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TEMPLATE

MONITORING REPORT

PUBLICATION DATE 14.10.2020

VERSION v. 1.1

RELATED SUPPORT – **TEMPLATE GUIDE Monitoring Report v. 1.1**

This document contains the following Sections

Key Project Information

SECTION A - Description of project

SECTION B - Implementation of project

SECTION C - Description of monitoring system applied by the project

Q - Data and parameters

SECTION E - Calculation of SDG Impacts

SECTION F - Safeguards Reporting

SECTION G - Stakeholder inputs and legal disputes

KEY PROJECT INFORMATION

Programme of Activity Information – (delete below table if N/A)

GS ID of Programme	GS 1729
Title of Programme	Myanmar Stoves Campaign
Version of POA-DD applicable to this monitoring report	4.0
Name and GS ID of fully Validated CPA/VPAs (i.e. non compliance check)	<p>GS1729 Myanmar Stoves Campaign - Soneva in Myanmar – VPA No. 007. GS ID – GS 6129</p> <p>GS1729 Myanmar Stoves Campaign - Soneva in Myanmar – VPA No. 008. GS ID – GS 6338</p> <p>GS1729 Myanmar Stoves Campaign - Soneva in Myanmar – VPA No. 009. GS ID – GS 6599</p> <p>GS1729 Myanmar Stoves Campaign - Soneva in Myanmar – VPA No. 010. GS ID – GS 6600</p> <p>GS1729 Myanmar Stoves Campaign - Soneva in Myanmar – VPA No. 011. GS ID – GS 6861</p> <p>GS1729 Myanmar Stoves Campaign - Soneva in Myanmar – VPA No. 012. GS ID – GS 7343</p> <p>GS1729 Myanmar Stoves Campaign - Soneva in Myanmar – VPA No. 013. GS ID – GS 7394</p> <p>GS1729 Myanmar Stoves Campaign - Soneva in Myanmar – VPA No. 014. GS ID – GS 7465</p> <p>GS1729 Myanmar Stoves Campaign - Soneva in Myanmar – VPA No. 015. GS ID – GS 7512</p> <p>GS1729 Myanmar Stoves Campaign - Soneva in Myanmar – VPA No. 016. GS ID – GS 7539</p>

Key Project Information

GS ID (s) of Project (s)	GS 6599
Title of the project (s) covered by monitoring report	GS1729 Myanmar Stoves Campaign - Soneva in Myanmar – VPA No. 009
Version number of the PDD/VPA-DD (s) applicable to this monitoring report	5.0
Version number of the monitoring report	3.0

Completion date of the monitoring report	26/05/2021
Date of project design certification	06/12/2018
Date of Last Annual Report	18/03/2020
Monitoring period number	3
Duration of this monitoring period	01/02/2020 - 31/01/2021
Project Representative	Mr. Arnfinn Oines Soneva Foundation
Host Country	Republic of the Union of Myanmar
Activity Requirements applied	<input checked="" type="checkbox"/> Community Services Activities <input type="checkbox"/> Renewable Energy Activities <input type="checkbox"/> Land Use and Forestry Activities/Risks & Capacities <input type="checkbox"/> N/A
Methodology (ies) applied and version number	The Gold Standard Simplified Methodology for Efficient Cookstoves, Version 01, February 2013.
Product Requirements applied	<input checked="" type="checkbox"/> GHG Emissions Reduction & Sequestration <input type="checkbox"/> Renewable Energy Label <input type="checkbox"/> N/A

Table 1 - Sustainable Development Contributions Achieved

Sustainable Development Goals Targeted	SDG Impact	Amount Achieved	Units/ Products
SDG 13: Take urgent action to combat climate change and its impacts	Emissions Reductions	4858	VERs
SDG 13: Take urgent action to combat climate change and its impacts	Improving education, awareness-raising, and human and institutional capacity on climate change, mitigation, impact reduction and early warning.	1775	People sensitized and trained

SDG 3: Ensure healthy lives and promote well-being for all ages	Improvement of health and safety by reducing the number of mortality rate attributed to household and ambient air pollution.	4413	People
SDG 7: Ensure access to affordable, reliable, sustainable and modern energy for all	Improvement in energy efficiency in cooking practices.	914	Households
SDG 8: Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all	Informal job creation in non-agricultural sector	64	Informal jobs created

Table 2 – Product Vintages

Start Dates	End Dates	VERs
01/02/2020	31/12/2020	4453
01/01/2021	31/01/2021	405

SECTION A. DESCRIPTION OF PROJECT

A.1. General description of project

Myanmar Stoves Campaign aims to ensure the use of carbon finance to support the distribution and maintenance of domestic and non-domestic Fuel-Efficient Stoves (FES) through local implementation partner(s) (IP) in the Republic of the Union of Myanmar.

The Myanmar Stoves Campaign is a programme of the Soneva Foundation and the first Gold Standard certified carbon project in Myanmar. This project activity is implemented

by three actors, which are the Soneva Foundation, Mercy Corps and Local Vendors (Sales Agents) in each of the targeted project villages under this VPA.



Myanmar Stoves Campaign was started in September 2013 and currently, and since then, as of December 2020, the project has covered more than 1000 villages in central part of Myanmar. The co-ordinated action by the three actors in this project has been successful in distributing over 30,000 fuel efficient stoves which have improved the lives of more than 150,000 people.

The stoves distributed are the Envirofit SuperSaver GL (Earlier known as M-5000). Each household received at least one stove. There are two methods of payments which are lump sum (15000 MMK for lump sum payment) and instalment (17000 MMK for five (5) months instalment) payments. Instalment is an excellent method for some families who have financial hardship and couldn't afford lump sum payment.

Selected FES model for this VPA:

- Envirofit SuperSaver GL (Earlier known as M-5000), launched in 2011, is the successor model of the G-3300 and is produced in China, India and Kenya
- Product weight 4.2kg
- Size (in cm): 28x26.5x26.5
- CO2 emission reduction compared to three stone fire of 66%
- Wood use reduction compared to three stone fire of 66%
- Thermal efficiency of 29.7%
- Manufacturer guarantee of 2 years on outside and 5 years on the inside parts
- Estimated product life of 5 years

Source: M5000 (SuperSaver GL) manufacturer website ([Link](#))

Envirofit SuperSaver GL had been selected as suitable product for local users based on the inputs from local communities and various stakeholders after they were consulted through demonstration and field tests. This followed with the stoves being distributed to the households in targeted villages.

This intervention has helped the local households to smoothly transition to a new FES stove from being dependent on the old three stone fires. The user experience and benefits has been highly positive and encouraging towards this modern technology. In addition to this, this project has successfully demonstrated the contribution in catalyzing the socio-economic development of these communities by having a positive impact on a range of indicators. There is an increasing awareness among the users in targeted villages and the nearby ones on the immediate and long term environmental and economic benefits coming from this project, which is helping in higher rates of adoption, all of which is helping the Myanmar Stoves Campaign to positively impact the lives of the rural under-served in a sustainable and environmentally friendly way.

This VPA consist of 1603 stoves, which are eligible for crediting as per the methodology rules, following the corrections from previous 2 years of verification, and have been applied for crediting.

Date of first stove sale & start date of the project activity = 01/12/2017

Start date of crediting period = 01/02/2018

Current monitoring exercise performed on: 22/02/2021 to 28/02/2021, results to be applied to the current (third) monitoring period of: 01/02/2020 to 31/01/2021

A.2. Location of project

The geographic location of the project activity is 20°33’07.28N and 95°47’51.08E. Stoves distributed under VPA – 009 are majorly in the villages of, which are clearly identifiable and can be distinguished from the other VPAs.

