

**Gold standard for the global goals
Monitoring report**



June 2017, version 1

Title of the project	GS1729 Myanmar Stoves Campaign - Soneva in Myanmar – VPA No. 007
Gold Standard project id	GS ID of the Activity (VPA 007) = GS 6129
Version number of the monitoring report	V3.0
Completion date of the monitoring report	V 1.0 (on 24/07/2020)
Date of project design certification	14/06/2018
Start date of crediting period	01/07/2017
Duration of this monitoring period	01/07/2019 - 30/06/2020
Duration of previous monitoring period	01/07/2018 – 30/06/2019
Project representative(s)	Soneva Foundation
Host Country	Republic of the Union of Myanmar
Certification pathway (activity certification/impact certification)	Impact Certification
SDG Contributions targeted (as per approved PDD)	<p>1 – SDG 3: Ensure healthy lives and promote well-being for all at all ages</p> <p>2 – SDG 7: Ensure access to affordable, reliable, sustainable and modern energy for all</p> <p>3 – SDG 8: Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all</p> <p>4 - SDG 13: Take urgent action to combat climate change and its impacts</p>
Gold Standard statement/product certification sought (GSVER/ADALYs/RECs etc.)	GSVER
Selected methodology(ies)	The Gold Standard Simplified Methodology for Efficient Cookstoves, Version 01, February 2013, and Version 1.1 April 2020.

<p>Estimated amount of annual average certified SDG impact (as per approved PDD)</p>	<p><u>SDG 3: Ensure healthy lives and promote well-being for all of all ages</u></p> <p>This VPA alone serves 1953 households and has improved the health and safety of around 10,000 people 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</p> <p><u>SDG 7: Ensure access to affordable, reliable, sustainable and modern energy for all</u></p> <p>This VPA has brought fuel-efficient cookstove to around 10,000 people, 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</p> <p><u>SDG 8: Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all</u></p> <p>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 program and until the end of this VPA period, 410 such sale agents were trained and developed, which includes almost 40% women.</p> <p><u>SDG 13: Take urgent action to combat climate change and its impacts</u></p> <p>The VERs (third monitoring period) generated by this VPA are 10266 VERs (capped at 10,000 VERs).</p> <p>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 37 such village level awareness raising events which were attended by a total of 1262 participants, 810 (65%) of which were women and 452 men (35%)</p> <p>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.</p>
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Total amount of certified SDG impact (as per approved methodology) achieved in this monitoring period

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

This VPA applies 1743 stoves that are eligible for crediting and with the usage rate of 99.1%, 1727 stoves are in use and has improved the health and safety of around 8343 people 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.

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

This VPA has brought fuel-efficient cookstove to 1727 households, 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.

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. During the start and end of the stove distribution period in this VPA, 46 such jobs were created. (Source: VPA 007 (GS 6129) Third Term - Project Tracking File)

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

During the third monitoring period, this VPA generated 8099 VERs. The vintage break is as follows:

From	To	VERs
01-Jul-19	31-Dec-19	4049
01-Jan-20	30-Jun-20	4050
Total		8099

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 during this VPA period, conducted 60 such village level awareness raising events which were attended by a total of 1560 participants (Source: VPA 007 (GS 6129) Third Term - Project Tracking File)

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

SECTION A. Description of project

A.1. Purpose and general description of project

>> (Provide a brief summary of the detailed description given in section B.1 including purpose of the project, brief description of the installed technology and equipment and relevant dates for the project (e.g. construction start/end, commissioning, continued operation periods, etc.)

Myanmar Stoves Campaign aims to ensure the use of carbon finance to support the distribution and maintenance of 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 May 2018, the project has covered more than 1000 villages in Mandalay Region in central part of Myanmar. The coordinated action by the three actors in this project has been successful in distributing over 25,000 fuel efficient stoves which have improved the lives of more than 125,000 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 (Total of 17000 MMK distributed over 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) Performance Sheet ([Link](#)) and 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 very positive and encouraging towards this modern technology. In addition to this, this project has successfully demonstrated the contribution in catalysing 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 1743 stoves for eligible crediting (1953 originally during validation in total)
Out of 1953, the following stoves were taken out from applying for verification:

- i) End User Data Missing = 9
- ii) Repeated Stove Serial Numbers = 28
- iii) Electric Stoves as Baseline Stoves = 81
- iv) Charcoal as Baseline Fuel = 48
- v) Other discrepancies = 31
- vi) Households having more than one project stoves = 13

After deducting i) to vi), 1743 stoves were selected for crediting out of 1953 stoves considered originally.

Date of first stove sale & start date of the project activity = 01/03/2017 (to 30/06/2017)

Start date of crediting period = 01/07/2017

Third project monitoring exercise performed on: 06/07/2020 to 13/07/2020, results to be applied to the crediting periods from:
01/07/2019 - 30/06/2020

A.2. Location of project

>> (Provide host country, state/province, city/town details along with GPS co-ordinates.)

Republic of the Union of Myanmar, Mandalay Division, Pyabwe Region.

The geographic location of the project activity is 20°33'07.28N and 95°47'51.08E. Stoves distributed under VPA – 007 are majorly in the villages of, which are clearly identifiable and can be distinguished from the other VPAs.

