



GROUPED PROJECTS FOR CAMBODIA IMPROVED COOKSTOVE

(SIPCO)

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Most recent date of issue	11-June-2024
Version	01.2
VCS Standard Version	VCS Standard version 4.5
Prepared by	Sustainability Investment Promotion and Development Joint Stock Company (SIPCO)

CONTENTS

1	PROJECT DETAILS.....	4
1.1	Summary Description of the Implementation Status of the Project	4
1.2	Audit History.....	6
1.3	Sectoral Scope and Project Type	6
1.4	Project Proponent	6
1.5	Other Entities Involved in the Project	6
1.6	Project Start Date	7
1.7	Project Crediting Period	7
1.8	Project Location	7
1.9	Title and Reference of Methodology	9
1.10	Double Counting and Participation under Other GHG Programs	11
1.11	Double Claiming, Other Forms of Credit, and Scope 3 Emissions.....	11
1.12	Sustainable Development Contributions	12
1.13	Commercially Sensitive Information.....	17
2	SAFEGUARDS AND STAKEHOLDER ENGAGEMENT	17
2.1	Stakeholder Engagement and Consultation.....	17
2.2	Risks to Stakeholders and the Environment.....	23
2.3	Respect for Human Rights and Equity	25
2.4	Ecosystem Health	27
3	IMPLEMENTATION STATUS	29
3.1	Implementation Status of the Project Activity	29
3.2	Deviations	32
3.3	Grouped Projects	32
3.4	Baseline Reassessment.....	39
4	DATA AND PARAMETERS.....	40
4.1	Data and Parameters Available at Validation	40
4.2	Data and Parameters Monitored.....	40
4.3	Monitoring Plan.....	42
5	QUANTIFICATION OF GHG EMISSION REDUCTIONS AND REMOVALS	50
5.1	Baseline Emissions	50

5.2	Project Emissions	50
5.3	Leakage Emissions	50
5.4	GHG Emission Reductions and Carbon Dioxide Removals	50
APPENDIX 1: COMMERCIALLY SENSITIVE INFORMATION.....		55
APPENDIX 2: SUPPLY CHAIN (SCOPE 3)		56

1 PROJECT DETAILS

1.1 Summary Description of the Implementation Status of the Project

The intention of the grouped project activity involves the installation of energy efficient Improved Cookstove (ICS) in the households (hereafter “users”) of Kingdom of Cambodia for cooking meals and boiling water. For this reason, this proposed project activity aims at reducing the woodfuel consumption of traditional stove users by distributing ICS to households. By reducing the consumption of woodfuel, it can contribute to improving public health problems. Furthermore, this proposed project can contribute to Cambodia's climate change respond and sustainable development.

The project activity targets households with no previous ICS access. The geographical boundary is in Cambodia. ICSs are distributed free of cost to users. Sustainability Investment Promotion and Development Joint Stock Company (SIPCO) financed the implementation of the project in full.

The project activity will promote the dissemination of energy efficient ICS. This will in turn reduce deforestation and degradation of forests in Cambodia through participation of the people in adopting energy efficient stoves. This will also contribute to improvement in quality of lives of the people from Cambodia through reduction of drudgery, time and money spent on fuel wood collection and through improvement of indoor air pollution. Globally, the project will contribute by reducing emission of GHG into the atmosphere.

The scenario existing prior to the implementation of the project is the actual baseline scenario which is equal to the existing common practice by the households i.e. in absence of the project activity the equivalent amount of thermal energy generated using firewood in three stone open fires to meet the cooking energy demand.

PP signed distribution contract with Cambodian Women for Peace and Development (CWPD). CWPD is a local non-government organization (NGO). CWPD is dedicated to progress, moving forward to build a peaceful nation, to contribute to improving the quality of life of Cambodian women and their family, to alleviate poverty and enhance social integration of the disadvantages and the marginal. The structure of CWPD (vertical linkage from district to commune to village level), its broad membership base and ongoing meetings and activities facilitate project promotion and implementation.

The improved cookstove under this grouped project is the Ecozen stove which is manufactured by Viet Charcoal Production Company Limited. The thermal efficiency and lifespan of the Ecozen ICS is 38.44% and 10 years, respectively.

The Grouped project will distribute free 800,000 ICSs to households who use the traditional cookstove for cooking meals. All the project instances to be included in this grouped project will be from within Cambodia only.

Currently, there are 49 project activity instances under the grouped project¹. The first ICS was distributed on 02-May-2022 in Takeo Province. The first and second monitoring period is from 02-May-2022 to 31-March-2023 with 200,001 ICSs distributed and 01-April-2023 to 31-December-2023 with 149,999 ICSs, respectively. Till the end of this monitoring period, a total of 350,000 ICSs was reported installed under the grouped project. The detail is illustrated as the table below:

No	Month of installation	Number of ICSs
1.	May-2022	32,000
2.	June-2022	20,494
3.	July-2022	17,636
4.	August-2022	23,800
5.	September-2022	16,071
6.	October-2022	16,000
7.	November-2022	40,000
8.	December-2022	16,000
9.	January-2023	3,000
10.	February-2023	15,000
11.	March-2023	11,437
12.	April-2023	15,231
13.	May-2023	16,000
14.	June-2023	17,900
15.	July-2023	13,650
16.	August-2023	13,588
17.	September-2023	22,058
18.	October-2023	17,038
19.	November-2023	16,000
20.	December-2023	7,097
Total	20 months	350,000 ICSs

The total GHG emission reductions generated in the second monitoring from 01-April-2023 to 31-December-2023 is 1,143,538 tCO₂e.

¹ The detail of the 49 project activity instances is mentioned in the section 3.1

1.2 Audit History

Audit type	Period	Program	Validation/verification body name	Number of years
Validation	05-July-2023 is the approval date (Crediting period: 02-May-2022 to 01-May-2032)	VCS	Carbon Check (India) Private Limited	N/A
Verification	From 02-May-2022 to 31-March-2023	VCS	Carbon Check (India) Private Limited	0.915 year
	From 01-April-2023 to 31-December-2023	VCS	EcoLance Private Limited	0.753 year
Total	3	1	2	1.668 year

1.3 Sectoral Scope and Project Type

Sectoral scope ²	03 – Energy Demand
Project activity type	Type II – Energy efficiency improvement project

1.4 Project Proponent

Organization name	Sustainability Investment Promotion and Development Joint Stock Company
Contact person	Ms. Nguyen Thi Hong Hanh
Title	Director
Address	6 th Floor, Hop Long Building, No.1, 59 Lang Ha Street, Ba Dinh District, Hanoi, Viet Nam
Telephone	+84 243 519 0955
Email	info@carbonvietnam.com

1.5 Other Entities Involved in the Project

Not Applicable.

² Projects, activities, or methodologies may be developed under any of the 16 VCS sectoral scopes: <https://verra.org/programs/verified-carbon-standard/vcs-program-details/#sectoral-scopes>

1.6 Project Start Date

Project start date	02-May-2022
Justification	As per section 3.8 of the VCS Standard (v4.5), The project start date of a non-AFOLU project is the date on which the project began generating GHG emission reductions or removals. The project activity is a non-AFOLU project and first improved cookstove under the project has been operating from 02-May-2022. Thus, the project start date is as 02-May-2022

1.7 Project Crediting Period

Crediting period	☐ Seven years, twice renewable ☒ Ten years, fixed ☐ Other (state the selected crediting period and justify how it conforms with the VCS Program requirements)
Start and end date of first or fixed crediting period	02-May-2022 to 01-May-2032

1.8 Project Location

The grouped project will be hosted by Cambodia. The grouped project covers Cambodia bounded between: Latitudes: from 10.41 N to 14.80 N; Longitudes: from 102.29 E to 107.83 E.