List of Villages (Major, Not All) Included in the VPA 009					
Sar Taing	Shin Hla South	Ywar Lin	Hlay Wun	Pauk Taw	Nat Gyi Sin
Min Kaing	Shin Hla Middle	Be Seik	Let Pan Ngu	No (11) Ward	Nat Gyi Sin
Ywar Thar Yar	Ywar Lin	Bu Kyun (East)	Sit Say Chaung	Tar Myauk	Aye Kyun
Ma Gyi Kan	Pwe Sar Kone	Bu Kyun (North)	Thar Poe	War Yon Khon	Auk Inn

Sa Khan Kan	Po Wa (North)	Bu Kyun (South)	Thin Ga Ton	Hin Thar Kone	Mar Ya Bin
Mar Ya Bin	Sa Kyin	Htein Chaung	Nwar Chan Kone	Hin Thar Ywar Thit	Taw Pu
Thin Ga Ton	Kauk Yoe Pon	Hpa Ye Kyun	Myit Laung	Ma Yoe Kone	Ywar Tan Shey

A.3. Reference of applied methodology

The Gold Standard Simplified Methodology for Efficient Cookstoves, Version 01, February 2013.

A.4. Crediting period of project

Start date of crediting period = 01/12/2017, 5 Years, renewable twice (15 years in total)

SECTION B. IMPLEMENTATION OF PROJECT

B.1. Description of implemented project

In VPA 009, the total number of stoves distributed, which are eligible for crediting are 1603. This VPA particularly focused on expanding the project and distributing the fuel-efficient cookstoves mostly in the regions which come under the central dry zone of Myanmar. The project employs a model where local women and men are selected and trained for the role of local sale agents/local vendors for the marketing, distribution, sales and after-sales of the stoves. These local sale agents earn a commission on the sales they make. In addition to the financial incentive, the local sale agents significantly benefit from learning new skills and knowledge and building confidence via the training and capacity building programs. A total of 64 sale agents were selected and trained between the start and end dates of VPA 009. The sale agents also act as the first point of contact for the stove users in the event of any grievances and after-sale service requirements. This is then escalated to the Mercy Corps team who looks into stove repairs/replacements.

The project is implemented and is currently under annual monitoring. For the reported monitoring period, 57% of the users have been reported to use the improved cookstoves. There have been no major deviations in this VPA as per the approved project design. The VPA still maintains adherence to the approved project design, and this VPA has been implemented as per the original plan as per the VPA-DD

B.1.1. Forward Action Requests

<p>FAR1: In line with the methodology, the sample selection shall be random and hence PP shall use random sample generator for the next verification.</p>	<p>PP has used random generator tool in the excel sheet to choose villages randomly.</p>
<p>FAR2: PP shall revise the monitoring survey questionnaire for the next verification and the questions asking frequency of use shall be consistent for both baseline and project stoves.</p>	<p>This has been taken into account and implemented in this monitoring term.</p>

B.2. Post-Design Certification changes

B.2.1. Temporary deviations from the approved Monitoring & Reporting Plan, methodology or standardized baseline

In the light of COVID19 events and restrictions, the monitoring surveys were conducted paperless, and a mix of door-to-door and remote methods. The deviation request for the same was approved by the GS team prior to the surveys.

B.2.2. Corrections

Not Applicable

B.2.3. Changes to start date of crediting period

Not Applicable

B.2.4. Permanent changes from the Design Certified monitoring plan, applied methodology or applied standardized baseline

Not Applicable

B.2.5. Changes to project design of approved project

Not Applicable

SECTION C. DESCRIPTION OF MONITORING SYSTEM APPLIED BY THE PROJECT

The start of the stove distribution under this VPA was on 01/12/2017 and the distribution ended on 22/01/2018.

The monitoring plan is in accordance with " The Gold Standard Simplified Methodology for Efficient Cookstoves, Version 01, February 2013."

The monitoring methodology is supported by:

- Sales receipts
- Total Sales Record (Project Tracking File)
- Customer Database

Maintenance of a Total Sales Record

The Project Proponent collates and maintains the total sales data in electronic and paper format. The Total Sales Record comprises the following data:

- Date of Sale
- Model/type of project technology sold:
- Serial/ID number of the device
- Name and telephone number (if available) of end-users
- Village name

The Sales Record information is collected using the following methods:

For the portable fuel-efficient stoves, the local vendors (sales agents) sell stoves directly to end-users and record sales and user training continuously. This data is then collated into a detailed Total Sales Record that tracks the chain of transactions between the user and the distributors.

The data received by the project implementation partners in paper format is converted and saved electronically for monitoring and analysis purposes. A mechanism, designed jointly between the CME and the implementing partner, has been agreed and put in place to accurately track sales, inventories, supply and purchases for every stove

distributed. For assuring accuracy and consistency, the Total Sales Record is cross checked with import data, usage and other relevant data.

The names and addresses (village name) collected are commensurate with representative sampling, i.e. the names and addresses (where possible) within sales record are large enough so that surveys can be based on representative, randomly selected samples.

Project Database

The project database is derived from the Total Sales Record with project cookstoves differentiated by different project scenarios. The differentiation of the project database into sections is based on the results of the applicable monitoring studies for each project scenario, in order that emission reduction calculations can be conducted appropriately section by section.

Other periodic monitoring tasks

Monitoring consists of checking of a representative sample, once every year (annually) to ensure that project cookstoves are still operating by carrying out the usage survey as per the guidelines set out in the methodology.

Annual surveys for monitoring:

- Usage Survey to establish the drop-off rates in technology usage from year-1 sales and other vintages. For example, if only cookstoves in the first year of use (age0-1) are being credited, a usage parameter is established for age-group 0-1, through a usage survey for cookstove age0-1. If cookstoves of age 0-1 and age 1-2 are being credited (as part of first request for issuance), usage parameters are established for age-group 0-1 and 1-2, respectively through a usage survey. If cookstoves of age-group 0-1 and 1-2 are being credited (as part of second request for issuance), usage parameters are established for age-group 1-2 only through a usage survey as the usage rate for cookstoves of age group 0-1 can be applied from the previous issuance.

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- Monitoring Survey to reassess household kitchen regimes. CME and/or Implementation Partner randomly samples households from the sales agreements received. Sampling is representative of geographic regions and technology used. Where replacements are made, monitoring shall also ensure that the efficiency of the new cookstove is similar to the appliances being replaced. Finally, the project also monitors the physical conditions of the cookstoves.

For this monitoring period in this VPA, there have been no cases of replacements or repairs reported.

The project monitoring survey for this VPA, was conducted from 22/02/2021 to 28/02/2021.

During this period, mix of remote and face to face 114 household surveys were conducted in a total of 10 villages under this VPA. These villages are: Name in Monitoring Survey Results Spreadsheet: Kyar Inn, Chaung Son, Ah Lel Kone, Koke Ko Gwa, Ma Gyi Taking, Sa Khan Kan, Ywar Thit Ka Lay, Ywar Tan Shey, Shin Hla (South), Tha Kyin