List of Villages in VPA 007						
Myin Twin	Shwe Pauk Pin	Lashio Gyi Ward	Than Bo	Pae Khine Gyi	Hpa Yar Hla	Nyaung Wu
Naw Khme	Sauk Taw Wa(N)	Yae Myet	Aung Thar	Kan Swei	Phar Yar Lay Kone	Shwe Bon Thar
Thin Ga Tone	War Yone Pin (Man Gyi Chan)	Ah Lel Kan	Yae Lel Thaung (East)	Hnan Khin	Thint Dauntk (N)	Myin Thar
Kin Bag	Hpyauk Seik Kone	No (1) Ward	Lin Kar Di Pa	Zee Phyu Kone	Lat Pan Chay Paw	Pyawt (Chin Myint Kyin)
Aung Thar	Myit Nge Ward	Ywar Thit Hpya	Yae Lel Thaung (West)	Kywe Swea	A Htet Nyan	Gwayt Gyi
Nwar Tat	Mi Chaung Tet	No (2) Ward	Hta Naung Kone	Kan Pauk Gyi	Khat Lan Kan	Htein Pan
Mae Khin Gyi	Shan Ywar Gyi	Pyaw	Ma Yoe Kone	Ohn Chaw	Mya Ga Gi Ri Ward	Out Yoe
Htan Lone Tat	Mon Taw	Let Khoke Kone	Sin Hpyu Kone	No (2) Ward	Chaung U (South) Ward	Gaung Kwe
Gway Saung	Hman Tan Ward	Nwar Shar Yoe	Nat_Gyi	Myo Thar (East)	Bo Tae Kone	Kun Thee Pain (Lay Ein Tan)
Kyauk Sa Ka Lay	Kan Gyi (East)	Pauk Myaing	Kone Lel	Moe Taung	Ywar Thit	Ya Thit
Taung Ta Lone	Nyaung Pin Thar	Inn Yin	Sat Pyar Kyin	Naung Hlaing	Oke Kyut Tann (West) Ward	Taung Khaung Pwar
Kya Swar	Thet Kei Kyin	Sin Chan	Kan Thar	Pay Taw	Kywe Tat	Kyauk Myaung
Ta Lin Gyi	Myin Thei	Bu Tar Ward	(Ga Nge) Ward	Nyaung Wun	Myin Ywar Ka Lay	Let Pan

Sapar Twin	Ta Pei	Shwe Thu Htay Ward	(Nga) Ward	Kan U	Kan Swei (East)	Nyaung Pin Wun
Zay Ywar	Pan Ya (South)	Shan Pwe Ward	(Ka Gyi) Ward	Pay Taw (Kan Pauk)	Sa Myaung	Chaung U
Mying Thar	Thit Taw Hpyar (North)	Nwar Ku Gyi	Si Thar	Myauk Kyun	Nyaung Wun (South)	Sue Lay Gone Ward
Tha Pyay Kan	Kyauk Ta Lone	Pon Nar	Pyin Si	Ah Neint	Ma Gyi Kan	
Koke Ko Kan	Ywar Bo (South)	Ywar Thar Aye	Tha Pay Thar (Middle)	Te Kone	Kyauk Kone	
Taung Kine	No (1) Ward	Kyauk Sauk	Tha Pay Thar (East)	Kyaung Phu	Myaung Char	
Souk Taw Wa	No (4) Ward	Tha Pay Thar (East)	Lay Tan	Ya Thar	Min Win	
Sauk Inn	Sin Tat	Tha Pay Thar West	Ywar Thar Aye	Ma Yoe Kone	Ah Lel Kyun	
Ta Ohm	Si Kan	Kan Kwayt	Pin Lel	Thein	Thone Ein	
Ae Bya	Kan Ma	Kone Thar	Te Gyi	Hpet Ping Aing	Kyan Tan Ward	
Ma Gyi Kine	Hpyu Twin Kone	Aye	Kyar Kan	Son	Buu Tar Ward	
Inn Kuu	Tha Yet Kan	Myin Chan Kone	Hnat Cho Taw	Ywar Thar Yar	Min Nay Kone	
Sa Kar Tae	Htan Ta Pin	Kyar Myee Swea	Kan Chaw (Ga Lant)	Koke Ke	Tha Kyin	
Moe Nan Chone	Pyin Hla Taw	Maing Maw	Thein Kone	Kyauk Tan	Let Pan Thar	
Suu Kar King	Ma Gyi Kone	Kin Sein Zay (East)	Myay Sa Kaung	Lay Ywar Son	Thin Pan Kone Ward	
Kan Gyi	Than Kone	Ta Ko Tee (North)	No (12) Ward	Hpon		
Myo Ma Ward	Tha Nat Sit	Pay Kone	Shwe Chaung	Ku		
Chan Aye Thar San Township	Na Be Pin	Wet Htein	Ma Har Myaing (1) Ward	Zee Pin Kan	No(7) Ward	
Hta Naung Pin Hla	Chin Thayt Let	Tha Ma Tan	Min Yin	Zee Taw	No(18) Ward	
Kyauk Chaw	Nga Lunt	Ta Mar Pin	Sat Pyar Kyin	Ywar Si (North)	Taung Kyun	
Aung Chan Thar	(Ga Gyi) Ward	Nat Yae Kan	Pa Da Myar Ward	Sar Khar	Kyar Taing	
Nauk Taw Par	(Kha Gway) Ward	Yae Poke	Nat Sin	Sin Gut	Hta Naung Pin Su (South)	
Nyaung Pin Thar	Chan Mya Thar Zi (South) Ward	Kyaung Kone Gyi	Mone Za Le	Kaing Taung	Kywe Chan	
Daunt Gyi Kwayt	Min Kun	Tha Pyay Thar	Pyin Pauk	Nyaung Pin	Sar Kyu	
Kyun U	Pe Chet (East)	Hpaung Ka Taw	Aye Seint	Hta Naung Taing	Ku Lar	
Kan Swei	Thar Si Lay	Nyaung Lay Pin	Ku Me	Kun Saik	Kyee Pin	
Pei Lay Se	Myet Shu	Ma Gyi Kyat	Si Pin	Chay Say	Thea Hphy Wa Pyi Taw Thar	
Pay Taw Gyi	Wet Lu (East)	Let Pa Kyin (South)	Tharsi lay	Myo Ma Ward	Tha Pyay Thar	
Ba Lont	Pa Kin (Nar Lin)	Let Pa Kyin (North)	Ywar Thit	Nyaung Kan	Ma Yoe Kone	
Mya Inn	Ah Lel Paing Ward	Se Yoe	Tha Phan Pin	Hpet Taw	Taw Pu	

A.3. Reference of applied methodology

>>>(Indicate title and version number of the methodology.)