The detail of coordination of Cambodia was be provided separately in KML file.

The first project activity instance was distributed in Takeo Province of Cambodia with the following geographic coordinates: latitude 10.9321 N; 104.7987 E



Figure 1: Cambodia Map

Cambodia is divided into 25 provinces. To facilitate the management, implementation, monitoring and sampling stages of the project, the project proponent divides the project boundary into 4 zones.

No.	Zones	Provinces
1	North-Western	Banteay Meanchey, Oddar Meanchey, Preah Vihear, Siem Reap
2	Eastern	Kratie, Mondulkiri, Ratanakiri, Stung Treng
3	Mekong Lowlands	Kampong Cham, Kampong Chhnang, Kampong Thom, Kandal, Prey Veng, Svay Rieng, Phnom Penh, Takeo and. Tboung Khmum
4	Cardomom and Elephant Mountains	Battambang, Koh Kong, Pursat, Kampong Speu, Kampot, Kep, Pailin and Preah Sihanouk

49 project activity instances (PA) during this monitoring were implemented at 9 provinces within Cambodia with the longitude and latitude coordinates the below:

Project activity	Province	Coordinate
PA 001, PA 002, PA 003, PA 005, PA 006, PA 043, PA 044	Takeo	104.7987 E, 10.9321 N https://www.google.com/maps-place-Tak%C3%A9o,+Campuchia-@10.9366166,104.4246985,10z-data=!3m1!4b1!4m6!3m5!1s0x31097ea70af3c445:0x73e3a94e2827c36a!8m2!3d10.9321519!4d104.798771!16zL20vMDJoMmRs?hl=vi-VN
PA 004	Kep	104.3559 E, 10.5360 N https://www.google.com/maps-place-Kep,+Campuchia-@10.49245,104.1812881,11z-data=!3m1!4b1!4m6!3m5!1s0x310836851a8b389f:0x1d6a42c22bd268ae!8m2!3d10.536089!4d104.3559158!16s%2Fm%2FOcrfr1v?hl=vi-VN
PA 007, PA 008, PA 009, PA 010, PA 011	Svay Rieng	105.7993 E, 11.0878 N https://www.google.com/maps-place-Svay+Rieng,+Campuchia-@11.194139,105.2338395,9z-data=!3m1!4b1!4m6!3m5!1s0x310b07eb6e6a2b43:0xea23edfab65bf0c8!8m2!3d11.142722!4d105.8290298!16zL20vMDJoMmQ1?hl=vi-VN
PA 012, PA 013, PA 014, PA 015, PA 016, PA 017, PA 018	Prey Veng	105.3280 E, 11.4851 N https://www.google.com/maps-place-Prey+Veng,+Campuchia-@11.3648215,105.456473,10z-data=!3m1!4b1!4m6!3m5!1s0x310b936cb013b065:0x3a05a414cdd1429b!8m2!3d11.3802442!4d105.5005483!16zL20vMDJoMmM5?hl=vi-VN
PA 019, PA 020, PA 021, PA 022, PA 023, PA 024	Thbong Khnum	105.6415 E, 11.9057 N https://www.google.com/maps/place/Tbong+Khmum,+Campuchia/@11.9496628,104.6205843,8z/data=!3m1!4b1!4m6!3m5!1s0x310c728a36aeb3ad:0x22401b5bf292b69f!8m2!3d11.8891023!4d105.876004!16s%2Fm%2FO_1n0kq?hl=vi-VN&entry=ttu
PA 025, PA 026, PA 027, PA 028, PA 029	Kampong Speu	104.52085 E, 11.45332 N https://www.google.com/maps-place-Kampong+Speu,+Campuchia-@11.5744359,102.9630898,8z-data=!3m1!4b1!4m6!3m5!1s0x310928256ebe44a9:0x468315122092d785!8m2!3d11.6155109!4d104.3791912!16zL20vMDJoMjQ1?hl=vi-VN

PA 030, PA 031, PA 032, PA 033, PA 034, PA 035	Kampong Thom	104.8887 E, 12.71111 N https://www.google.com/maps/place/Kampong+Thom,+Campuchia/@12.8185296,103.6459975,8z/data=!3m1!4b1!4m6!3m5!1s0x310de21fe3d2c3ab:0x64bcff54ced9347c!8m2!3d12.8221829!4d105.1258955!16zL20vMDJoMjRt?hl=vi-VN&entry=ttu
PA 036, PA 037, PA 038, PA 039, PA 040, PA 041, PA 042	Kampong Cham	105.4635 E, 11.9934 N https://www.google.com/maps/place/Kampong+Cham,+Campuchia/@11.9891361,105.3547631,12z/data=!3m1!4b1!4m6!3m5!1s0x310c6a648a9f6931:0x3f4e5cee1b275bb4!8m2!3d11.9924294!4d105.4645408!16zL20vMGJnbW1k?hl=vi-VN&entry=ttu
PA 045, PA 046, PA 047, PA 048, PA 049	Kampot	104.1640 E, 10.5942 N https://www.google.com/maps/place/Kampot,+Campuchia/@10.590923,104.085756,12z/data=!3m1!4b1!4m6!3m5!1s0x310836897d5fd26f:0x6f50ed443bd607ff!8m2!3d10.5942421!4d104.1640355!16zL20vMGmZbnRi?hl=vi-VN

1.9 Title and Reference of Methodology

Type (methodology, tool or module).	Reference ID, if applicable	Title	Version
Methodology	VMR0006	Methodology for installation of High efficiency firewood cookstoves	1.1
Methodology	VMR0006	Energy Efficiency and Fuel Switch Measures in Thermal Applications	1.2
Methodology	AMS-I.E	Switch from non-renewable biomass for thermal applications by the user	12.0
Tool	21	Demonstration of additionality of small-scale project activities	13.1
Tool	30	Calculation of the fraction of non-renewable biomass	04.0

1.10 Double Counting and Participation under Other GHG Programs

1.10.1 No Double Issuance

Is the project receiving or seeking credit for reductions and removals from a project activity under another GHG program?

☐ Yes ☒ No

1.10.2 Registration in Other GHG Programs

Is the project registered or seeking registration under any other GHG programs?

☐ Yes ☒ No

1.11 Double Claiming, Other Forms of Credit, and Scope 3 Emissions

1.11.1 No Double Claiming with Emissions Trading Programs or Binding Emission Limits

Are project reductions and removals or project activities also included in an emissions trading program or binding emission limit? See the *VCS Program Definitions* for definitions of emissions trading program and binding emission limit.

☐ Yes ☒ No

1.11.2 No Double Claiming with Other Forms of Environmental Credit

Has the project activity sought, received, or is planning to receive credit from another GHG-related environmental credit system? See the *VCS Program Definitions* for definition of GHG-related environmental credit system.

☐ Yes ☒ No

1.11.3 Supply Chain (Scope 3) Emissions

Do the project activities affect the emissions footprint of any product(s) (goods or services) that are part of a supply chain?

☒ Yes ☐ No

If yes:

Is the project proponent(s) or authorized representative a buyer or seller of the product(s) (goods or services) that are part of a supply chain?