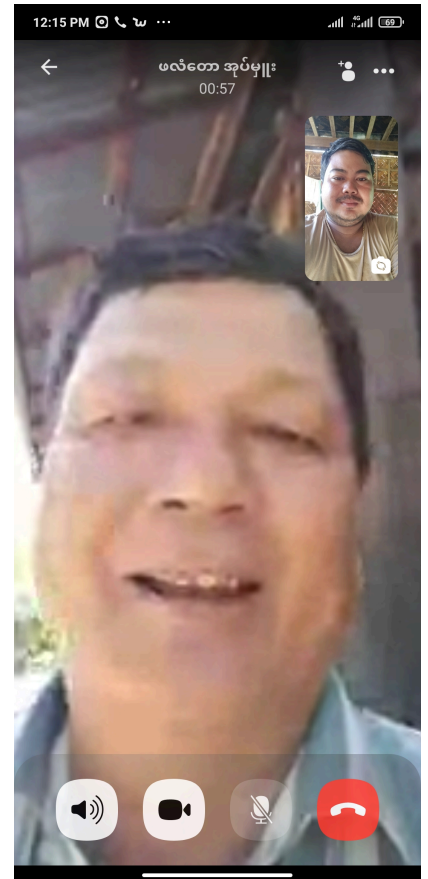
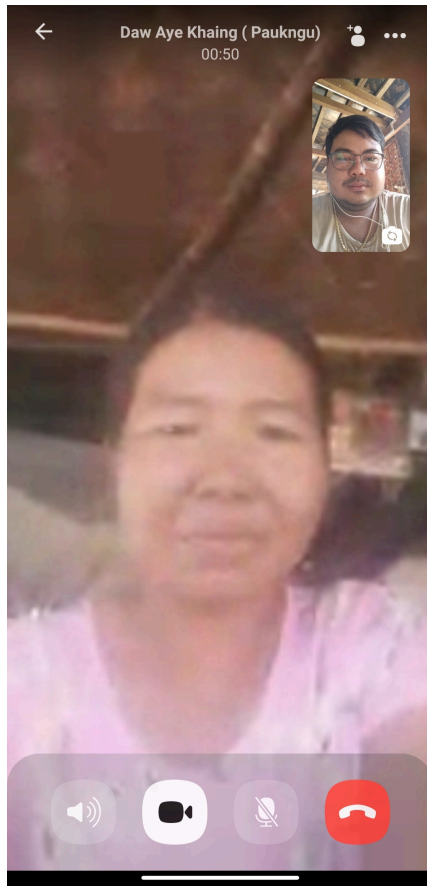
The team involved in the project monitoring exercise is as follows:

Name	Designation & Role	Qualification
Bhushan Trivedi	Consultant to the Soneva Foundation on Myanmar Stoves Campaign. Bhushan led the designing of the project monitoring survey exercise + QA/QC of data.	Bhushan Trivedi is a consultant in the field of social development and social entrepreneurship. He has an extensive experience of working in the development sector in India and Myanmar, specifically on energy access initiatives. Apart from being a consultant to the Soneva Foundation on Myanmar Stoves Campaign for four years, he also led a solar PV micro-grid project in rural Myanmar. Bhushan has earned his bachelor's degree in Mechanical Engineering from Pune University, India. A Masters in Environmental Assessment & Management from Salford Univerity, Manchester,

		UK, and a Diploma in Social Entrepreneurship from NMIMS, Mumbai.
Tha Nyan Toe	<p>Program Manager, Energy Venture Program for Mercy Corps (Myanmar)</p> <p>Tha Nyan Toe planned the data collection, training of office staff and sale agents, supervision and QA/QC of data</p>	<p>Graduated with BSc (Finance) from University College Dulin (UCD). Worked as business development in many private sector both overseas countries and Myanmar. Before joining Mercy Corps Myanmar, he worked as a Business Development Consultant for International Finance Corporation (IFC-Lighting Myanmar) from December 2016 to December 2019. Experienced business development professionals in local private sector, passionate about rural development and off-grid markets. His interests are in collaboration with international development organizations that can support local private sector development. He has very sound knowledge of rural customers and local private companies in the sector. Provide solutions for high quality off-grid solar market, unlocking the energy access through financial inclusion for rural customers. He Joined Mercy Corps Myanmar in early 2020 as Program Manager for Energy and Climate Change programs.</p>

in the recent light of COVID19 events during the time of these monitoring surveys, following a consultation with the GS and getting prior approval from the GS COVID team, the PP executed remote monitoring via a mix of remote and in-person household surveys. The sale agents in the selected villages helped the process by face-to-face monitoring surveys with the households and passing on the information to the projects team in real-time over a phone/video call. The training of these sale agents for conducting annual monitoring was done prior to the surveys via video calls by the projects team. Below are some of the screenshots of the training, the surveys, and the list of sales agents employed for the monitoring tasks along with their contact details.

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No	Village Name	Sale Agent Name	Phone No.
1	Ah Lel Kone	Sit Aung Naing(Project Staff)	09-250523276
2	Ywar Thit Ka lay		
3	Koke Ko Gwa		
4	Ma Gyi Taing		
5	Ywar Tan Shey	U Thein Tun	09-444316070
6	Shin Hla(S)	U Thein Swe	09-761467283
7	Kyar Inn	Daw Cho Cho Win	09-780336809
8	Sa Khan Kan	Sit Aung Naing(Project Staff)	09-250523276

9	Tha Kyin	Daw San Yu Maw	09-968662199/09-690894419
10	Chaung Son	Sit Aung Naing(Project Staff)	09-250523276

SECTION D. DATA AND PARAMETERS

D.1. Data and parameters fixed ex ante or at renewal of crediting period

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Relevant SDG Indicator	SDG 13: Take urgent action to combat climate change and its impacts
Data/parameter	EF_{b, fuel, CO2}
Unit	tCO2/t firewood
Description	CO2 emission factor arising from the use of firewood in baseline scenario
Source of data	IPCC default values, table 1.4 of chapter 1 of Vol. 2, 2006 IPCC Guidelines for National Greenhouse Gas Inventories
Value(s) applied	1.747
Choice of data or Measurement methods and procedures	Deemed valid by GS VER Methodology
Purpose of data	To calculate VERs
Additional comment	Measuring emission factors from stove technologies is costly and difficult to do accurately. The CME applies default IPCC emission values.

Relevant SDG Indicator	SDG 13: Take urgent action to combat climate change and its impacts
Data/parameter	EF_{b, fuel, non_CO2}
Unit	tCO2/t firewood
Description	Non-CO2 emission factor for use of firewood in baseline scenario
Source of data	IPCC default value, table 2.9 of chapter 2 of Vol. 2, 2006 IPCC Guidelines for National Greenhouse Gas Inventories
Value(s) applied	0.455

Choice of data or Measurement methods and procedures	Deemed valid by GS VER Methodology
Purpose of data	To calculate VERs
Additional comment	Measuring emission factors from stove technologies is costly and difficult to do accurately. The CME applies default IPCC emission values.

Relevant SDG Indicator	SDG 13: Take urgent action to combat climate change and its impacts
Data/parameter	η_b
Unit	Fraction
Description	Efficiency of the baseline system being replaced
Source of data	Methodology
Value(s) applied	10%
Choice of data or Measurement methods and procedures	Default value as per the GS methodology.
Purpose of data	To calculate VERs
Additional comment	Measuring emission factors from stove technologies is costly and difficult to do accurately. The CME applies default IPCC emission values.

Relevant SDG Indicator	SDG 13: Take urgent action to combat climate change and its impacts
Data/parameter	η_p
Unit	Percent
Description	Efficiency of the cookstove i being used in the project scenario
Source of data	Manufacturer’s website> section on the specifications project stove Envirofit M5000 (SuperSaver GL) (Reference: Weblink)

Value(s) applied	29.7%
Choice of data or Measurement methods and procedures	The value is derived from Envirofit, the manufacturers of these stoves who issue these results after complying with all relevant test standards and procedures for the certification of their products.
Purpose of data	To calculate VERs
Additional comment	The project stove has been independently tested and is widely used in different countries.