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

A.4. Crediting period of project

>> (Provide start date and length of the crediting period as given in approved PDD.)

Start Date of the Crediting Period as in approved PDD: 01/07/2017

Length of the crediting period is five years, renewable twice, hence 15 years in total.

SECTION B. Implementation of project

B.1. Description of implemented project

>> (Provide information on the implementation status of the project during this monitoring period. Specify any deviations / delays compared to information in approved project.)

In VPA 007, the total number of stoves distributed eligible for crediting are 1743. 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. 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 project implementation partner of this VPA, Mercy Corps (Myanmar) team who looks into stove repairs/replacements. In an event where the user needs after-sale service, he/she reaches out to the local sale agent, who then raises the matter with the local project team. Records of stoves services/replaced are maintained at the Mercy Corps local office. For this particular monitoring period, no such stove complains or requests for service/replacements were received from the stove users.

The project is implemented and is currently under annual monitoring. For the reported monitoring period, 99.1% 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.2. Post-registration changes

B.2.1. Temporary deviations from Certified Key Project Information, Project Design Document, Monitoring & Reporting Plan, applied methodology or applied standardized baseline

>> (Indicate whether any temporary deviations have been applied during this monitoring period. If applied, provide a description of the deviation(s). Include the reasons for the deviation(s), how it deviates from the monitoring plan, applied methodology(ies) and/or applied approaches, the duration for which the deviation(s) is(are) applicable and justification on the conservativeness of the approach. Also indicate if prior approval from GS-TAC have been sought on the deviation.)

The number of households in this VPA has been changed from 1953 considered earlier during validation to 1743 total listed households, which have been considered eligible and have been applied for final verification for the third monitoring term, and the same number of stoves were applied for the first term of monitoring as well.

Out of 1953, the following stoves were taken out from applying for verification:

- i) End User Data Missing = 9
- ii) Repeated Stove Serial Numbers = 28
- iii) Electric Stoves as Baseline Stoves = 81
- iv) Charcoal as Baseline Fuel = 48
- v) Other discrepancies = 31
- vi) Households having more than one project stoves = 13

After deducting i) to vi), 1743 stoves were selected for crediting out of 1953 stoves considered originally.

B.2.2. Corrections

>> *(Indicate whether any corrections to project information or parameters fixed at validation have been applied.)*

- i) Same as B.2.1
- ii) The monitoring period was changed from: 01/03/2017 to 28/02/2018 to 01/07/2017 to 30/06/2018 during the first monitoring period . For the third monitoring period, this is: 01/07/2019 to 30/06/2020

B.2.3. Changes to start date of crediting period

>> *(Indicate whether any changes to the start date of the crediting period have been approved by Gold Standard that is relevant for this monitoring period.)*

Change done during the previous first monitoring period: The dates were changed from: 01/03/2017 to 28/02/2018 to 01/07/2017 to 30/06/2018.

B.2.4. Permanent changes from registered monitoring plan, applied methodology or applied standardized baseline

>> *(Indicate whether any permanent changes from the approved monitoring plan, applied methodologies or applied approaches have been approved by GS-TAC that is relevant for this monitoring period.)*

N.A.

B.2.5. Changes to project design of approved project

>> *(Indicate whether any changes to the design of the project have been approved by GS-TAC that is relevant for this monitoring period.)*

N.A.

SECTION C. Description of monitoring system applied by the project

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The start of the stove distribution under this VPA was on 01st March 2017 and the distribution ended on 30th June 2017.

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
- Project Database, which is maintained continuously

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 Sale¹
- Model/type of project technology sold:
- Serial/ID number of the device
- Name and telephone number (if available) of end-users
- Application of device (type of end use: Commercial/Domestic)
- Address/ Location of end-users²

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

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.

¹ Date of Sale will be associated with conservative assessment as to date of installation and commencement of use of technology

² In circumstances where a user's formal address cannot be provided due to insufficient information on street names/house numbers, suitable landmarks/ with location on a town/city plan will be provided.

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 must be 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 must be 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 third request for issuance), usage parameters must be 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.
- Monitoring Survey to reassess household kitchen regimes. CME and/or Implementation Partner will randomly sample households from the sales agreements received. Sampling will be 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 must also monitor 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 06/07/2020 to 13/07/2020

During this period, 111 household face to face surveys were conducted in a total of 10 villages under this VPA. These villages are: Hpet Pin Aing, Hpyu Twin Kone, Kin bet, Kyauk Tan, Myauk Kyun, Nwar Shar Yoe, Pin Lel, Sar Kyu, Sin Gut, Sin Hpyu Kone,

- Monitoring Team:

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

Name	Designation & Role	Qualification
Bhushan Trivedi	<p>Consultant to the Soneva Foundation on Myanmar Stoves Campaign.</p> <p>Bhushan led the designing of the project monitoring survey exercise + QA/QC of data.</p>	<p>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.</p> <p>Bhushan has earned his bachelor's degree in Mechanical Engineering from Pune University, India. A Masters in Environmental Assessment & Management from Salford University, Manchester, UK, and a Diploma in Social Entrepreneurship from NMIMS, Mumbai.</p>
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>
Local Office Team Members	<p>Team Members who conducted the telephonic interviews</p>	<p>1) Sit Aung Naing (+95-9250523276), Project Officer based in Yenangyaung township, Magway region. He is taking care of 6 townships. Working with project since December 2016.</p> <p>2) Zaw Moe Aung (+95-9793823190) Project Assistant based in Salin township. Supporting Sit Aung Naing. Working with this project since September 2017.</p> <p>3) Htein Lin (+95-9402539143) Project Officer based in Aung Lan township. He is taking care of 6 townships. Working with this project since Jan 2014 .</p> <p>4) Win Tun Aung (+95-9253247400), Project Assistant based in Magway township. Supporting Htein Lin. Working with this project since August 2014.</p>

		5) Tun Lin Aung (+95-9259388510), Project Officer based in Min Hla township. Working with this project since September 2017
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SECTION D. Data and parameters