☒ Yes ☐ No

If yes:

Has the project proponent(s) or authorized representative posted a public statement on their website saying, “VCUs may be issued for the greenhouse gas emission reductions and removals associated with Ecozen Cookstove, manufactures by Viet Charcoal Production Company Limited in Di Su commune, My Hao District, Hung Yen Province and distributed by Sustainability Investment Promotion and Development Joint Stock Company (SIPCO) under their project activity title “Grouped Projects for Cambodia Improved Cookstove (VCS ID: 2925)”.

☒ Yes ☐ No

SIPCO has sent the notification of the grouped project and the potential risk of Scope 3 emissions double claiming to Viet Charcoal Production Company Limited via email.

See evidence in Appendix 2 in the document.

1.12 Sustainable Development Contributions

The project activity helps in achieving following co-benefits, which will contribute in sustainable development in host country.

A) Environment well-being:

- The project activity contributes to the reduction in GHG emission due to reduction in use of non-renewable biomass and it can ensure natural recovery of forests and-or reforestation.
- The project activity leads to reduction in indoor air pollutants from wood smoke and avoid smoke related health disorders.
- The reduction in non-renewable biomass consumption for cooking and boiling water through efficient use leads to improved ecological balance.
- The project activity supports fire prevention in the household kitchen.

B) Socio and Economic Benefits:

- Implementation of the project activity results in employment opportunities for people involved with installation, maintenance and distribution of these household biomass based cookers.
- The project activity improves the status of living of people in households cooking since the community level implementation of units of these kinds can be carried out at considerably lower costs. There is less dependence on firewood and its expenses and time associated with firewood buying and collection.
- Business development component of the project activity has resulted in the enhancement of capacity development and technical knowhow for moderately educated people in the community through workshops, seminars and training programs.
- The project alleviates the work burden of women and children as they have to spend less time to collect firewood for cooking.

- Community health issues such as chronic lung diseases, acute respiratory infections, cataracts, blindness, and adverse effects on pregnancy are decreased due to improvement of indoor air quality.

C) Technological benefit

The introduction of locally manufactured technology with improved energy efficiency helps in technological self-reliance in the area.

Table 1: Sustainable Development Contributions

Row nu	SD G	SDG indicator	Net impact on SDG indicator	Current project contributions	Contributions over project lifetime
1)	3.9	3.9.1: Mortality rate attributed to household and ambient air pollution	Decrease	The project leads to reduction for 350,000 households in Household Air Pollution (HAP) thereby resulting in improved health conditions of women and children	The project activity provides energy efficient ICSs to households who use the traditional cookstove for cooking meal daily. Therefore, the project will lead to reduction for households in Household Air Pollution (HAP) thereby resulting in improved health conditions of household, especially women and children.
2)	4.3	4.3.1. Participations of youth and adults in formal and non-formal education and training in the previous 12 months, by sex	Increase	Daily cooking and firewood collection are mainly done by women and children. During this monitoring period, the project distributed 350,000 ICSs to 350,000 households. By using project devices with high thermal efficiency and saving wood fuel, hence this helps women and children save time from hard work. Children in 350,000 households have more time to educate.	By reducing the amount of time required for gathering firewood and time is saved for cooking, the initiative will free up time that can be used for other important activities such as education. Moreover, locals gain employment possibilities from the conception and execution of the group projects, and the project proponent provides training that enables them to acquire necessary skills and contribute to sustainable development.

3)	5.4	5.4.1: Proportion of time spent on unpaid domestic and care work, by sex, age and location	Decrease	Especially for women and children in 350,000 families, lessen drudgery by cutting down on time spent cooking and gathering wood in rural regions using an open-fire or other traditional cookstove	Under the project scenario, women will see a massive reduction in both the amount of fuelwood required for cooking, and the amount of time taken to cook. They would be able to save 1 - 2 hours daily. They would also have time to engage in other employment opportunities
4)	7.1	7.1.2. Proportion of population with primary reliance on clean fuels and technology	Increase	Increase access to clean cooking technology with ICS installations in 350,000 households under the project activity	The ICS distributed to household is energy cooking technology. The grouped projects will increase the proportion of citizen with primary reliance on clean fuels and technology in project area.
5)	8.3	8.3.1. Proportion of informal employment in total employment, by sector and sex	Increase	The project will generate around 30 employment opportunities for distribution of ICSs and post-installation operation & Maintenance of ICSs, spot checks and periodic surveys.	During whole lifetime of the grouped project, it needs labor intensive (including: distribution, spot checks and periodic surveys for ensuring streamline operation of the project). Hence the number of temporary and permanent jobs created

6)	13.0	Tonnes of greenhouse gas emissions avoided or removed	Decrease	Contribute to GHG emission reduction of 1,143,538 tCO ₂ e into the atmosphere in this second monitoring period.	Prevented the release of about 50,000,000 tCO ₂ e into the atmosphere over the project lifetime
7)	15.1	15.1.1. Forest area as a proportion of total land area	Increase	During this monitoring period, the project activity saved 682,526 tonnes of non-renewable biomass ³	Through distributing ICSs for households, the grouped projects will reduce in demand for non-renewable biomass, assisting the maintenance of existing forest stock.

³ The quantity of wood saved is calculated by multiplying the number of cookstove used, by the fNRB and the quantity of woodybiomss saved per cookstove during the calendar year, hence for this monitoring period, it is: $((180,001 * 3.587) + (167,999 * 3.637)) * 0.7171 * 0.753 = 682,526$ tons of non-renewable biomass saved.

1.13 Commercially Sensitive Information

Not applicable. The grouped projects do not have any commercially sensitive information.

2 SAFEGUARDS AND STAKEHOLDER ENGAGEMENT

2.1 Stakeholder Engagement and Consultation

2.1.1 Stakeholder Identification

Below stakeholders were identified since validation, there are no changes at verification.

Stakeholder Identification

The process of identifying stakeholders involves categorizing individuals or groups who are expected to have a direct or indirect impact on the project or those who have an interest in it.

SIPCO identifies the relevant stakeholders via 3 steps who are associated throughout the grouped project lifetime. The steps are illustrated like as:

Step 1: The first step is to determine the expected and unexpected outcomes of the grouped project's activities. Then the results are established, the potential stakeholders affected by these impacts are identified.

Step 2: Stakeholder group identification if carried out at each step of project implementation, using a holistic approach to the project's total benefits and co-benefits. The assessment for stakeholder identification at the different stages is as follows:

- Project ideation: Stakeholders could include academic institutions, self-help organizations, and local officials who can assist the project promoter in gaining traction in the community.
- Project development: government authorities, NGOs, community development, investors would be stakeholders at this stage.

	• Project implementation: end-user, distribution partners, ICS manufactures, would be the stakeholders during implementation stage. Distribution partner of the grouped project is Cambodian Women for Development and Peace (CWPD) which has signed contract with SIPCO for distributing ICS to households. CWPD have system from central to village, they can know exactly these households who are using the traditional cookstove and they can select the correct end-users. • Project validation and verification: surveyors, distribution partners, end-users... could be some of the main stakeholders during this stage. Almost of project stakeholders affected by the project activity identified in the step 2. Step 3: Make the stakeholder category and determine direct/indirect effects based on each stakeholders identified in step 2 as the final step of the identification process. The final list of stakeholder includes ICS end-users, distribution partner (CWPD), government authorities, local NGOs and ICS manufactures. The full list of stakeholders has been provided to VVB as supporting document.
Legal or customary tenure/access rights	Not applicable. The grouped project only involves distribution ICS to household and it will not involve territories and resources.
Stakeholder diversity and changes over time	Most of stakeholders are identified at period of project activity, from starting, development, implementation and monitoring. There is insignificant change in stakeholders' diversity and therefore have no real impact on their opinion during this monitoring period. 1. ICS end-users: No change was observed in structure & functionality. 2. CWDP: No change in structure and functionality or any organization values.