Relevant SDG Indicator	SDG 13: Take urgent action to combat climate change and its impacts
Data/parameter	$f_{NRB, y}$
Unit	Fraction
Description	Default values of fraction of non-renewable biomass for least developed countries and small island developing states
Source of data	Please refer supporting document titled, 'Myanmar Stoves Campaign - fNRB Approval Letter'
Value(s) applied	0.95
Choice of data or Measurement methods and procedures	The default fNRB approved by CDM EB will be applied to all VPAs. If this value is updated by the EB or rejected by the Myanmar DNA, then each VPA using this value will be updated either at VPA inclusion or verification.
Purpose of data	To calculate VERs
Additional comment	The PP has this value endorsed by the local implementation partner, Mercy Corps

Relevant SDG Indicator	SDG 13: Take urgent action to combat climate change and its impacts
Data/parameter	$B_{b,y}$
Unit	t/hh/a (tons firewood per household per annum)
Description	Quantity of firewood consumed for cooking in baseline scenario during year y

Source of data	Baseline survey
Value(s) applied	4.219
Choice of data or Measurement methods and procedures	<p>The value derived from ex-ante baseline surveys. For more details, please refer the supporting document titled, 'VPA 009 (GS 6599) – (Third Term) - Myanmar Stoves Campaign - Baseline Survey Report'</p> <p>Three main reasons for higher than usual fuelwood consumption:</p> <p>Most families own livestock, mainly pigs, chicken, and cows. A common feedstock is broken rice which is cooked together with other cereals in order to make it easier to digest for the animals. This habit adds another cooking session per day. Farmers are regularly visited by traders to negotiate purchases of harvested goods. During these visits families prepare food for guests, requiring additional cooking. During fieldwork, additional food is prepared for farmworkers.</p>
Purpose of data	To calculate VERs
Additional comment	All data sources are transparent and verifiable. Refer to baseline survey report for details.

Relevant SDG Indicator	SDG 13: Take urgent action to combat climate change and its impacts
Data/parameter	$LE_{p,i,y}$
Unit	fraction
Description	Leakage in project scenario p, for technology i, during year y
Source of data	Default value
Value(s) applied	0.95
Choice of data or Measurement methods and procedures	Deemed valid per the GS methodology.
Purpose of data	To calculate VERs
Additional comment	Not Applicable

D.2. Data and parameters monitored

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Relevant SDG Indicator	SDG 13: Take urgent action to combat climate change and its impacts
Data/parameter:	$U_{p,y}$
Unit	Percentage
Description	Usage rate for project cookstove in year y , based on adoption rate and drop off rate as per usage surveys
Measured/calculated/default	Measured
Source of data	Annual Monitoring
Value(s) of monitored parameter	57%
Monitoring equipment	Household Surveys
Measuring/reading/recording frequency:	Measuring and Recording Annually
Calculation method (if applicable):	Not Applicable
QA/QC procedures:	A representative sample of project cookstove end-users was selected for follow-up by the monitoring and evaluation team. A visit to to conduct surveys with households verified information in the distribution database and determine usage drop-off rates.
Purpose of data:	To calculate VERs
Additional comments:	A usage parameter is derived for each age group of project cookstove being credited. Project survey sample size 114 households.

Relevant SDG Indicator	SDG 13: Take urgent action to combat climate change and its impacts
Data/parameter:	$N_{p,y}$
Unit	Number of project cookstoves credited (units)
Description	Cookstove in the project database for project scenario p through year y
Measured/calculated/default	Measured
Source of data	VPA 009 (GS 6599) - End User Database
Value(s) of monitored parameter	1603
Monitoring equipment	Sale Record Entries
Measuring/reading/recording frequency:	Annual
Calculation method (if applicable):	Not Applicable
QA/QC procedures:	Transparent data analysis and reporting
Purpose of data:	To calculate VERs
Additional comments:	The total sales record is divided based on project scenario to create the project database.

Relevant SDG Indicator	SDG 13: Take urgent action to combat climate change and its impacts
Data/parameter:	DF_n
Unit	Fraction
Description	Discount factor to account for efficiency loss n of project cookstoves
Measured/calculated/default	Default
Source of data	calculated from the default value
Value(s) of monitored parameter	0.92 i.e., 1% efficiency loss per year.

Monitoring equipment	NA
Measuring/reading/recording frequency:	Annual
Calculation method (if applicable):	Not Applicable
QA/QC procedures:	Transparent data analysis and reporting
Purpose of data:	To calculate VERs
Additional comments:	Not Applicable

Relevant SDG Indicator	SDG 13: Take urgent action to combat climate change and its impacts
Data/parameter:	DF_{b, Stove, y}
Unit	Fraction
Description	Discount factor to account for usage of baseline cookstove during the year y in project scenario p
Measured/calculated/default	Measured
Source of data	Annual Monitoring
Value(s) of monitored parameter	5.81 %
Monitoring equipment	Household Surveys
Measuring/reading/recording frequency:	Annual
Calculation method (if applicable):	Not Applicable
QA/QC procedures:	Transparent data analysis and reporting
Purpose of data:	To calculate VERs

Additional comments:	The discount factor for baseline-stove is determined based on a number of meals cooked using the baseline stove. The required information shall be captured through sample surveys carried out following a random sampling approach for each age-group of the project stove. The minimum number of sample sizes shall be selected following the guidelines provided in section 4.2, option (b) of the POA-DD.
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D.3. Comparison of monitored parameters with last monitoring period

Data/Parameter	Value obtained in this monitoring period	Value obtained last monitoring period
$U_{p,y}$	57%	92.3%
$N_{p,y}$	1603	1603
DF_n	0.92	0.93
$DF_{b, Stove, y}$	5.81%	6.19%

D.4. Implementation of sampling plan

In the light of the COVID19 events, these surveys were conducted remotely, via the sale agents stationed already in the respective villages. These sale agents went door-to-door, following all safety guidelines, and interviewed randomly selected households. The agents then passed on the information to the IP team working from (home) office via a mobile phone call, and the IP team entered the information in a data collection software in real time. In this way, all user data could be measured and recorded.

The PP chose a list of villages where the project made medium to high volume of sales (min. 12+ sales/village) Following this, a simple random sampling approach was employed using an MS excel random generator to choose between around 10 villages from this list. The PP then checked the availability of sales agents in these randomly generated villages, and based on that, finalized the list of villages to be surveyed.

Sampling, and Selection of Villages and Households for Survey

A simple random sample firstly of the villages was chosen from the population, which was all the villages included in this particular VPA where stoves were distributed in medium or high volumes (range from 10 stoves up to 50+). These were random choices by the PP with the care that each village had the same probability of being chosen as sample. MS excel random generator was used for this purpose. Please find the screenshot of the generator results below:

Village Number	Village Name	Random
1	Ah Lel Kone	0.013588
33	Ywar Thit Ka Lay	0.01552
15	Ma Gyi Yin	0.028603
9	Koke Ko Gwa	0.097794
14	Ma Gyi Taing	0.115086
31	Ywar Tan Shey	0.116408
23	Shin Hla (South)	0.125065
11	Kyar Inn	0.172874
27	War Ri (Kone)	0.263932
18	Sa Khan Kan	0.279742
25	Tha Kyin	0.288737
4	Chaung Son	0.295347
24	Shwe Toke Kan	0.297963
28	Wet Gaung	0.314541
7	Inn Kyar	0.318147
2	Ah Shey Kone	0.389335
36	Mar Ya Bin	0.397364
3	Baw Myint	0.403443
20	Sar Ra Pay (East)	0.437289
21	Sar Taing	0.450797

This list of villages was then handed over to the Implementation Partner (IP) by the PP and the IP led the data collection part in these villages with sale agents present and available for the surveys in these respective villages. During this exercise, the sale agents could choose random households and not any specific ones to ensure each of the households in these villages has an equal chance of being interviewed. Hence, the selection of households for monitoring essentially can be described to be occurring in two phases: a) At the village selection level and, b) At the household selection level.

