monitoring report under section B.1. 4. We provided the approval date and reference number of the post-registration changes under sections B.2.1 and C.3.2 of the report 	
Documentation provided by project participant	
1. Revised MR, version 1.2, dated July 27, 2021	
DOE assessment	Date: 02/08/2021
<ol style="list-style-type: none"> 3. CME has now added the reference number of Generic CPA mentioned under section A.1.1 in-line to the one mentioned in the CPA-DD on page 12. 4. CME has now added information related to sampling approach under section B.1 of MR (Version 1.1) 5. CME has now added the approval date and reference number of the post-registration changes under sections B.2.1 and C.3.2 of the report. <p>Thus, CAR#01 stands closed.</p>	

CAR ID	02	Section no.	E.3.1.	Date : 18/05/2021
Description of CAR				
<ol style="list-style-type: none"> 1. The CPA distribution Database does not list down total number of members in the HH and age and gender of the end user. Please clarify how is it meeting the recording keeping system for each CPA under PoA. 				
Project participant response				Date : 21/05/2021
<p>For record-keeping and management for the project, all data is electronically managed. We have selected major information from the conformity letter that helps CME and CI can distinguish the project device including serial number, username, address, and contact information, and entered it into an Excel file for management while minimizing errors through double-check.</p>				

Documentation provided by project participant	
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DOE assessment	Date: 17/06/2021
Registered PoA-DD page 6 clearly mentions that following details will be recorded while conducting the ICS distribution:	
<ul style="list-style-type: none"> • Name of the user; • Address and contact number; • Age and gender; • Installation date; and • Number of people in the household. 	
The number of HHs was found to be correctly reported for all the end users. However, CME shall explain why information related Age and Gender of the end-user has been removed. (open)	
Project participant response	Date : 27/07/2021
Age and gender have been not added to reduce the size of the monitoring documents. They are noted in the conformity letter. We provided the conformity letter for all households during the remote site visit. We did not delete/remove age and gender-related information. We simply did not insert the information to the monitoring document for the efficiency of monitoring document management.	
Documentation provided by project participant	
Revised MR, version 1.2, dated July 27, 2021	
DOE assessment	Date: 02/08/2021
CME has recorded the age and gender details related to the end-user in-line to the PoA-DD requirements and the same was confirmed from the conformity letter provided. The same was not mentioned in the monitoring sheet in-order to reduce the size of the file and was found to be acceptable as all the details related to the end-user has been confirmed.	
Thus,CAR#02 stands closed.	

CAR ID	03	Section no.	E.3.4.2., E.3.4.3.	Date : 18/05/2021
Description of CAR				
<ol style="list-style-type: none"> 1. All the parameter tables have filled incorrectly. Please see the comments in the MR section E.2. 2. CME shall add monitoring survey date under section E.3. of the MR 				
Project participant response				Date : 21/05/2021
1~2. We corrected information and data based on the comments accordingly.				
Documentation provided by project participant				
-				
DOE assessment				Date: 17/06/2021
<ol style="list-style-type: none"> 1. There are still few corrections required in the parameter tables. Please refer to the highlighted comments under section E.2 of MR. 2. The monitoring survey date could not be found under section E.3 of the MR (Version 1.1). 				
Project participant response				Date : 27/07/2021
<ol style="list-style-type: none"> 1. We stated either measured or calculated based on the comments. For other factors, we provided the evidence as you requested. 2. We inserted the monitoring survey date on page 27 				
Documentation provided by project participant				
Revised MR, version 1.2, dated July 27, 2021				
DOE assessment				Date: 02/08/2021
<ol style="list-style-type: none"> 1. The parameter table under section E.2 of the MR was found to be correctly filled as per the template guidelines. 2. The monitoring survey dates were found to be mentioned under section E.3 of the MR (Version 1.2). 				
Thus,CAR#03 stands closed.				