	3. Government authorities: No change was observed in structure & functionality. 4. Local NGOs: No change was observed in structure & functionality. 5. Manufacturer: More jobs for their employee in manufacturing, transportation and maintenance ICSs
Expected changes in well-being	- Reduce deforestation and forest degradation in Cambodia through involvement of stakeholders in discontinuing the use of firewood for cooking meals - Community health issues such as chronic lung diseases, acute respiratory infections, cataracts, blindness, and adverse effects on pregnancy will be decreased due to improvement of indoor air quality. - Reduce in indoor air pollutants from wood smoke and avoid smoke related health disorders - The project activity will support fire prevention in the household kitchen
Location of stakeholders	Except for the ICS manufacture in Viet Nam, the remaining stakeholders are in Cambodia
Location of resources	Cambodia

2.1.2 Stakeholder Consultation and Ongoing Communication

Ongoing consultation	The PP is maintaining ongoing communication with stakeholders through different measures. During the monitoring survey, project has taken the chance to update information to different stakeholders, and collected comments through interviews, surveys, direct observations, group discussions. The PP also conducts and reports the monitoring result from the random sampling of to all stakeholders on annually basis. Staff of SIPCO and CWPD of the villages communicates & collects end-users' comments through visits to household at least 1 time per year.
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	Through monitoring survey trip, the field team managers also actively organize and conducts group discussions with different stakeholders The data from these interactions is compiled into annual reports and updated to the CWPD & local governmental authority. Through the ongoing communication process, all the implementation information, such as the results of monitoring, the risks, costs and benefits the project and the plan of site visit from verification body has been updated timely to the stakeholders. In addition, the PP also updates workers on relevant law and applicable regulation (if any) and conduct additional educational services as requested by the beneficiary.
Date(s) of stakeholder consultation	28-January-2024, SIPCO sent the report of this monitoring period to CWPD
Communication of monitored results	The monitored results have been shared with Woman Union & relevant stakeholders through annual reports include: 1. The list of households has been selected for survey 2. The summarize of the result of SIPCO's representative sample conduct survey.
Consultation records	All formal consultations are logged in the consultation forms. Forms will be saved for record of correspondence
Stakeholder input	During this ongoing communication, all households participating in the survey were satisfied with the project's device and their lives have greatly improved since receiving ICSs. There are no negative comments about the grouped projects and its devices.

2.1.3 Free, Prior, and Informed Consent

Consent	It is entirely up to individual homes in the participating villages to decide whether or not they choose to take part in the adoption of ICS; this is a purely optional activity.
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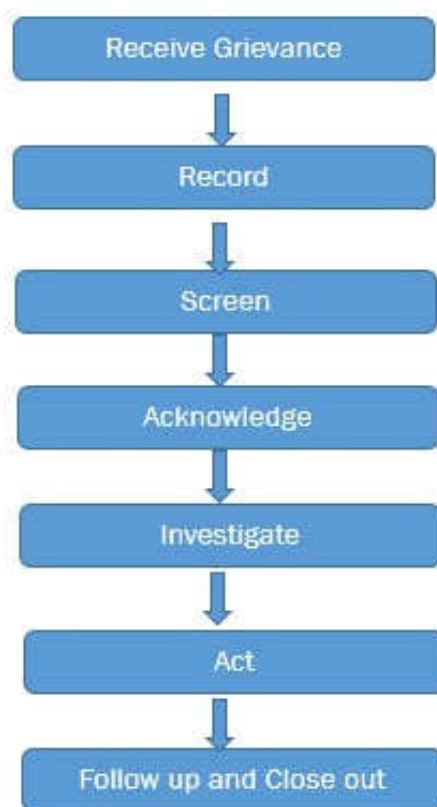
Outcome of FPIC	Before the installation takes place, free, prior, and informed permission is obtained from households involved. The grouped project activity involves distribution of ICSs to households and it does not involve any land, relocated people, and physical or economic displacement.
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2.1.4 Grievance Redress Procedure

Grievances received	Resolution and outcome
In this monitoring period, the grouped project has received 2 grievances.	
1. "The project cookstove is very good, it helps us to save wood fuel. However, it is quite small so can SIPCO give us a bigger stove?" - The grievance has sent from a household in Svay Rieng province.	Project proponent was received 2 grievances though SIPCO phone number. These grievances were logged in the Grievance Lodgement Forms. After considering, these grievances were changed to project coordination department to solve them and respond households. The person responsible for responding to these grievances determined that they were the grievances not related to the quality of the equipment, the project stove was still operating well, no corrective action and replacement was needed, so the person performing resolved the same day by calling the households. The implementer clearly explains the project criteria to the person submitting the complaint. However, PP also retains comments for consideration and research to improve the kitchen in the future. PP determined that these grievances were positive assessments for the project devices. 2 households understood and satisfied with performer response and no further feedback. Hence these grievances were closed in the same day.
2. "Using the project cookstove more a year, we like it so much. It is high efficiency. Currently, since your demand is rise so can SIPCO give us a bigger stove?" - The grievance has sent from a household in Takeo province.	

Project proponent has established a grievance mechanism in the project area which has been explained to the stakeholders during stakeholder meetings and the project implementation progress. The stakeholders affected by the project can express any complaint. Any grievances could send to SIPCO email address. Also stakeholders can voice their grievances to any officers who will then escalate using the correct process. For online form, stakeholders can complete a grievance form located on SIPCO website: www.carbonvietnam.com

The grievance mechanism process could be illustrated as below:



- Receive Grievance

The grievance could be received by all means, such as in person/over the phone, via email/website,

- Record

All formal grievances will be logged in the External Grievance Register and Grievance Lodgment Forms will be saved for record of correspondence.

- Screen

The stakeholder contact officer is responsible for assigning a grievance owner to liaise with the external stakeholders and work on a resolution. Grievances will be screened depending the level of severity in order to determine who the grievance owner will be and how the grievance is approached.

- Acknowledge

A grievance will be acknowledged, by the grievance owner, within two working days of a grievance being submitted. Communication will be made either verbally or in written form.

The acknowledgement of a grievance should include a summary of the grievance, method that will be taken to resolve the grievance and an estimated timeframe in which the grievance will be resolved. If required, the acknowledgement provides an opportunity to ask for any additional information or to clarify any issues.

- Investigate

The grievance owner is responsible for investigating the grievance. The investigation may require the grievance owner to make site visits, consult employees, contact external stakeholders and complete other activities. Records of meetings, discussions and activities all need to be recorded during the investigation. Information gathered during the investigation will be analysed and will assist in determining how the grievance is handled and what steps need to be taken in order to resolve the grievance.

- Act

Following the investigation, the grievance owner will use the findings to create an action plan outlining steps to be taken in order to resolve the grievance. The grievance owner is responsible for assigning actions, monitoring actions undertaken and making sure deadlines are adhered to. Once all actions have been completed and the grievance owner feels the grievance has been resolved, they will then formally advise the external stakeholder via their preferred method of contact.

- Follow up and close out

The grievance owner will make contact with the external stakeholder/s three weeks after the grievance is resolved. When contacting the external stakeholder, the grievance owner will verify that the outcome was satisfied and also gather any feedback on the grievance process.

Minutes of the meeting will be recorded and saved.

If required, the grievance owner may need to follow up with the external stakeholder on numerous occasions to confirm all parties are satisfied.