As per the 'Guideline: Sampling and surveys for CDM project activities and programmes of activities, version 04.0', paragraph 4. Sampling requirements point no 10 states, "Where there is no specific guidance in the applicable methodology, project proponents shall use 90/10 confidence/precision as the criteria for reliability of sampling efforts for small-scale project activities". During this monitoring exercise, 114 surveys were conducted out of 1603 total eligible users, achieving a confidence level of 95%, and 9 % margin of error. The margin of error lies within the criteria, and the required level of confidence has been achieved as per the specific guidance. (Ref: [Link](#))

The list of households which were surveyed is as follows:

Survey No	Love Serial Number	Household Owner Name	Primary Cookstove User Name	Mobile Phone Number (If Applicable)	Village Name	Date of Purchase of FES	Date of Survey	FES Still Used
1	EM1G078880	U Naing Lin	Daw Aye Aye Thin	Not Applicable	Kyar Inn	18-01-2018	22-02-2021	Yes
2	EM1G081572	Daw San Wai	Daw San Wai	Not Applicable	Kyar Inn	18-01-2018	22-02-2021	Yes
3	EM1G079903	Daw Cho Cho Win	Daw Cho Cho Win	Not Applicable	Kyar Inn	18-01-2018	22-02-2021	Yes
4	EM1G079929	Daw Ei Mon	Daw Saw Myint	Not Applicable	Kyar Inn	18-01-2018	22-02-2021	Yes
5	EM1G081592	Daw San San Maw	Daw San San Maw	Not Applicable	Kyar Inn	18-01-2018	22-02-2021	Yes
6	EM1G080106	Daw Saw Saw Myint	Daw Saw Saw Myint	Not Applicable	Kyar Inn	18-01-2018	22-02-2021	Yes
7	EM1G079024	Daw Thein Thein Swe	Daw Thein Thein Swe	Not Applicable	Kyar Inn	18-01-2018	22-02-2021	Yes
8	EM1G079284	U Kyaw Than	U Kyaw Than	Not Applicable	Kyar Inn	18-01-2018	23-02-2021	Yes
9	EM1G079014	Daw Hla Thwe	Daw Hla Thwe	Not Applicable	Kyar Inn	18-01-2018	23-02-2021	Yes
10	EM1G081674	Daw Nwe Yi Win	Daw Nwe Yi Win	Not Applicable	Kyar Inn	18-01-2018	23-02-2021	Yes
11	EM1G078940	U Paw San	Daw Kyi Htay	Not Applicable	Chaung Son	19-01-2018	26-02-2021	Yes
12	EM1G080345	Daw Wit Yi Tun	Daw Wit Yi Tun	Not Applicable	Chaung Son	19-01-2018	26-02-2021	Yes
13	EM1G079540	Daw Nyo	Daw Nyo	Not Applicable	Chaung Son	19-01-2018	26-02-2021	Yes
14	EM1G081286	U Thuang Wai	Daw Htay Myint Yi	Not Applicable	Chaung Son	19-01-2018	26-02-2021	No
15	EM1G079000	U Thein Saung	Daw Aye Myint Kyi	Not Applicable	Chaung Son	19-01-2018	26-02-2021	No
16	EM1G081585	Daw Khin Myint Kyi	Daw Khin Myint Kyi	Not Applicable	Chaung Son	19-01-2018	26-02-2021	No
17	EM1G079409	U Htay Lwin	Daw Thuzar Myint	Not Applicable	Chaung Son	19-01-2018	26-02-2021	No
18	EM1G078895	U Sein Thuang	Daw Khin Soe Moe	Not Applicable	Chaung Son	20-01-2018	26-02-2021	No
19	EM1G080412	U Maung San	Daw Chaw Nu	Not Applicable	Chaung Son	20-01-2018	26-02-2021	No
20	EM1G079835	U Chan Thar	Daw Wai Wai Aung	Not Applicable	Chaung Son	20-01-2018	26-02-2021	Yes
21	EM1G081548	U Sein Myint Wai	Daw Nyo	Not Applicable	Chaung Son	19-01-2018	26-02-2021	Yes
22	EM1G079919	U Thein Naing Soe	Daw Aye May	Not Applicable	Chaung Son	19-01-2018	26-02-2021	Yes
23	EM1G081233	Daw May Yi Myint	Daw May Yi Myint	Not Applicable	Ah Lei Kone	18-01-2018	26-02-2021	No
24	EM1G081631	U Nan Lin San	Daw Aye Mu	Not Applicable	Ah Lei Kone	18-01-2018	26-02-2021	Yes
25	EM1G079380	U Aung Naing Soe	Daw Yi Yi Soe	Not Applicable	Ah Lei Kone	18-01-2018	26-02-2021	Yes
26	EM1G079561	U Tun Tun Oo	Daw Khin Cho Lwin	Not Applicable	Ah Lei Kone	18-01-2018	26-02-2021	Yes
27	EM1G080280	U Chan Sein	Daw Thi Thi Moe	Not Applicable	Ah Lei Kone	18-01-2018	26-02-2021	Yes
28	EM1G079059	Daw Khin San Tint	Daw Khin San Tint	Not Applicable	Ah Lei Kone	18-01-2018	26-02-2021	No
29	EM1G081304	Daw Pu Tu	Daw Pu Tu	Not Applicable	Ah Lei Kone	18-01-2018	26-02-2021	No
30	EM1G078821	Daw Aye Myint Kyi	Daw Aye Myint Kyi	Not Applicable	Ah Lei Kone	16-01-2018	26-02-2021	No
31	EM1G079600	U Kyaw Tun	U Kyaw Tun	Not Applicable	Ah Lei Kone	16-01-2018	26-02-2021	No
32	EM1G081315	U Pu Kyi	Daw Nwe Yi	Not Applicable	Ah Lei Kone	18-01-2018	26-02-2021	Yes
33	EM1G080878	U Nay Aung	Daw Ohnmar Lwin	Not Applicable	Ah Lei Kone	18-01-2018	26-02-2021	Yes
34	EM1G079280	Daw Ohnmar Khin	Daw Ohnmar Khin	Not Applicable	Ah Lei Kone	18-01-2018	26-02-2021	Yes
35	EM1G080162	Daw Sein Ngwe	Daw Sein Ngwe	Not Applicable	Koke Ko Gwa	17-01-2018	27-02-2021	Yes
36	EM1G079167	U Than Win	Daw Myint Myint Oo	Not Applicable	Koke Ko Gwa	17-01-2018	27-02-2021	Yes
37	EM1G081066	U Bo Aung	Daw San San	Not Applicable	Koke Ko Gwa	17-01-2018	27-02-2021	Yes
38	EM1G081660	Daw Hla Pwe	Daw Hla Pwe	Not Applicable	Koke Ko Gwa	17-01-2018	27-02-2021	Yes
39	EM1G079467	U Tun Kyaw	Daw Oune San	Not Applicable	Koke Ko Gwa	17-01-2018	27-02-2021	Yes
40	EM1G081013	U Sein Ba Toe	Daw Sein Htwe	Not Applicable	Koke Ko Gwa	17-01-2018	27-02-2021	Yes
41	EM1G079366	Daw Aye Aye San	Daw Aye Aye San	Not Applicable	Koke Ko Gwa	17-01-2018	27-02-2021	Yes
42	EM1G079378	U Hla	Daw May Lay	Not Applicable	Koke Ko Gwa	21-01-2018	27-02-2021	Yes
43	EM1G079868	U Thuang Han	Daw Kyi Than	Not Applicable	Koke Ko Gwa	22-01-2018	27-02-2021	Yes
44	EM1G079888	U Han Myint	Daw Htay Myint	Not Applicable	Koke Ko Gwa	21-01-2018	27-02-2021	Yes
45	EM1G079070	Daw Toke	Daw Toke	Not Applicable	Koke Ko Gwa	17-01-2018	27-02-2021	Yes
46	EM1G079330	U Hla Than	Daw Htay Hla	Not Applicable	Koke Ko Gwa	20-01-2018	27-02-2021	Yes
47	EM1G080986	U Nyunt Shwe	Daw Kyi Sein	Not Applicable	Ma Gyi Taing	29-12-2017	27-02-2021	No
48	EM1G079286	U Nyunt Win	Daw Myint Myint Aye	Not Applicable	Ma Gyi Taing	29-12-2017	27-02-2021	No
49	EM1G080423	U Aung Chit	Daw Sein Sein	Not Applicable	Ma Gyi Taing	29-12-2017	27-02-2021	No
50	EM1G079994	U Myint Hlaing Oo	Daw Mya Sein	Not Applicable	Ma Gyi Taing	29-12-2017	27-02-2021	No
51	EM1G079285	U Kyaw Shein	Daw Kyin Sein	Not Applicable	Ma Gyi Taing	29-12-2017	27-02-2021	No
52	EM1G080635	U Thet Khaing Win	Daw Aye Thidar Aung	Not Applicable	Ma Gyi Taing	29-12-2017	27-02-2021	No
53	EM1G079884	U Aung Kyaw Myint	Daw Lin Lin Lat	Not Applicable	Ma Gyi Taing	19-01-2018	27-02-2021	Yes