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

(Copy this table for each piece of data and parameter)

Relevant SDG Indicator	SDG 13: Take urgent action to combat climate change and its impacts Target 13 B: Promote mechanisms for raising capacity for effective climate change-related planning and management in least developed countries and small island developing States, including focusing on women, youth and local and marginalized communities
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 Target 13 B: Promote mechanisms for raising capacity for effective climate change-related planning and management in least developed countries and small island developing States, including focusing on women, youth and local and marginalized communities
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	0.530
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 Target 13 B: Promote mechanisms for raising capacity for effective climate change-related planning and management in least developed countries and small island developing States, including focusing on women, youth and local and marginalized communities
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 Target 13 B: Promote mechanisms for raising capacity for effective climate change-related planning and management in least developed countries and small island developing States, including focusing on women, youth and local and marginalized communities
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 Target 13 B: Promote mechanisms for raising capacity for effective climate change-related planning and management in least developed countries and small island developing States, including focusing on women, youth and local and marginalized communities
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	CDM EB67 Report Annex 22 (Weblink)
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 Target 13 B: Promote mechanisms for raising capacity for effective climate change-related planning and management in least developed countries and small island developing States, including focusing on women, youth and local and marginalized communities
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, please find the document titled, “VPA 007 (GS 6129) Third Term - Myanmar Stoves Campaign - Baseline Survey Report - March 2018”. 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.</p> <p>Farmers are regularly visited by traders to negotiate purchases of harvested goods. During these visits families prepare food for guests, requiring additional cooking.</p> <p>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 Target 13 B: Promote mechanisms for raising capacity for effective climate change-related planning and management in least developed countries and small island developing States, including focusing on women, youth and local and marginalized communities
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

(Copy this table for each piece of data and parameter)

Relevant SDG Indicator	SDG 13: Take urgent action to combat climate change and its impacts Target 13 B: Promote mechanisms for raising capacity for effective climate change-related planning and management in least developed countries and small island developing States, including focusing on women, youth and local and marginalized communities
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	99.1%
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 will be selected for follow-up by the monitoring and evaluation team. A combination of household visits and phone calls to households will verify 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 111 households.

Relevant SDG Indicator	SDG 13: Take urgent action to combat climate change and its impacts Target 13 B: Promote mechanisms for raising capacity for effective climate change-related planning and management in least developed countries and small island developing States, including focusing on women, youth and local and marginalized communities
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 007 (GS 6129) Third Term - End User Database
Value(s) of monitored parameter	1743
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 Target 13 B: Promote mechanisms for raising capacity for effective climate change-related planning and management in least developed countries and small island developing States, including focusing on women, youth and local and marginalized communities
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	Fixed default value from the methodology.
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 Target 13 B: Promote mechanisms for raising capacity for effective climate change-related planning and management in least developed countries and small island developing States, including focusing on women, youth and local and marginalized communities
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	11.8%
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 use may be 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.

SDG Indicators & Safeguarding Principles Assessment (SPA) Monitoring Indicators and Status:

Relevant SDG Indicator	SDG 3: Ensure healthy lives and promote well-being for all at all ages Target 3.9: By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination
Data / Parameter	Improvement in the indoor air quality, and health and safety of the stove users.
Unit	%
Description	Qualitative feedback from the stove users
Source of data	Project Survey
Value(s) applied	100%
Measurement methods and procedures	Household Surveys
Monitoring frequency	Annual
QA/QC procedures	Transparent data collection, analysis and reporting.
Purpose of data	Aimed at gathering and analysing user feedback on improvement in Indoor Air Quality and sub-sequent health benefits (eg: improvements in irritation to eyes, breathing problems, other health and safety benefits). The FES has reported reductions in CO and PM emissions as compared to three stone fires by 82% and 70% respectively (Link), which contributes to the health and well-being by reduction of Indoor Air Pollution.
Additional comment	Not Applicable

Relevant SDG Indicator	SDG 7: Ensure access to affordable, reliable, sustainable and modern energy for all Target 7.3: By 2030, double the global rate of improvement in energy efficiency.
Data / Parameter	Number of households served.
Unit	Number
Description	Total households and lives impacted
Source of data	Ongoing data collection and storage.
Value(s) applied	1743 eligible households in this VPA, and 8343 lives impacted.

Measurement methods and procedures	Ongoing, Project User Database. The Total Sales Record collects and maintains the total number of FES distributed in this VPA, from its start date to end date, which helps to estimate the number of lives this VPA has impacted.
Monitoring frequency	Annual
QA/QC procedures	Transparent data collection, analysis and reporting.
Purpose of data	To measure the number of households (and lives) impacted by access of a fuel-efficient cookstove.
Additional comment	Not Applicable. The average HH size of 4.83 people/HH was derived at the time of VPA registration based on baseline survey, and not monitored during the project survey during this monitoring period.

Relevant SDG Indicator	SDG 8: Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all Target 8.3: Promote development-oriented policies that support productive activities, decent job creation, entrepreneurship, creativity and innovation, and encourage the formalization and growth of micro-, small- and medium-sized enterprises, including through access to financial services.
Data / Parameter	Number of Sale Agents (Men and Women) created for the sales/distribution of stoves.
Unit	Number
Description	Employment and local capacity built up
Source of data	Ongoing data collection and storage. The Project Tracking File records the number of sale agents created during each VPA.
Value(s) applied	46 sale agent jobs created during this VPA period.
Measurement methods and procedures	Ongoing, Project Tracking File
Monitoring frequency	Annual
QA/QC procedures	Transparent data collection, analysis and reporting.
Purpose of data	To measure the number of jobs created local men and women in the target region.
Additional comment	Not Applicable

Relevant SDG Indicator	SDG 13: Take urgent action to combat climate change and its impacts Target 13.3: Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning.
Data / Parameter	Number of: i) Village Level Awareness Raising Events and ii) Attendance
Unit	Number
Description	Local awareness and sensitisation over climate/deforestation issues
Source of data	The Project Tracking File records the number awareness raising sessions conducted and the attendance in such meetings.
Value(s) applied	60 village level events attended by 1560 participants.
Measurement methods and procedures	Ongoing, Project Tracking File
Monitoring frequency	Annual
QA/QC procedures	Transparent data collection, analysis and reporting.