CAR ID	04	Section no.	E.2.1., E.3.4.2.	Date : 18/05/2021
Description of CAR				

1. Since the stove distribution started in 2018, CME shall explain how the batches have been formed.
2. CME shall determine the date of commissioning of project device and date of commissioning of batches in line with the registered CPA DD and mention under section E.2. CME shall also provide conformity to confirm the dates.

Project participant response	Date : 21/05/2021
<p>1~2. When distributing the cook stove, each user's signature was received in a conformity letter containing the distribution date certifying that the cook stove was received. Therefore, the vintage was determined for each stove based on the date written on the conformity letter.</p> <p>2. The date of commissioning of the project device was determined based on the date of the conformity letter in each CPA. The ICS users signed the letter at the time of the ICS handover. All letters have been managed according to a record-keeping system for each CPA under the Pota.</p>	
Documentation provided by project participant	
Revised MR, version 1.2, dated July 27, 2021	
DOE assessment	Date: 17/06/2021
<ol style="list-style-type: none"> 1. CME has claimed ERs batch wise. However, it is not clear how the batches are formed. Please check clarification SSC 759. 2. The start date of commissioning has been said to be 30/09/2019, however, the ERs are being claimed from Aug 2018. Please check SSC 759 and revise the date in the MR. (open) 	
Project participant response	Date : 27/07/2021
<ol style="list-style-type: none"> 1. We formed the batch based on the definition from AMS-II.G version 09.0 methodology. It defined batch as the population of the device of the same type commissioned at a certain calendar year. We started our distribution from 19/12/2018 till 30/09/2019. All stoves that were distributed during the period of CPA 1-6 were defined as one batch. 2. We confirmed that there is no issue with the date of commissioning date and ERs accounting. We started the distribution from 19/12/2018, thus even if the commissioning date is 30/09/2019 and ER accounting starts on 31/08/2019, there is no problem based on the methodology. 	
Documentation provided by project participant	
Revised MR, version 1.2, dated July 27, 2021	
DOE assessment	Date: 02/08/2021
<p>1. CME has defined batch in-line to the applied methodology and the batch formation by the CME was found to be acceptable as they have considered all the stoves distributed from 19/12/2018 till 30/09/2019 in one batch as this was found to be in-line with the requirement stated in the clarification SSC 759.</p> <p>2. As there has been one batch formed by the PP thus in-line to the clarification SSC 759, as there is just one batch in the current MP thus the ERs for this batch has been calculated by the PP in-line to the applied methodology.</p> <p>Thus, CAR#04 stands closed.</p>	

CAR ID	05	Section no.	E.3.6.4.	Date : 18/05/2021
Description of CAR				
<ol style="list-style-type: none"> 1. Leakage factor has not been considered in the emission reductions. 2. Under section F, the equation has not been applied in line with the revised approved CPA DD. Equation for the calculation of $ER_{y,i,j}$ and $By_{savings,i,j}$ were found to be missing. Moreover, the CME has not added the sample calculations under this section. 				
Project participant response				Date : 21/05/2021
<ol style="list-style-type: none"> 1. We applied the leakage factor in the emission reduction 2. We updated equations and added the sample calculation under the section F 				
Documentation provided by project participant				
1. 210501_MR1_ER calculation_Ver.1.1.xlsx (ER Calculation document)				
DOE assessment				Date: 17/06/2021

1. CME has now accounted the leakage factor in calculating the emission reductions.
2. CME has now mentioned the equation for calculation of $ER_{y,i,j}$ and $By_{savings,i,j}$ under section F.1 of the MR (Version 1.1) in-line to the revised approved CPA-DD.
Thus, CAR stands closed.