54	EM1G079141	U Thuang Htike	Daw Hnin Hnin Khaing	Not Applicable	Ma Gyi Taing	18-01-2018	27-02-2021	Yes
55	EM1G079526	Daw Hla Myint	Daw Hla Myint	Not Applicable	Ma Gyi Taing	18-01-2018	27-02-2021	Yes
56	EM1G079719	U Myint Khaing	Daw Kyu Tin	Not Applicable	Ma Gyi Taing	19-01-2018	27-02-2021	Yes
57	EM1G078939	U Han Min	Daw Moe Moe	Not Applicable	Ma Gyi Taing	19-01-2018	27-02-2021	Yes
58	EM1G080241	U Bo Win	Daw Mae Nyo	Not Applicable	Ma Gyi Taing	19-01-2018	27-02-2021	Yes
59	EM1G079887	U San Lin	Daw Than Mya	Not Applicable	Sa Khan Kan	29-12-2017	28-02-2021	Yes
60	EM1G079363	U Hla Than	Daw Pu Su	Not Applicable	Sa Khan Kan	29-12-2017	28-02-2021	No
61	EM1G080501	Daw Than Than	Daw Than Than	Not Applicable	Sa Khan Kan	29-12-2017	28-02-2021	No
62	EM1G080958	Daw Tin Nwet	Daw Tin Nwet	Not Applicable	Sa Khan Kan	29-12-2017	28-02-2021	Yes
63	EM1G079809	U Myint Oo	Daw Yin Nu	Not Applicable	Sa Khan Kan	29-12-2017	28-02-2021	Yes
64	EM1G079396	Daw Khin Aye Naing	Daw Khin Aye Naing	Not Applicable	Sa Khan Kan	29-12-2017	28-02-2021	No
65	EM1G079602	U Han Lin	Daw Khin Win Yi	Not Applicable	Sa Khan Kan	29-12-2017	28-02-2021	No
66	EM1G081174	U Aung Thu	Daw Tin Htwe	Not Applicable	Sa Khan Kan	29-12-2017	28-02-2021	No
67	EM1G079421	U Hla Thuang	Daw Moe Kyi	Not Applicable	Sa Khan Kan	17-01-2018	28-02-2021	Yes
68	EM1G080832	U Nyan Tun	Daw Lan Sae	Not Applicable	Sa Khan Kan	17-01-2018	28-02-2021	Yes
69	EM1G079353	U Kyaw Lwin	Daw Kyin Mu	Not Applicable	Sa Khan Kan	17-01-2018	28-02-2021	Yes
70	EM1G080872	U Thet Naing Tun	Daw Ei Ei Mon	Not Applicable	Ywar Thit Ka Lay	29-12-2017	28-02-2021	No
71	EM1G080837	U Win Maung	Daw Win Kyi	Not Applicable	Ywar Thit Ka Lay	19-01-2018	28-02-2021	No
72	EM1G081591	U Win Oo	Daw Nyein Htay	Not Applicable	Ywar Thit Ka Lay	19-01-2018	28-02-2021	No
73	EM1G080840	U Than Oo	Daw Oune Nwet	Not Applicable	Ywar Thit Ka Lay	19-01-2018	28-02-2021	No
74	EM1G079344	U Maung San	Daw Khin Mar Nyo	Not Applicable	Ywar Thit Ka Lay	19-01-2018	28-02-2021	No
75	EM1G081551	U Zaw Myo Htwe	Daw Htay Htay Than	Not Applicable	Ywar Thit Ka Lay	19-01-2018	28-02-2021	No
76	EM1G078937	U Pike Tin	Daw Thin Thin Khaing	Not Applicable	Ywar Thit Ka Lay	19-01-2018	28-02-2021	No
77	EM1G078933	U Maw	Daw Nwet Yi	Not Applicable	Ywar Thit Ka Lay	19-01-2018	28-02-2021	No
78	EM1G079081	U Tun Lwin	Daw Tin Nwet	Not Applicable	Ywar Thit Ka Lay	19-01-2018	28-02-2021	No
79	EM1G081468	U Kyaw Zaw	Daw Moe San Aye	Not Applicable	Ywar Thit Ka Lay	20-01-2018	28-02-2021	No
80	EM1G078782	U Hlaing Win	Daw Khin Moet Moet	Not Applicable	Ywar Thit Ka Lay	20-01-2018	28-02-2021	Yes
81	EM1G080721	Daw Hla Yi	Daw Hla Yi	Not Applicable	Ywar Thit Ka Lay	20-01-2018	28-02-2021	No
82	EM1G074614	U Thein Tun	Daw Than Lin	Not Applicable	Ywar Tan Shey	30-12-2017	25-02-2021	No
83	EM1G074544	U Myint Naing	Daw Myint Khaing	Not Applicable	Ywar Tan Shey	30-12-2017	25-02-2021	No
84	EM1G078106	U Myint Swe	Daw Thein Thein	Not Applicable	Ywar Tan Shey	30-12-2017	25-02-2021	No
85	EM1G078041	U Maung Shun	Ma Zin Mar Aung	Not Applicable	Ywar Tan Shey	30-12-2017	25-02-2021	No
86	EM1G075702	U Than Soe	Daw Nay Chi Khaing	Not Applicable	Ywar Tan Shey	30-12-2017	25-02-2021	No
87	EM1G078441	U Myo Nyunt	Daw San Hla	Not Applicable	Ywar Tan Shey	30-12-2017	25-02-2021	No
88	EM1G077820	U Bo Aung	Ma Thidar Oo	Not Applicable	Ywar Tan Shey	30-12-2017	24-02-2021	Yes
89	EM1G074507	U Bo Than	Daw Moe Moe Myint	Not Applicable	Ywar Tan Shey	30-12-2017	24-02-2021	No
90	EM1G074131	U Hman Kyaw	Daw Thi Dar Win	Not Applicable	Ywar Tan Shey	30-12-2017	25-02-2021	No
91	EM1G078188	U Thuang Kyaw	Daw Phyar Yay	Not Applicable	Ywar Tan Shey	30-12-2017	25-02-2021	No
92	EM1G075354	U Than Win	Ma Tin Mar Khaing	Not Applicable	Ywar Tan Shey	30-12-2017	25-02-2021	No
93	EM1G076116	U Mon Dine	Daw Nyo Nyo	Not Applicable	Shin Hla (South)	30-12-2017	25-02-2021	Yes
94	EM1G074482	Daw Mya Win	Daw San Yi Myint	Not Applicable	Shin Hla (South)	28-12-2017	25-02-2021	Yes
95	EM1G074424	Daw Tint	Daw Tint	Not Applicable	Shin Hla (South)	28-12-2017	25-02-2021	Yes
96	EM1G075378	U Moe	Ma Thaint Thaint Thu	Not Applicable	Shin Hla (South)	28-12-2017	25-02-2021	Yes
97	EM1G077034	U Thein Ngwe	Daw Tin San	Not Applicable	Shin Hla (South)	28-12-2017	25-02-2021	Yes
98	EM1K074847	U Chit Thein	Ma Zuu Hlaing	Not Applicable	Shin Hla (South)	30-12-2017	25-02-2021	No
99	EM1G077495	U Ko Soe	Daw Than Myint	Not Applicable	Shin Hla (South)	28-12-2017	25-02-2021	Yes
100	EM1K075023	U Than Like	Ma Khin Hnin Kyu	Not Applicable	Shin Hla (South)	30-12-2017	25-02-2021	Yes
101	EM1G077248	U Aung Ko Min	Ma Thin Thin Wai	Not Applicable	Shin Hla (South)	28-12-2017	25-02-2021	No
102	EM1K073031	U Myint Aye	Ma Khin Maw	Not Applicable	Shin Hla (South)	30-12-2017	25-02-2021	Yes
103	EM1G076529	U Thein Swe	Ma Mar Mar Myint	Not Applicable	Shin Hla (South)	28-12-2017	25-02-2021	No
104	EM1G076644	Daw Tin Kyi	Daw Myint Kyi	Not Applicable	Tha Kyin	06-12-2017	26-02-2021	No
105	EM1G077267	Daw Yin Mya	Daw Htwe Tin	Not Applicable	Tha Kyin	06-12-2017	26-02-2021	Yes
106	EM1G077843	U Zaw Zaw Aung	Daw Cho Mar Win	Not Applicable	Tha Kyin	06-12-2017	25-02-2021	No
107	EM1G078485	Daw Gyan Sein	Daw Cho Cho Win	Not Applicable	Tha Kyin	06-12-2017	26-02-2021	Yes
108	EM1G078513	Daw Hla Ngwe	Daw May Thet Khaing	Not Applicable	Tha Kyin	06-12-2017	26-02-2021	Yes
109	EM1G076662	Daw Chit	Daw Swe Swe Pyone	Not Applicable	Tha Kyin	06-12-2017	26-02-2021	Yes
110	EM1G078009	Daw Khin Nyo San	Daw Khin Nyo San	Not Applicable	Tha Kyin	06-12-2017	26-02-2021	Yes
111	EM1G077183	U Saw Win	Daw Khin Hnin Soe	Not Applicable	Tha Kyin	10-12-2017	26-02-2021	Yes
112	EM1G076438	Daw Tin Tin Saung	Daw Tin Tin Saung	Not Applicable	Tha Kyin	07-12-2017	25-02-2021	Yes
113	EM1G076385	U Win Myint	Daw Khin Mu	Not Applicable	Tha Kyin	06-12-2017	26-02-2021	Yes
114	EM1G076346	U Win Maung	Daw Khin Lone	Not Applicable	Tha Kyin	06-12-2017	26-02-2021	Yes