Purpose of data	To measure the number of people made aware and sensitised about the issues of global warming, climate change, deforestation impacts and transitioning towards energy efficient choices in the target region.
Additional comment	The Myanmar Stoves Campaign conducts village level awareness raising campaigns, where it aims to educate and sensitize the target audience broadly on key environmental issues, implications of deforestation, global warming and climate change and the importance of energy efficient cooking solutions. These workshops are conducted from village to village and are attended by the men, women and children and the village head of the respective villages. In these meetings, the discussion is around the environmental challenge and the project idea, design, and partners, the project cookstoves and its advantages, cooking demonstrations, the purchase points, and payment plans and general feedback of the audience/QnA with them. During this VPA period, 60 such events were conducted, which were attended by a total of 1560 participants.

Safeguarding Principles Assessment (SPA) Monitoring

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

D.3. Implementation of sampling plan

>> (If data and parameters monitored described in section D.2 above are determined by a sampling approach, provide a description on how project participants implemented the sampling plan and surveys for those data and parameters according to the approved PDD.)

The PP chose a list of villages where the project made medium to high volume of sales. Following this, a simple random sampling approach was employed to choose between around 10 villages from this list. Lastly, the households in these chosen village were selected randomly for usage surveys.

Sampling, and Selection of Villages and Households for Survey

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.

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

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probability of being chosen as sample. 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 experienced enumerators. During this exercise, the enumerators 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.

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.

At the household selection, as described above, the enumerators are given a list of villages by the PP and the Implementation Partners. All the households in these villages have an equal chance of being interviewed for the survey, and the selection is purely done randomly.

Prior to this, at the village selection for conducting the surveys, the PP had manually selected these villages for the surveys from the total population (N) of villages under this VPA meeting the sales threshold as described above via the (Manual) Lottery Method, as the N was not large. No software support was used here. The PP planned to select around 10 villages spread across the start and end dates of the stove distribution date under this VPA, and have around 9-11 surveys done in each of the villages, in order to get results from as many different villages we can.

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, 111 surveys were conducted out of 1743 total 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: <https://www.surveymonkey.com/mp/margin-of-error-calculator/>)

The list of households which were surveyed is as follows:

Survey No	Stove Serial Number	Household Owner Name	Village Name	Date of Purchase of FES	Date of Survey	FES Still Used
1	EM1G078192	Daw Myat Nu	Hpet Pin Aing	03-05-2017	6-Jul-20	Yes
2	EM1G076790	Daw Khin HninnThu	Hpet Pin Aing	05-05-2017	6-Jul-20	Yes
3	EM1G077156	U Wai Phyto	Hpet Pin Aing	04-05-2017	6-Jul-20	Yes
4	EM1G077807	U Naing Zaw Lat	Hpet Pin Aing	05-05-2017	6-Jul-20	Yes
5	EM1G078559	Daw Khin San Myint	Hpet Pin Aing	06-05-2017	6-Jul-20	Yes
6	EM1G077340	Daw Mar Mar	Hpet Pin Aing	06-05-2017	6-Jul-20	Yes
7	EM1G078211	Daw Moe Thu	Hpet Pin Aing	07-05-2017	6-Jul-20	Yes
8	EM1G078570	U Myint Aung	Hpet Pin Aing	29-06-2017	6-Jul-20	Yes
9	EM1G076933	Daw Khin Myaing	Hpet Pin Aing	22-05-2017	6-Jul-20	Yes
10	EM1G077745	U Aye	Hpet Pin Aing	07-04-2017	6-Jul-20	Yes
11	EM1G078330	Daw Ei Ei Chaw	Hpet Pin Aing	16-05-2017	6-Jul-20	Yes
12	EM1G078310	Daw Kyi Win	Hpyu Twin Kone	22-03-2017	7-Jul-20	Yes
13	EM1G077574	Daw Than Hlaing	Hpyu Twin Kone	23-03-2017	7-Jul-20	Yes
14	EM1G077001	Daw Ban Htay	Hpyu Twin Kone	22-03-2017	7-Jul-20	Yes