All formal grievances are recorded in summary with the PP to identify if the complaint is a project wide issue that necessitates a system change in the implementation.

2.1.5 Public Comments

During this monitoring period, the grouped project was not received any negative and adverse comments.

2.2 Risks to Stakeholders and the Environment

	Risk identified	Mitigation or preventative measure taken
Risks to stakeholder participation	No risk identified	The grouped project activities distribute ICS to household. They can decide to receive ICS or not. If they want, they can register to CWPDP. After CWPDP and SIPCO check that the

		households meet the criteria to participate in the project, before receiving ICS, household voluntarily signs the beneficiary agreement with SIPCO. There is no trade-off or any negative impact to their livelihood, land, food, etc... Hence no risk for stakeholders to participate in this project.
Working conditions	No risk identified	The grouped project activities create jobs for local people, ICS manufacture, distribution unit. All of working condition such as working hours, working environment, physical pressure, rest hour, minimum wage, etc... as per Cambodian Labor and Employment Law. Hence, no risk about working conditions for stakeholders to participate in this project.
Safety of women and girls	No risk identified	In this monitoring, PP distributed 350,000 ICSs to 350,000 households. This helps them access to sustainable and modern energy. The proposed project aims to reduction in indoor air pollutants from wood smoke and avoid smoke related health disorders for households in Kingdom of Cambodia. Moreover, the project activity supports fire prevention in the household kitchen. From there, reduce polluted indoor air due to cook meal. So project's cookstove is safe when using. Hence, no any risk identified relate to safety of women and girls.
Safety of minority and marginalized groups, including children	No risk identified	In this monitoring, PP distributed 350,000 ICSs to 350,000 households. This helps them access to sustainable and modern energy. The proposed project aims to reduction in indoor air pollutants from wood smoke and avoid smoke related health disorders for

		households in Kingdom of Cambodia. Moreover, the project activity supports fire prevention in the household kitchen. From there, reduce polluted indoor air due to cook meal. So project's cookstove is safe when using. Hence, no any risk identified relate to safety or minority and marginalized groups, including children.
Pollutants (air, noise, discharges to water, generation of waste, release of hazardous materials)	No risk identified.	The grouped project aims at reducing the woodfuel consumption of traditional cookstove, this can contribute to improving public health problems. This also contributes to improvement in quality of lives of the people from Cambodia through reduction of drudgery, time and money spent on fuel wood collection and through improvement of indoor air pollution. Globally, the project contributes by reducing emission of GHG into the atmosphere. Hence the grouped project brings positive benefits to the citizens and environments. The project activity is not any pollutant into the environment.

2.3 Respect for Human Rights and Equity

2.3.1 Labor and Work

Discrimination and sexual harassment	SIPCO distributes ICSs to households who are using woodfuel to boil drinking water without distinction in genders, races, religions, educational backgrounds or any other aspects. SIPCO also dedicate to the elimination of discrimination. The same is also governed by government policies and any such discrimination has considered a punishable offence in the host country. Cambodia is also party to the "Convention on the Elimination of All Forms of Discrimination against Women" and the project has aligned its labour policies accordingly.
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Management experience	SIPCO has years of expertise involving communities in comparable project activities and their implementation. We have procedures in place to educate management and staff on avoiding corruption, code of conduct and business ethics. All project personnel, including firm management, adhere to these principles to make sure the business operates in compliance with all applicable laws and to the highest operational standards.
Gender equity in labor and work	SIPCO is committed to ensuring that all stakeholders, regardless of their genders, colours, faiths, educational backgrounds, or any other factors, will be given an equal chance to fill all job positions. This commitment is fulfilled by providing equal access to employment opportunities. Before any full-time or part-time employees for the project are hired, the project proponent advertises applicable employment opportunities by contacting village heads and posting announcements on local notice boards seeking potential candidates for the positions. Also, the initiative encourages women, people with disabilities, and members of underrepresented groups to apply for the positions.
Human trafficking, forced labor, and child labor	SIPCO does not tolerate child labor or forced, involuntary or trafficked labor in any form. To ensure this, workers have to give a job application to SIPCO. When recruiting, SIPCO checks ID card each worker to ensure that they are of working age. Besides that, workers also submit curriculum vitae verified by local authority.

2.3.2 Human Rights

Each of our workers has a contract that states their rights and obligations. The contract details comply with Vietnam labor laws. Specific information is provided on anti-terrorism and anti-corruption efforts, including a code of conduct. Per the Core Labor Conventions of the International Labor Organization (ILO), SIPCO respects, and works in tandem with the elimination of all forms of forced or compulsory labor, the effective abolition of child labor, minimum age convention, the right to organize, and the elimination of discrimination in respect of paid positions and occupation.

2.3.3 Indigenous Peoples and Cultural Heritage

Not Applicable. The grouped project activities involve installing ICS and it does not involve any indigenous peoples and cultural heritage.

2.3.4 Property Rights

Disputes over rights to territories and resources	Not applicable
Respect for property rights	The grouped project activity involves distribution of ICSs to households and only install at the informed invitation of the households and these ICSs do not infringe or interact with property rights.

2.3.5 Benefit Sharing

Not Applicable. The grouped project activities do not impact property right.

2.4 Ecosystem Health

	Risk identified	Mitigation or preventative measure taken during the monitoring period
Impacts on biodiversity and ecosystems	No risk identified	The implementation of the grouped project does not impose any severe impacts on the ecological system in the surrounding areas. The project activities help in reducing the consumption of fuel wood by efficient fuel combustion thereby reducing deforestation and reducing indoor air pollution. The use of ICS technology helps to reduce adverse environmental and social impacts associated with the use of non-renewable biomass. The reduced consumption of the stated baseline fuel has sustainable benefit for all household's traditional cook stoves users included in the project activity. The implementation of the project reduce workloads involved in fuel collection, and by reducing indoor air pollution, reduce the risk of respiratory diseases, especially for women and children. ICSs also contribute to environment protection by reducing biomass consumption and hence greenhouse gas emissions, mainly CO ₂ ,
Soil degradation and soil erosion	No risk identified	
Water consumption and stress	No risk identified	
Usage of fertilizers	No risk identified	

		when the combusted biomass originates from non-renewable stocks. Therefore, it has no impact to ecosystem health, so this section is not applicable
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2.4.1 Rare, Threatened, and Endangered species

The grouped project activity involves distributions of ICSs to households only and it does not involve rare, threatened and endangered species.

2.4.2 Introduction of species

Not applicable. The grouped project activities do not involve planting or species introduction.

2.4.3 Ecosystem conversion

Not applicable. The grouped project activities only distribute ICSs to households and do not involve any ecosystem conversion.

3 IMPLEMENTATION STATUS

3.1 Implementation Status of the Project Activity

In this monitoring period of the grouped project, SIPCO distributed 350,000 ICSs to households in Cambodia from 02-May-2022 to 08-Dec-2023. Project devices were transported and gathered in district points before distribution about a week before the start distribution date. Then, SIPCO in conjunction with the partner (Cambodia Women for Peace and Development) organizes one or two-day mass distributions in all communes in the district. representation of households whose names are on the demand registration list who have been determined to be eligible to participate in the project is invited to the commune center or the distribution points to attend the communication session and receive project cookstoves.