SECTION E. CALCULATION OF SDG IMPACTS

E.1. Calculation of baseline value or estimation of baseline situation of each SDG Impact

The following reporting is based on conditions of the households in this project prior to the project implementation and in the scenario when they were primarily dependent on three stone fires. These are logical estimates of the values in the absence of this project and when households were using old three stone fires, with no aspects of the project design being implemented such as local capacity building and job creation and environmental awareness campaigns.

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

- = The households in this VPA were exposed to negative impacts from using three stone fire and constraint on productivity due to more time) was spent on collecting firewood.
- = 0 households having access to fuel efficient cookstoves.

SDG 7: Ensure access to affordable, reliable, sustainable and modern energy for all

- = The households in this VPA did not have access to an improved cookstove prior to this project.
- = 0 households having access to fuel efficient cookstoves.

SDG 8: Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all

- = 0 local jobs created of the nature included in this project design.

SDG 13: Take urgent action to combat climate change and its impacts

- = 4.219 T/household/annum of wood was consumed, and 7570 tonnes of CO₂ was emitted due to use of three stone fires.
- = 0 environmental awareness sessions were organized.

E.2. Calculation of project value or estimation of project situation of each SDG Impact

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

This VPA alone serves 1603 eligible households and with the latest usage rate from monitoring tests being 57%, 914 stoves are still in use, which have improved the health and safety of around 4413 people (Average household size = 4.83 people/HH) due to the fuel-efficient cookstove. This is in line with the Target 3.9.1, which states to reduce the number of mortality rate attributed to household and ambient air pollution. The latest monitoring results show that all 100% of the stove users agree with the improvement in air quality, reduction in smoke and visible health impacts (less burning of eyes, cough, etc).

SDG 7: Ensure access to affordable, reliable, sustainable and modern energy for all

This VPA has brought fuel-efficient cookstove, thus improving the energy efficiency for their cooking practices as compared to the old, three-stone fires, in line with the Target 7.3, which states, By 2030, double the global rate of improvement in energy efficiency. It also covers the Target 7.b, which focuses on bringing technology to LDCs. This VPA alone serves 1603 eligible households and with the latest usage rate from monitoring tests being 57%, 914 stoves are still in use, which has improved the health and safety of around 4413 people (Average household size = 4.83 people/HH) due to the fuel-efficient cookstove.

SDG 8: Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all

Myanmar Stoves Campaign's project design includes selecting, training and developing the local men and women for the role of sale agents, for distribution and selling of stoves to the households. This provides these local entrepreneurs with transferable skills and income source. This is in line with the Target 8.3.1, which states, to increase the Proportion of informal employment in non-agriculture employment, by sex. Since the start of the VPA stove distribution phase, 64 such sale agents were trained and developed.

SDG 13: Take urgent action to combat climate change and its impacts

The VERs claimed by this VPA, are 4858 VERs during the issuance from the third monitoring period.

The detailed calculations are shown as below:

EX-POST CALCULATION OF EMISSION REDUCTIONS FOR VPA 009 (GS 6599)

PARAMETER	UNIT	DESCRIPTION	2018	2019	2020	Source
$N_{p,y}$	-	Number of project cookstoves of each age group operation in year y	1,603	1,603	1,603	Eligible cookstoves for crediting from VPA 009 (GS 6599) - End User Database
$U_{p,y}$	%	Usage rate for project cookstove in year y, based on adoption rate and drop off rate as per usage surveys	100	92.3	57	Source: Usage Survey - February 2021
$B_{b,y}$	t/hh/a	Quantity of firewood consumed in baseline scenario during year y	4.22	4.22	4.22	Source: Baseline Survey
η_b	%	Efficiency of the baseline system being replaced	10	10	10	Methodology
$\eta_{p,y}$	%	Efficiency of the system being deployed as part of the project activity	27.92	27.64	27.36	
P_y	t/hh/a	Quantity of firewood that is saved in the year y	2.71	2.69	2.68	
η_p	%	Efficiency of project cookstove (fraction) determined at the start of the project activity	29.7	29.7	29.7	
DF_{η}	-	Discount factor to account for efficiency loss of project cookstove per year of operation (fraction)	0.94	0.93	0.92	
$f_{NRB,y}$	-	Fraction of woody biomass saved by the project activity in period y that can be established as non-renewable biomass	0.95	0.95	0.95	Source: Endorsment Letter Submitted to GS
$EF_{b, fuel, CO2}$	tCO ₂ /tWood	CO ₂ emission factor of firewood that is substituted or reduced	1.747	1.747	1.747	Methodology
$EF_{p, fuel, non-CO2}$	tCO ₂ /tWood	Non-CO ₂ emission factor of firewood that is substituted or reduced	0.455	0.455	0.455	Methodology
$DF_{b, Stove, y}$	%	Usage of baseline cookstove during the year y in project scenario	0.0000	6.1982	5.81	Source: Usage Survey - February 2021
	%	Percent of users who also use baseline cookstove	0.00	39.58	7.69	Source: Usage Survey - February 2021
	%	Percent of meals prepared using baseline cookstove	0.00	15.66	5.81	Source: Usage Survey - February 2021
x	-	y-1				
y	-	Year of the crediting period				
	t CO ₂	Emission reductions of the project activity in period y (max. 10,000)	9,080	8,328	5,114	
	-	Leakage Discount Factor	0.95	0.95	0.95	
ERY	t CO ₂	Emission reductions of the project activity in period y (max. 10,000)	8,626	7,912	4,858	

In addition to this, in line with Target 13.3, states, to improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning. The Myanmar Stoves Campaign has conducted 60 such village level awareness raising events which were attended by more than 1775 participants.