15	EM1G076870	Daw Win Si	Hpyu Kone Twin	25-03-2017	7-Jul-20	Yes
16	EM1G076464	Daw Tin Aung	Hpyu Kone Twin	24-03-2017	7-Jul-20	Yes
17	EM1G076868	Daw Win	Hpyu Kone Twin	24-03-2017	7-Jul-20	Yes
18	EM1G076880	Daw Toe Yi	Hpyu Kone Twin	22-03-2017	7-Jul-20	Yes
19	EM1G078093	Daw Kyi Hlaing	Hpyu Kone Twin	22-03-2017	7-Jul-20	Yes
20	EM1G077829	Daw Hla Po	Hpyu Kone Twin	25-03-2017	7-Jul-20	Yes
21	EM1G076512	Daw Khin San Win	Hpyu Kone Twin	25-03-2017	7-Jul-20	Yes
22	EM1G076638	Daw Myint	Hpyu Kone Twin	23-03-2017	7-Jul-20	Yes
23	EM1G078341	Daw Nu	Hpyu Kone Twin	24-03-2017	7-Jul-20	Yes
24	EM1G075041	Daw Kay Thi	Kin Bet	12-03-2017	6-Jul-20	Yes
25	EM1G075065	U Khin Maung Than	Kin Bet	06-03-2017	6-Jul-20	Yes
26	EM1G076323	U Soe Khin	Kin Bet	12-03-2017	6-Jul-20	Yes
27	EM1G075476	U Htun Kyaw	Kin Bet	12-03-2017	6-Jul-20	Yes
28	EM1G075205	Daw Yin Yin Mya	Kin Bet	15-03-2017	6-Jul-20	Yes
29	EM1G075156	U Maung Maung	Kin Bet	28-03-2017	6-Jul-20	Yes
30	EM1G075363	U Han Nyunt	Kin Bet	31-03-2017	6-Jul-20	Yes
31	EM1G075970	U Kyaw Thu	Kin Bet	09-03-2017	6-Jul-20	Yes
32	EM1G075727	U Kyaw Sai Maung	Kin Bet	06-03-2017	6-Jul-20	Yes
33	EM1G074477	U Sai Aung	Kin Bet	06-03-2017	6-Jul-20	Yes
34	EM1G074749	U Chit Ko	Kin Bet	06-03-2017	6-Jul-20	Yes
35	EM1G074869	U Aung Kyi	Kin Bet	06-03-2017	6-Jul-20	Yes
36	EM1G077916	Daw Win	Kyauk Tan	30-04-2017	7-Jul-20	Yes
37	EM1G077609	Daw Hla Yi	Kyauk Tan	30-04-2017	7-Jul-20	Yes
38	EM1G078183	Daw Aye Shwe	Kyauk Tan	30-04-2017	7-Jul-20	Yes
39	EM1G077328	Daw Aye Aye Mar	Kyauk Tan	30-04-2017	7-Jul-20	Yes
40	EM1G076812	Daw Nwet yi	Kyauk Tan	28-05-2017	7-Jul-20	Yes
41	EM1G077580	Daw Nyo	Kyauk Tan	29-04-2017	7-Jul-20	Yes
42	EM1G078146	Daw Khin Mar Cho	Kyauk Tan	02-05-2017	7-Jul-20	Yes
43	EM1G077591	Daw Yi Win	Kyauk Tan	01-05-2017	7-Jul-20	Yes
44	EM1G078602	Daw Hlaing	Kyauk Tan	24-05-2017	7-Jul-20	Yes
45	EM1G077371	Daw Khin Htay Kyi	Kyauk Tan	23-05-2017	7-Jul-20	Yes
46	EM1G076731	Daw Thein De	Myauk Kyun	05-05-2017	11-Jul-20	Yes
47	EM1G076722	Daw Win Win Nwe	Myauk Kyun	05-05-2017	11-Jul-20	Yes
48	EM1G076824	Daw Kyi Win	Myauk Kyun	01-05-2017	11-Jul-20	Yes

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49	EM1G078258	Daw Aye Nyunt	Myauk Kyun	05-05-2017	11-Jul-20	Yes
50	EM1G076961	Daw Khin Win	Myauk Kyun	05-05-2017	11-Jul-20	Yes
51	EM1G078204	Daw Khaing	Myauk Kyun	01-05-2017	11-Jul-20	Yes
52	EM1G078135	Daw Khin Swe Hlaing	Myauk Kyun	01-05-2017	11-Jul-20	Yes
53	EM1G078253	Daw Ohm Mar	Myauk Kyun	05-05-2017	11-Jul-20	Yes
54	EM1G076708	Daw Kyi Kyi Wai	Myauk Kyun	05-05-2017	11-Jul-20	Yes
55	EM1G078160	Daw Yi Htay	Myauk Kyun	05-05-2017	11-Jul-20	Yes
56	EM1G078357	Daw Myint Shwe	Myauk Kyun	01-05-2017	11-Jul-20	Yes
57	EM1G076748	Daw Mya Htay	Myauk Kyun	05-05-2017	11-Jul-20	Yes
58	EM1G077727	U Aung Win	Nwar Shar Yoe	05-04-2017	7-Jul-20	Yes
59	EM1G077458	U Aung Min	Nwar Shar Yoe	04-04-2017	7-Jul-20	Yes
60	EM1G078213	U Tin Myint	Nwar Shar Yoe	06-04-2017	7-Jul-20	Yes
61	Em1G077057	U Thein Zaw	Nwar Shar Yoe	28-04-2017	7-Jul-20	Yes
62	EM1G077115	U Thein Naing	Nwar Shar Yoe	07-04-2017	7-Jul-20	Yes
63	EM1G077740	U Win Kyaw	Nwar Shar Yoe	05-04-2017	9-Jul-20	Yes
64	EM1G076700	U Tote Paw	Nwar Shar Yoe	05-04-2017	9-Jul-20	Yes
65	EM1G077701	U Aung Tint	Nwar Shar Yoe	08-04-2017	9-Jul-20	Yes
66	EM1G077204	U Tin Shwe	Nwar Shar Yoe	04-04-2017	9-Jul-20	Yes
67	EM1G077613	U Nyunt Win	Nwar Shar Yoe	05-04-2017	13-Jul-20	Yes
68	EM1G077079	Daw Khin Mar Kyi	Nwar Shar Yoe	07-04-2017	13-Jul-20	Yes
69	EM1G077987	U Shwe Nyo	Nwar Shar Yoe	15-06-2017	13-Jul-20	Yes
70	EM1G078578	Daw Khin Ohm	Pin Lel	04-05-2017	11-Jul-20	Yes
71	EM1G077427	Daw Mya Nyunt	Pin Lel	04-05-2017	11-Jul-20	Yes
72	EM1G076899	Daw Ohm Sein	Pin Lel	05-05-2017	11-Jul-20	Yes
73	EM1G076684	U Nyo	Pin Lel	03-05-2017	11-Jul-20	Yes
74	EM1G078501	Daw Aye Win	Pin Lel	03-05-2017	11-Jul-20	Yes
75	EM1G078636	Daw Aye Mar	Pin Lel	18-05-2017	11-Jul-20	Yes
76	EM1G077144	Daw Win Tin	Pin Lel	05-05-2017	11-Jul-20	Yes
77	EM1G078235	U Khin Mg Htay	Pin Lel	05-05-2017	11-Jul-20	Yes
78	EM1G076962	Daw San Aye	Pin Lel	26-05-2017	11-Jul-20	Yes
79	EM1G077470	U Thaung	Sar Kyu	31-05-2017	8-Jul-20	Yes
80	EM1G076707	Daw Than Hla	Sar Kyu	31-05-2017	8-Jul-20	Yes
81	EM1G078260	Daw Tin Ma	Sar Kyu	30-05-2017	8-Jul-20	Yes
82	EM1G076611	Daw Htay Kyi	Sar Kyu	09-06-2017	8-Jul-20	Yes
83	EM1G078223	Daw Zee	Sar Kyu	20-06-2017	8-Jul-20	Yes
84	EM1G076569	Daw Hnin Si	Sar Kyu	28-06-2017	8-Jul-20	Yes