CAR ID	06	Section no.	E.3.6.5.	Date : 17/06/2021
Description of CAR				
<p>Section F.6 of MR states that the reason for increase in achieved ERs is the value of $B_{y=1,new,i,j,survey}$ assumed in ex-ante calculation(i.e., 1.18).</p> <p>However, it is not clear on what basis this value was considered or assumed.</p>				
Project participant response				Date : 25/06/2021
<p>We inserted the source of this value based on the PoA-DD of the project. The estimated value, which is 1.18, was calculated using the average wood fuel consumption of households in the Asia region suggested in the CDM-SSC WG Thirty-third meeting Report Annex 8. Please see the below equation which is stated on PoA-</p> $B_{y=1,new,i,j,survey} = B_{old,i,j} \times \left(1 - \frac{\eta_{old,i,j}}{\eta_{new,i,j}}\right) + \left(\frac{\eta_{new,i,j}}{\eta_{old,i,j}} - 1\right)$ $= 3.29 \times \left(1 - \frac{0.1}{0.28}\right) + \left(\frac{0.28}{0.1} - 1\right) = 1.18$ <p>DD page 24 for more details.</p>				
Documentation provided by project participant				
<p>1. CDM-SSC WG Thirty-third meeting Report Annex 8</p> <p>2. PoA-DD version 06.13 (PoA 10471)</p>				
DOE assessment				Date: 02/08/2021
<p>The average wood fuel consumption of households in Asia region mentioned as 3.29 was found to be acceptable as this is a default value mentioned in CDM-SSC WG Thirty-third meeting Report Annex 8 and further the estimated value of the parameter has been calculated in-line to the equation 6 in the applied methodology. Thus, the finding stands closed.</p>				

CAR ID	07	Section No.	E.3.4.3	Date : 23/08/2021
Description of CAR				
<p>1. cell C37 of 'Stratified-Mean' sheet of 'CPA001_006_Sampling_Calculator_n'. the population considered is not consistent to rest of the cells.</p> <p>2. MR page 28 says 10% oversampling has been done, while the decided sample size is much higher.</p> <p>3. As per the PoA DD the required information also includes 'Age and gender; Installation date; and Number of people in the household.'</p>				
Project participant response				Date : 25/08/2021
<p>1. We revised the population number in the cell C37 to 218,955, which is the total number of distributed cookstove.</p> <p>2. We corrected oversampling per cent reflecting the actual per cent we applied.</p> <p>3. We added Age and gender; Installation date, and Number of people in the household in the MR report. We also added sentences in the report explaining why gender and age, and number of household members were not added to the monitoring documents.</p>				
Documentation provided by project participant				
<p>1. Revised CPA001_006_Sampling_Calculator_n</p> <p>2. Revised MR ver. 1.3</p>				
DOE assessment				Date: 01/09/2021

1. CME has now revised the population number to 218,955 (which is the total number of distributed cookstove) in the cell C37 of the Sampling calculator sheet.
2. CME has now corrected the oversampling percent for parameter $N_{y,l,j}$ and $B_{y=1,new,l,j,survey}$ to 15% which was found to be acceptable as the actual number of samples were much higher than the calculated samples.
3. CME has now included details required to be collected in the distribution database. The list now includes Age and gender; Installation date, and Number of people in the household in-line to section B of the PoA-DD.

Thus, CAR#07 stands closed.

Table 4. FAR from this verification

FAR ID	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

e.g., there is no FAR from this verification.

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Document information

<i>Version</i>	<i>Date</i>	<i>Description</i>
04.0	6 April 2021	Revision to: <ul style="list-style-type: none"> • Reflect the “Clarification: Regulatory requirements under temporary measures for post-2020 cases” (CDM-EB109-A01-CLAR).
03.0	31 May 2019	Revision to: <ul style="list-style-type: none"> • Ensure consistency with version 02.0 of the “CDM validation and verification standard for programmes of activities” (CDM-EB93-A08-STAN); • Make structural and editorial improvements.
02.0	29 December 2017	Revision to align with the requirements of the “CDM validation and verification standard for programme of activities” (version 01.0).
01.0	5 June 2015	Initial publication.
Decision Class: Regulatory Document Type: Form Business Function: Issuance Keywords: programme of activities, verifying and certifying		