The project, as per Target 13.b.1, also uses the carbon finance to support technology and capacity building for mechanisms for raising capacities for effective climate change-related planning and management, including focusing on women, youth and local and marginalized communities.

E.3. Calculation of leakage

The leakage calculations have been factored in via the Leakage Discount Factor of 0.95, as described in the Row 23 of the spreadsheet titled, 'VPA 009 (GS 6599) - (Third Term) Ex-Post Emission Reduction Calculation'.

E.4. Calculation of net benefits or direct calculation for each SDG Impact

SDG	SDG Impact	Baseline estimate	Project estimate	Net benefit
13	VERs	7570	2711	4858
13	People Educated	0	1775	1775
3	People Served	0	4413	4413
7	Households Served	0	914	914
8	Informal Jobs Created	0	64	64

E.5. Comparison of actual SDG Impacts with estimates in approved PDD

SDG	Values estimated in ex ante calculation of approved PDD for this monitoring period	Actual values ¹ achieved during this monitoring period
13	8624	4858
13	1775	1775
3	7742	4413
7	1603	914
8	64	64

¹ Whenever emission reductions are capped, both the original and capped values used for calculations must be transparently reported. Use brackets to denote original values.

E.5.1. Explanation of calculation of value estimated ex ante calculation of approved PDD for this monitoring period

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

a) Baseline Scenario = None of the households applied for crediting had any form of improved cookstove. They were exposed to the detrimental health impacts due to three stone fires and more time being spent on collecting firewood.

Baseline Calculations: 0 household/people.

b) Project Scenario (& the net benefit) = This VPA alone serves 1603 eligible households and with the latest usage rate from monitoring tests being 57%, 914 stoves are still in use, which has improved the health and safety of around 4413 people (Average household size = 4.83 people/HH) due to the fuel-efficient cookstove. This is in line with the Target 3.9.1, which states to reduce the number of mortality rate attributed to household and ambient air pollution. The latest monitoring results show that all 100% of the stove users agree with the improvement in air quality, reduction in smoke and visible health impacts (less burning of eyes, cough, etc).

SDG 7: Ensure access to affordable, reliable, sustainable and modern energy for all

a) Baseline Scenario = The households in this VPA applied for crediting did not have access to any form of improved cookstove.

Baseline Calculations: 0 household/people.

b) Project Scenario (& the net benefit) = This VPA alone serves 1603 eligible households, and with the latest usage rate from monitoring tests being 57%, 914 stoves are still in use, which has ensured access to affordable, reliable, sustainable, and modern energy for around 4413 people (Average household size = 4.83 people/HH)

Project Calculations: 914 stoves in use * 4.83 people/HH (Avg. household size) = 4413 people in total

SDG 8: Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all

a) Baseline Scenario = None of the local jobs which are involved in this project design were created during the baseline scenario.

Baseline Calculations: 0 jobs created.

b) Project Scenario (& the net benefit) = Since the start and until the end of this VPA period, 64 sale agents were trained and developed.

Project Calculations: Values derived from the 'VPA 009 (GS 6599) – (Third Term) Project Tracking File'.

SDG 13: Take urgent action to combat climate change and its impacts

a) Baseline Scenario = Around 4.219 Tonnes of Wood was consumed per household per year and about 7570 Tonnes of CO₂ was emitted per household by burning firewood per year in this VPA. In addition, there were no awareness raising campaigns around the climate change/global warming issues.

Baseline Calculations: Baseline fuel consumption derived from 'VPA 009 (GS 6599) – (Third Term) - Myanmar Stoves Campaign - Baseline Survey Report'.

b) Project Scenario (& the net benefit) = Around 2.71 Tonnes of firewood is saved per year per household and the VERs claimed by this VPA in this period are 4858. In addition to this, in line with Target 13.3, states, to improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning. The Myanmar Stoves Campaign during this VPA has conducted more than 60 such village level awareness raising 60 events which were attended by more than 1775 participants.

Project Calculations: Please refer to 'VPA 009 (GS 6599) – (Third Term) - Ex-Post Emission Reduction Calculation' for ER calculations. The values of awareness raising events are derived from the 'VPA 009 (GS 6) – (Third Term) - Project Tracking File'.

E.6. Remarks on increase in achieved SDG Impacts from estimated value in approved PDD

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The achieved results for SDG 8 are same, and reduced for SDG 13, 3, and 7 as compared to the ex-ante calculations, due to lower usage rate than estimated earlier.

SECTION F. SAFEGUARDS REPORTING

Relevant SPA	Safeguarding Principle 1 – Human Rights
Data / Parameter	Non violation of Human rights and abuses of any kind
Unit	Incidents
Description	Qualitative feedback from the stove users/sale agents, and other local stakeholders
Source of data	Ongoing Observations
Value(s) applied	0%
Measurement methods and procedures	Discussions with users and sale agents during households surveys conducted by the PD, and during the objective observer/external assessor visit.
Monitoring frequency	Annual
QA/QC procedures	Transparent data collection, analysis and reporting.
Purpose of data	To ensure internationally proclaimed human rights for everyone associated with this project.
Additional comment	Our ongoing discussions with relevant stakeholders reveals that no such incidents have been reported.

Relevant SPA	Safeguarding Principle 4 - Cultural heritage, Indigenous Peoples, Displacement and Resettlement
Data / Parameter	Project in sites, structures, or objects with historical, cultural, artistic, traditional or religious values or intangible forms of culture
Unit	Number
Description	Project being implemented in the above-mentioned site(s)
Source of data	Local input/records of such sites of importance
Value(s) applied	0
Measurement methods and procedures	On-going evaluation of such sites
Monitoring frequency	On-going
QA/QC procedures	Transparent data collection, analysis and reporting.
Purpose of data	To ensure the project does not negatively impact these kind of special sites/structures.
Additional comment	None of our installations or other aspects of the project are around sites, structures, or objects with historical, cultural, artistic, traditional or religious values or intangible forms of culture

Relevant SPA	Safeguarding Principle 6 - Economic Impacts
Data / Parameter	No forced labour
Unit	%
Description	Any sale agents/other labour being forcefully employed by the project
Source of data	Ongoing observations
Value(s) applied	0

Measurement methods and procedures	Discussions with sale agents during households' surveys conducted by the PD, and during the objective observer/external assessor visit.
Monitoring frequency	Annual
QA/QC procedures	Transparent data collection, analysis and reporting.
Purpose of data	To ensure there is no forced labour of any kind with the project.
Additional comment	No forced labour employed

SECTION G. STAKEHOLDER INPUTS AND LEGAL DISPUTES

G.1. List all Inputs and Grievances which have been received via the Continuous Input and Grievance Mechanism together with their respective responses/mitigations.

The PP engaged with the stove users, sale agents and the local administration but did not receive any inputs/grievances during the monitoring period.

G.2. Report on any stakeholder mitigations that were agreed to be monitored.

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None. Not Applicable.

G.3. Provide details of any legal contest that has arisen with the project during the monitoring period

The PP confirms there are no legal contest or disputes as it received no such notices during this monitoring period from any of the stakeholders directly or indirectly associated with this project.

Revision History

Version	Date	Remarks
1.1	14 October 2020	<p>Hyperlinked section summary to enable quick access to key sections</p> <p>Improved clarity on Key Project Information</p> <p>Section for POA monitoring</p> <p>Forward action request section</p> <p>Improved Clarity on SDG contribution/SDG Impact term used throughout</p> <p>Clarity on safeguard reporting</p> <p>Clarity on design changes</p> <p>Leakage section added for VER/CER projects</p> <p>Addition of Comparison of monitored parameters with last monitoring period</p> <p>Provision of an accompanying Guide to help the user understand detailed rules and requirements</p>
1.0	10 July 2017	Initial adoption