20 instances (namely PA 018 to PA 024 and PA 030 to PA 042) will be included in this second monitoring period. The grouped project registration date is 05-July-2023. PA 001 was included during project validation period; the 28 instances are PA 001 – PA 017, PA 025 – PA 029 and PA 043 – PA 049 were included and approved in the first monitoring period. Timeline of project activity instances is illustrated as the table below:

Steps							Total of ICSs have been distributed as on 31-Dec- 2023
Number instances	PA start date (the first equipment distributed)	Inclusion date	Start date of stove in the second crediting period	Implementation status as on 31-Dec-2023			
				Quantity	Start date of distribution ICS in a month	End date of distribution ICS in a month	
PA 001	02-May-22	05-Jul-23	1-Apr-23	8,000	2-May-22	3-May-22	8,000
PA 002	04-May-22	21-Dec-23	1-Apr-23	8,000	4-May-22	5-May-22	8,000
PA 003	07-May-22	21-Dec-23	1-Apr-23	8,000	7-May-22	8-May-22	8,000
PA 004	07-Jun-22	21-Dec-23	1-Apr-23	2,272	7-Jun-22	7-Jun-22	2,272
PA 005	12-May-22	21-Dec-23	1-Apr-23	8,000	12-May-22	14-May-22	8,000
PA 006	09-Jan-23	21-Dec-23	1-Apr-23	2,000	9-Jan-23	11-Jan-23	2,000
PA 007	02-Aug-22	21-Dec-23	1-Apr-23	8,000	2-Aug-22	3-Aug-22	8,000
PA 008	06-Aug-22	21-Dec-23	1-Apr-23	8,000	6-Aug-22	7-Aug-22	8,000
PA 009	04-Sep-22	21-Dec-23	1-Apr-23	8,000	4-Sep-22	6-Sep-22	8,000
PA 010	09-Sep-22	21-Dec-23	1-Apr-23	8,000	9-Sep-22	10-Sep-22	8,000
PA 011	10-Sep-22	21-Dec-23	1-Apr-23	71	10-Sep-22	10-Sep-22	71

PA 012	02-Nov-22	21-Dec-23	1-Apr-23	8,000	2-Nov-22	3-Nov-22	8,000
PA 013	04-Nov-22	21-Dec-23	1-Apr-23	8,000	4-Nov-22	5-Nov-22	8,000
PA 014	07-Nov-22	21-Dec-23	1-Apr-23	8,000	7-Nov-22	8-Nov-22	8,000
PA 015	08-Nov-22	21-Dec-23	1-Apr-23	8,000	8-Nov-22	10-Nov-22	8,000
PA 016	05-Jul-22	21-Dec-23	1-Apr-23	8,000	5-Jul-22	6-Jul-22	8,000
PA 017	03-Aug-22	21-Dec-23	1-Apr-23	7,800	3-Aug-22	7-Aug-22	8,000
			4-Apr-23	200	3-Apr-23	3-Apr-23	
PA 018	03-Apr-23	To be included in this monitoring period	6-Apr-23	7,181	3-Apr-23	5-Apr-23	7,181
PA 019	06-Apr-23	To be included in this monitoring period	11-Apr-23	8,000	6-Apr-23	10-Apr-23	8,000
PA 020	3-Jul-23	To be included in this monitoring period	8-Jul-23	8,000	3-Jul-23	7-Jul-23	8,000
PA 021	10-Jul-23	To be included in this monitoring period	13-Jul-23	5,500	10-Jul-23	12-Jul-23	8,000
			3-Oct-23	2,500	2-Oct-23	2-Oct-23	
PA 022	2-Oct-23	To be included in this monitoring period	7-Oct-23	8,000	3-Oct-23	6-Oct-23	8,000
PA 023	3-Oct-23	To be included in this monitoring period	12-Oct-23	6,538	9-Oct-23	11-Oct-23	8,000
			5-Dec-23	1,462	4-Dec-23	4-Dec-23	
PA 024	9-Oct-23	To be included in this monitoring period	6-Dec-23	1,149	5-Dec-23	5-Dec-23	8,000
PA 025	02-Dec-22	21-Dec-23	1-Apr-23	8,000	2-Dec-22	3-Dec-22	8,000
PA 026	03-Oct-22	21-Dec-23	1-Apr-23	8,000	3-Oct-22	4-Oct-22	8,000
PA 027	06-Oct-22	21-Dec-23	1-Apr-23	8,000	6-Oct-22	7-Oct-22	8,000
PA 028	05-Jun-22	21-Dec-23	1-Apr-23	8,000	5-Jun-22	6-Jun-22	8,000
PA 029	06-Jun-22	21-Dec-23	1-Apr-23	2,222	6-Jun-22	6-Jun-22	8,000
			1-Apr-23	5,778	1-Mar-23	2-Mar-23	
PA 030	12-Apr-23	To be included in this monitoring period	1-Apr-23	5,659	3-Mar-23	5-Mar-23	5,659
PA 031	2-May-23	To be included in this monitoring period	10-May-23	8,000	2-May-23	9-May-23	8,000

PA 032	10-May-23	To be included in this monitoring period	17-May-23	8,000	10-May-23	16-May-23	8,000
PA 033	1-Aug-23	To be included in this monitoring period	8-Aug-23	8,000	1-Aug-23	7-Aug-23	8,000
PA 034	8-Aug-23	To be included in this monitoring period	12-Aug-23	5,588	8-Aug-23	11-Aug-23	8,000
			5-Sep-23	2,412	1-Sep-23	4-Sep-23	
PA 035	1-Sep-23	To be included in this monitoring period	8-Sep-23	5,546	5-Sep-23	7-Sep-23	5,546
PA 036	5-Sep-23	To be included in this monitoring period	8-Jun-23	8,000	1-Jun-23	7-Jun-23	8,000
PA 037	1-Jun-23	To be included in this monitoring period	14-Jun-23	8,000	8-Jun-23	13-Jun-23	8,000
PA 038	8-Jun-23	To be included in this monitoring period	16-Jun-23	1,900	14-Jun-23	15-Jun-23	8,000
			13-Sep-23	6,100	8-Sep-23	12-Sep-23	
PA 039	14-Jun-23	To be included in this monitoring period	19-Sep-23	8,000	13-Sep-23	18-Sep-23	8,000
PA 040	8-Sep-23	To be included in this monitoring period	8-Nov-23	8,000	1-Nov-23	7-Nov-23	8,000
PA 041	13-Sep-23	To be included in this monitoring period	14-Nov-23	8,000	8-Nov-23	13-Nov-23	8,000
PA 042	1-Nov-23	To be included in this monitoring period	9-Dec-23	4,486	5-Dec-23	8-Dec-23	4,486
PA 043	11-Jan-23	21-Dec-23	1-Apr-23	1,000	11-Jan-23	11-Jan-23	8,000
			1-Apr-23	7,000	6-Mar-23	8-Mar-23	
PA 044	07-Feb-23	21-Dec-23	1-Apr-23	8,000	7-Feb-23	8-Feb-23	8,000
PA 045	07-Nov-22	21-Dec-23	1-Apr-23	8,000	7-Nov-22	27-Nov-22	8,000
PA 046	04-Jun-22	21-Dec-23	1-Apr-23	8,000	4-Jun-22	7-Jun-22	8,000
PA 047	05-Dec-22	21-Dec-23	1-Apr-23	8,000	5-Dec-22	13-Dec-22	8,000
PA 048	03-Jul-22	21-Dec-23	1-Apr-23	8,000	3-Jul-22	5-Jul-22	8,000
PA 049	06-Jul-22	21-Dec-23	1-Apr-23	1,636	6-Jul-22	6-Jul-22	1,636
Total							350,000

3.2 Deviations

3.2.1 Methodology Deviations

Not applicable. The grouped project did not apply any methodology deviations.