85	EM1G078191	U Myint Kyaw	Sar Kyu	01-06-2017	8-Jul-20	Yes
86	EM1G077720	Daw Tin Too	Sar Kyu	09-06-2017	8-Jul-20	Yes
87	EM1G076607	Daw Sein Aye	Sar Kyu	01-06-2017	8-Jul-20	Yes
88	EM1G076716	U Win Kyi	Sar Kyu	01-06-2017	8-Jul-20	Yes
89	EM1G076720	U Mg Aye	Sar Kyu	27-05-2017	8-Jul-20	Yes
90	EM1G077518	Daw Cho They Win	Sin Gut	02-05-2017	9-Jul-20	Yes
91	EM1G076567	Daw Aye	Sin Gut	04-05-2017	9-Jul-20	Yes
92	EM1G078262	Daw Paw	Sin Gut	05-05-2017	9-Jul-20	Yes
93	EM1G077496	Daw Chaw	Sin Gut	02-05-2017	9-Jul-20	Yes
94	EM1G076677	Daw Ni	Sin Gut	08-05-2017	9-Jul-20	Yes
95	EM1G077732	Daw Win Mow	Sin Gut	03-05-2017	9-Jul-20	Yes
96	EM1G076728	U Myint San	Sin Gut	05-05-2017	9-Jul-20	Yes
97	EM1G077961	Daw Htay	Sin Gut	12-05-2017	9-Jul-20	Yes
98	EM1G076719	U Than Chaung	Sin Gut	04-05-2017	9-Jul-20	Yes
99	EM1G077597	U Paw Tun	Sin Gut	04-05-2017	9-Jul-20	Yes
100	EM1G077467	U Phoe Zone	Sin Gut	03-05-2017	9-Jul-20	Yes
101	EM1G076633	Daw Yin Yin Htay	Sin Hpyu Kone	05-04-2017	8-Jul-20	Yes
102	EM1G076909	Daw Khin Saw Win	Sin Hpyu Kone	05-04-2017	8-Jul-20	Yes
103	EM1G078464	Daw Aye Aye Maw	Sin Hpyu Kone	06-04-2017	8-Jul-20	Yes
104	EM1G076393	Daw San San Oo	Sin Hpyu Kone	04-04-2017	8-Jul-20	Yes
105	EM1G076453	Daw Mya Paing	Sin Hpyu Kone	06-04-2017	8-Jul-20	Yes
106	EM1G076867	Daw Shwe Man	Sin Hpyu Kone	05-04-2017	8-Jul-20	No
107	EM1G076510	U Aung Muu	Sin Hpyu Kone	29-04-2017	8-Jul-20	Yes
108	EM1G076871	Daw Tin Mar	Sin Hpyu Kone	02-04-2017	8-Jul-20	Yes
109	EM1G076658	Daw Ei Ei Mon	Sin Hpyu Kone	30-03-2017	8-Jul-20	Yes
110	EM1G077927	Ma Khaing Khaing Myint	Sin Hpyu Kone	25-03-2017	8-Jul-20	Yes
111	EM1G076457	Daw San Myaing	Sin Hpyu Kone	06-04-2017	8-Jul-20	Yes

SECTION E. Calculation of SDG outcomes

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

>> (Provide details of equations and approaches used to calculate/estimate baseline values.)

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 (and money) was spent on collecting firewood.

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.

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

= 4.2 T/household/annum of wood was consumed, and 12774 tonnes of CO₂ was emitted due to use of three stone fires
= 0 environmental awareness sessions were organised

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

>> (Provide details of equations and approaches used to calculate/estimate project values.)

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

This VPA alone applied for 1743 stoves eligible for crediting and with the latest usage rate from monitoring tests being 99.1%, around 1727 stoves are still in use, which has improved the health and safety of around 8343 people 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 1743 households that are applied credited and with the latest usage rate from monitoring tests being 99.1%, around 1727 stoves are still in use, which has ensured access to affordable, reliable, sustainable and modern energy for around 8343 people

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 program and until the end of this VPA period, 46 such sale agents were trained and developed, which includes 42 women.

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

The VERs claimed by this VPA, are 8099 VERs during the third issuance. The detailed VER calculations are shown as below:

EX-POST CALCULATION OF EMISSION REDUCTIONS FOR VPA 007 (GS 6129)