3.2.2 Project Description Deviations

The deviation has been sought with the fNRB value which is approved in project registration period. To ensure the most conservative figure and fair with the new Verra cookstove methodology (VMR006 version 1.2), the project developer voluntarily decided to deduct the calculated fNRB by 26%. This would result in a new fNRB value:

$$96.91\% \times (1-26\%) = 71.71\%$$

This value was applied in the first monitoring period. This monitoring and the entire crediting period of the grouped projects are also used.

3.3 Grouped Projects

For the inclusion of new project activity instance, the project proponent shall ensure that it meets the eligibility criteria below:

No.	Eligibility criterion - Category	Eligibility criterion – Required condition	Evidence provided and applicability
1	Meet the applicability conditions set out in the methodology applied to the project.	The new project activity instance will meet all applicability conditions of VMR0006: “Methodology for installation of high efficiency firewood cookstoves”, version 1.1	The new project activity instances including: PA 018, PA 019, PA 020, PA 021, PA 022, PA 023, PA 024, PA 030, PA 031, PA 032, PA 033, PA 034, PA 035, PA 036, PA 037, PA 038, PA 039, PA 040, PA 041, PA 042 – total 20 instances meet applicability conditions listed section 3.3 in this monitoring report. See details below
2	Use the technologies or measures specified in the project description.	Each Instance under this Grouped project will consist of the distribution of Ecozen cookstove with a thermal efficiency of 38.44% to household users cooking with non-renewable biomass in the baseline scenario. The instance consists of	Only Ecozen cookstove are distributed in 20 instances during this monitoring with the efficiency of 38.44%.

		replacement of conventional firewood cookstoves for biomass fired ICS as defined in the Grouped project.	
3	Apply the technologies or measures in the same manner as specified in the project description	Each instance under this grouped project shall consist of the distribution of ICSs with efficiency improvements in thermal applications of non-renewable biomass. Ecozen cookstove have a thermal efficiency of 38.44%, larger than 25%.	Only Ecozen cookstove with the efficiency is 38.44% to be adopted in this monitoring.
4	Are subject to the baseline scenario determined in the project description for the specified project activity and geographic area..	The new project activity instances will be installed within Cambodia only and subject to the same baseline scenario determined in section 3.4	The new project activity instances during this monitoring have been implemented in 05 provinces in Cambodia, detail below: • Prey Vieng: PA 018 • Thbong Khmum: PA 019 – PA 024 • Kampong Speu: PA 025 – PA 029 • Kampong Thom: PA 030 – PA 035 • Kampong Cham: PA 036 – PA 042
5	Have characteristics with respect to additionality that are consistent with the initial instances for the specified project activity and geographic area.	All new project activity instances will use the activity method for demonstration of additionality. Step 1: Regulatory Surplus There is no mandated government programme or policy in host country of this project ensuring the distribution of new project activity instances. Step 2: Positive List The inclusion of new project activity instances will comply with positive list as it satisfies criterion 1 where it meets all the	20 instances under this monitoring are eligible when the CME has provided the confirmation that ICSs are distributed for free of cost to household.

		applicability conditions of the methodology Step 3: Project Method This step is not applicable under project activity because the stoves are provided at zero cost to the end-users.	
6	Conditions that avoid double counting of emission reductions.	The new project activity instances will: 1. Apply a unique system (i.e. conformity letter) for ICS in each project instance, assigning a unique ID to each ICS and allowing to clearly identify each ICS and to which project instance it belongs. 2. Each ICS installed will include project instance assignment and will have corresponding end user details (i.e. name, address). This data will be recorded as part of the beneficiary agreement and Project database. The CME has an agreement in place with residents who use ICS in the project instance in which the owner transfers the rights to the emissions reductions exclusively to the CME as part of the Carbon Rights Waiver within the Beneficiary agreement	Each ICS in project activity instance (PAI) under the grouped project is uniquely identifiable and not part of any other CDM-VCS registered project or instance of the other grouped project. The ICSs will carry unique IDs comprised of the project activity instance number. The labels are below: • PA 018: CAM018-ICS-0001 to CAM018-ICS-7181 • PA 019: CAM019-ICS-0001 to CAM-019-8000 • PA020: CAM020-ICS-0001 to CAM020-ICS-8000 • PA 021: CAM021-ICS-0001 to CAM-ICS-8000 • PA 022: CAM022-ICS-0001 to CAM023-ICS-8000 • PA 023: CAM023-ICS-0001 to CAM023-ICS-8000 • PA 024: CAM024-ICS-0001 to CAM024-ICS-1149 • PA 030: CAM030-ICS-0001 to CAM030-ICS-5659 • PA 031: CAM031-ICS-0001 to CAM031-ICS-8000 • PA 032: CAM032-ICS-0001 to CAM032-ICS-8000 • PA 033: CAM033-ICS-0001 to CAM033-ICS-8000 • PA 034: CAM034-ICS-0001 to CAM034-ICS-8000

			• PA 035: CAM035-ICS-0001 to CAM035-ICS-5546 • PA 036: CAM036-ICS-0001 to CAM036-ICS-8000 • PA 037: CAM037-ICS-0001 to CAM037-ICS-8000 • PA 038: CAM038-ICS-0001 to CAM038-ICS-8000 • PA 039: CAM039-ICS-0001 to CAM039-ICS-8000 • PA 040: CAM040-ICS-0001 to CAM040-ICS-8000 • PA 041: CAM041-ICS-0001 to CAM041-ICS-8000 • PA 042: CAM042-ICS-0001 to CAM042-ICS-8000
7	Where a capacity limit applies to a project activity included in the project, no project activity instance shall exceed such limit. Further, no single cluster of project activity instances shall exceed the capacity limit, determined as follows: 1) Each project activity instance that exceeds one percent of the capacity limit shall be identified. 2) Such instances shall be divided into clusters, whereby each cluster is comprised of any system of instances such that each instance is within one kilometer of at least one other instance in the cluster. Instances that are not within one kilometer of any other instance shall	This eligibility criterion is not applicable. According to the applied methodology, there are no capacity limits defined. Therefore, the grouped project does not have any specified capacity limits applicable.	Not applicable. A Capacity limit does not apply under the VMR0006 methodology version 1.1

	not be assigned to clusters. 3) None of the clusters shall exceed the capacity limit and no further project activity instances shall be added to the project that would cause any of the clusters to exceed the capacity limit		
8	Target group	Each project instance will target end users which includes households who use traditional cookstove to cook meal.	The new project activity instances under this monitoring satisfy the criteria. Each household in PIs must sign a beneficiary agreement to commit that they are using traditional cookstove.
9	Occur within one of the designated geographic areas specified in the project description	New project activity instances will be located within the geographic boundaries of Cambodia. The new project instances geographic location will be defined in the monitoring reports	The geographic boundary of instances under in this monitoring is illustrated to be within Cambodia (Figure 1). The location data captured from each household who received the project devices will be stored in the database file and agreement. They are provided to VVB at the time of verification.
10	Comply with at least one complete set of eligibility criteria for the inclusion of new project activity instances. Partial compliance with multiple sets of eligibility criteria is insufficient	New project activity instances must comply set of eligibility criteria for the inclusion of new project activity instances in the table	The new project activity instances during this monitoring comply set of eligibility criteria for the inclusion of new project activity instances as described in this table of the document.
11	Be included in the monitoring report with sufficient technical, financial, geographic	New project activity instances must comprise monitoring plans that outline the technical, financial, geographic and other	20 instances for baseline surveys and applicable provisions is submitted alongside this monitoring report.