PARAMETER	UNIT	DESCRIPTION	2017	2018	2019	Source
$N_{p,y}$	-	Number of project cookstoves of each age group operation in year y	1,743	1,743	1,743	
$U_{p,y}$	%	Usage rate for project cookstove in year y, based on adoption rate and drop off rate as per usage surveys	97	98.1	99.1	Source: Usage Survey, July 2020 (ex-post)
$B_{b,y}$	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	27.32	27.32	
P_y	t/hh/a	Quantity of firewood that is saved in the year y	2.71	2.67	2.67	
η_p	%	Efficiency of project cookstove (fraction) determined at the start of the project activity	29.7	29.7	29.7	
DF_{η}	Fraction	Discount factor to account for efficiency loss of project cookstove per year of operation (fraction)	0.94	0.92	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
$EF_{b, fuel, non_CO2}$	tCO ₂ /tWood	Non-CO ₂ emission factor of firewood that is substituted or reduced	0.455	0.455	0.455	Methodology
$DF_{b, Stove, y}$	Fraction	Usage of baseline cookstove during the year y in project scenario	8.3862	12.0200	11.8000	Source: Usage Survey, July 2020 (ex-post)
	%	Percent of users who also use baseline cookstove	43.93	28.16	47.27	Source: Usage Survey, July 2020 (ex-post)
	%	Percent of meals prepared using baseline cookstove	19.09	12.02	11.80	Source: Usage Survey, July 2020 (ex-post)
x	-	y-1				
y	-	Year of the crediting period				
t CO ₂	-	Emission reductions of the project activity in period y (max. 10,000)	9,569	8,418	8,525	
-	-	Leakage Discount Factor	0.95	0.95	0.95	
ER _y	t CO ₂	Emission reductions of the project activity in period y (max. 10,000)	9,090	7,997	8,099	
ER _{acc}	t CO ₂	Aggregated emission reductions	9,090	7,997	8,099	
	t CO ₂	Emission reductions per appliance	5.22	4.59	4.65	
	trees	Number of trees saved per appliance per y	13.9	13.7	13.7	
	trees	Number of trees saved per year	24,142	23,849	23,849	
	kg	Average weight of tree	195.5	195.5	195.5	

The vintage breakdown of the ER is as follows:

From	To	VERs
01-Jul-19	31-Dec-19	4049
01-Jan-20	30-Jun-20	4050
Total		8099

The equations used to determine the VER calculations are as per The Gold Standard Simplified Methodology for Efficient Cookstoves, Version 01, February 2013, where:

$$ER_y = \sum_{t=0}^{xoy} N_{p,y} * P_y * U_{p,y} * (f_{NRB,y} * EF_{b, fuel, CO2} + EF_{b, fuel, non_CO2}) * (1 - DF_{b, Stove, y})$$

$$P_y = B_{b,y} * (1 - \frac{\eta_b}{\eta_{p,y}})$$

$$\eta_{p,y} = \eta_p * (DF_\eta)^{y-1} * 0.94$$

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 more than 60 such village level awareness raising events which were attended by more than 1560 participants, of which were 1049 were females.

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 net benefits as difference of baseline and project values or direct calculation for each SDG outcome

>>

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) = The project has 1743 stove eligible for ER claim and with 99.1% usage rate, 1727 stoves are still in use, which has positively impacted the health and safety of around 8343 people. 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 1743 households that are applied for crediting and with the latest usage rate from monitoring tests being 99.1%, around 1727 stoves are still in use, which has ensured access to affordable, reliable, sustainable and modern energy for around 8343 people

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, 46 sale agents were trained and developed, which includes 42 women.

Project Calculations: Values derived from the 'VPA 007 (GS 6129) Third Term - Project Tracking File'.

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

a) Baseline Scenario = Around 4.2 Tonnes of Wood was consumed per household per year and about 12774Tonnes 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 007 (GS 6129) Third Term - Baseline Survey Report'

b) Project Scenario (& the net benefit) = Around 2.69 Tonnes of firewood is saved per year per household and the VERs claimed by this VPA, are 8099 VERs during the third issuance. 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 more than 60 such village level awareness raising events which were attended by more than 1560 participants, of which 1049 were females.

Project Calculations: Please refer to 'VPA 007 (GS 6129) Third Term - Ex Post Emission Reductions Sheet' for ER calculations. The values of awareness raising events are derived from the 'VPA 007 (GS 6129) Third Term - Project Tracking File'.

E.4. Summary of ex-post values of each SDG outcome for the current monitoring period

Item	Baseline estimate	Project estimate	Net benefit
SDG 3	0 ICS in use 0 people impacted positively on health and safety, improved productivity	1727 ICS in use 8343 people impacted positively on health and safety	1727 ICS in use 8343 people impacted positively on health and safety
SDG 7	0 households benefited with an ICS	1727 households benefited and have a working ICS	1727 households benefited and have a working ICS
SDG 8	0 local jobs created	46 local sale agents trained and developed	46 local sale agents trained and developed
SDG 13	4.2 Tonnes of Wood consumed per household per year 12774 tCO ₂ emitted by all household in the VPA per year	1.53 Tonnes of Wood consumed per household per year 4675 tCO ₂ emitted by all household in the VPA per year 0 village level awareness events conducted attended by 0 participants	2.69 Tonnes of Wood saved per household per year 8099 tCO _{2e} saved 60 village level awareness events conducted attended by 1560 participants

E.5. Comparison of actual value of outcomes with estimates in approved PDD

Item	Values estimated in ex ante calculation of approved PDD	Actual values achieved during this monitoring period
SDG 3	Around 10,000 people impacted positively on health and safety,	8343 people impacted positively on health and safety
SDG 7	1953 households receiving Energy efficient cookstoves in Myanmar, an LDC	1743 households (eligible for crediting) received Energy efficient cookstoves in Myanmar, an LDC, and 1727 in use after year 3
SDG 8	410 local sale agents trained and developed (estimate of from start of project till around validation)	46 local sale agents trained and developed
SDG 13	10266 tCO _{2e} saved + 37 village level awareness events conducted attended by 1262 participants	8099 tCO _{2e} saved + 60 village level awareness events conducted attended by 1560 participants

E.6. Remarks on difference from estimated value in approved PDD

>> For SDG 3, the number of people impacted is less in monitoring period due to less number of stoves being applied for crediting and drop in usage rate. The same applies for SDG 7 & SDG 13 for the ER calculations. For SDG 8, during the time of validation the PP had reported all the sale agents right from the

project start, which was a mistake. Hence the actual number of sale agents trained during the period are rightfully reported as 46.

SECTION F. Stakeholder inputs and legal disputes

F.1. List all inputs/grievances which have been received for the project during the monitoring period together with their respective answers/actions

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

F.2. List all inputs/grievances from previous monitoring period where follow up action is to be verified in this monitoring period

>> Not Applicable. This is the third monitoring period.

F.3. Provide details of any legal contest or dispute 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.