	and other relevant information to demonstrate compliance with the applicable set of eligibility criteria and enable sampling by the validation/ verification body	relevant information to enable sampling by the validation/ verification body.	Monitoring data for this instances will be provided to the VVB at verification.
12	Be included in an updated project description, with updated project location information (as set out in Section 3.11), which shall be validated at the time of verification against the applicable set of eligibility criteria.	The location of new project activity instances in the grouped project must comprise project location which illustrated in the project description. The information is as set out in Section 3.11 which shall be validated at the time of verification against the applicable set of eligibility criteria.	20 instances are included during this monitoring, are 6 provinces within Cambodia only. The detailed coordinates of each instance are described in section 1.7 in the monitoring report and provided to the VVB at verification.
13	Have evidence of project ownership, in respect of each project activity instance, held by the project proponent from the respective start date of each project activity instance (i.e., the date upon which the project activity instance began reducing or removing GHG emissions).	New project activity instances will demonstrate ownership by the project proponent, from the start date of the PAI	The PP has an agreement in place with residents who use ICS in the 20 instances in which the owner transfers the rights to the emissions reductions exclusively to the CME as part of the Carbon Rights Waiver within the Beneficiary agreement
14	Have a start date that is the same as or later than the grouped project start date	Only PIs having a start date that is the same as or later than the GP start date will be included in the grouped project. The start date of GP is the date of distribution of first unit as per section 1.6 of this document. And subsequent additions will have start date after GP start date only	The start date of 20 instances are the same as or later than the GP start date is 02-May-2022. Detail information is illustrated in section 3.1 in the report. Same can be verified by ER spreadsheet being submitted to the VVB.

15	Be eligible for crediting from the start date of the project activity instance through to the end of the project crediting period (only)	New PI within this grouped project shall only be eligible for crediting from its start date through to the end of the project crediting period	20 instances under the grouped project in this monitoring period are only be eligible for crediting from its start date through to the end of the project crediting period. Detail information is showed in section 5.4 in the report. This is be provided in the monitoring report to VVB at verification.
16	Only eligible for crediting from the start of the verification period in which they were added to the grouped project	New PI within this grouped project shall only be eligible for crediting from the start of the verification period in which they were added to the grouped project.	20 instances under the grouped project in this monitoring period are only eligible for crediting from the start of the verification period in which they were added to the grouped project. The detail information is illustrated in section 5.4 in the report. Also, this is provided VVB during verification
17	Not be or have been enrolled in another VCS project.	All of new PIs within this grouped project will be a new activity and not be or have been enrolled in another VCS project.	20 activity instances under the grouped project during the monitoring period are new activities. This is also be stated in section 1.9 in the report.
18	Adhere to the clustering and capacity limit requirement for multiple project activity instance set out in 3.6.8 – 3.6.9	The project proponent shall include in a singular project all project activity instances within ten kilometers of another instance of the same project activity and with the same project proponent (i.e., instances of the same project activity may not be spread across more than one project if they are within ten kilometers of each other).	The distance of 20 instances within the grouped project and with the same project proponent in this monitoring period is more than 10 km. The information is detailed in database file.
		Where a capacity limit applies to a project activity included in the project, no project activity instance shall exceed such limit.	This eligibility criterion is not applicable. According to the applied methodology, there are no capacity limits defined.

		Further, no single cluster of project activity instances shall exceed the capacity limit, determined as follows: 1) Each project activity instance that exceeds one percent of the capacity limit shall be identified. 2) Such instances shall be divided into clusters, whereby each cluster is comprised of any system of instances such that each instance is within one kilometer of at least one 3) None of the clusters shall exceed the capacity limit and no further project activity instances shall be added to the project that would cause any of the clusters to exceed the capacity limit	Therefore, the grouped project does not have any specified capacity limits applicable.
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3.4 Baseline Reassessment

Did the project undergo baseline reassessment during the monitoring period?

☐ Yes

☒ No

4 DATA AND PARAMETERS

4.1 Data and Parameters Available at Validation

Data / Parameter	η_{old}
Data unit	Percentage
Description	Efficiency of pre project device
Source of data	Default value as per applied methodology
Value applied	10
Justification of choice of data or description of measurement methods and procedures applied	The default value of 0.10 is used as the replaced system is a three stone fire using firewood (not charcoal), or a conventional device with no improved combustion air supply or flue gas ventilation, i.e. without a grate or a chimney.
Purpose of Data	Calculation of emission reduction
Comments	The value is fixed ex - ante

Data / Parameter	$f_{NRB,y}$
Data unit	%
Description	Fraction of woody biomass saved by the project activity in year y that can be established as non-renewable biomass
Source of data	Independent third party i.e C4 Ecosolution (PTY) Ltd
Value applied	71.71%
Justification of choice of data or description of measurement methods and procedures applied	Tool30 “Calculation of fraction of non- renewable biomass” version 03.0 was used to calculate f_{NRB} values. Project proponents considered the area where biomass is sourced and justify the selection of the area in project design documents. For this project, secondary data is used to determine the parameter as per the calculation of the fraction of non-renewable biomass, Version 03.0. The analysis was independently completed by third party named C4 Ecosolutions (Pty) Ltd. With regards to the calculations, the third party analyze the f_{NRB} based on satellite data availability, Geographic Information System (GIS) and data modelling which provided the most reliable measuring method. Futhurmore, to ensure the most conservative figure and fair with the new Verra cookstove methodology (VMR006 version 1.2), the project developer voluntarily decided to deduct the calculated f_{NRB} by 26%. This would result in a new f_{NRB} value: $96.91\% \times (1-26\%) = 71.71\%$

	This value are applied both this monitoring and the entire crediting period of the grouped projects.
Purpose of Data	Calculation of baseline emission
Comments	This parameter shall remain fixed for the monitoring periods

Data / Parameter	NCV _{wood fuel}
Data unit	TJ/Tonne
Description	Net calorific value of the non-renewable woody biomass that is substituted or reduced
Source of data	2006 IPCC default for wood fuel
Value applied	0.0156
Justification of choice of data or description of measurement methods and procedures applied	2006 IPCC Default value
Purpose of Data	Calculation of baseline emission
Comments	This parameter shall remain fixed for the monitoring periods

Data / Parameter	EF _{wf,CO2}
Data unit	tCO ₂ /TJ
Description	CO ₂ emission factor for the use of wood fuel in baseline scenario.
Source of data	2006 IPCC
Value applied	112
Justification of choice of data or description of measurement methods and procedures applied	IPCC default value
Purpose of Data	Calculation of baseline emission
Comments	This parameter shall remain fixed for the monitoring periods

Data / Parameter	EF _{wf,nonCO2}
Data unit	tCO ₂ /TJ
Description	Non-CO ₂ emission factor for the use of wood fuel in baseline scenario.
Source of data	2006 IPCC
Value applied	26.23

Justification of choice of data or description of measurement methods and procedures applied	IPCC default value
Purpose of Data	Calculation of baseline emission
Comments	This parameter shall remain fixed for the monitoring periods

Data / Parameter	η_p
Data unit	fraction
Description	Efficiency of the project device at the start of project activity
Source of data	Manufacturer's specification
Value applied	0.3844
Justification of choice of data or description of measurement methods and procedures applied	This parameter shall be determined ex ante
Purpose of Data	Calculation of $n_{new,i,j}$
Comments	-

4.2 Data and Parameters Monitored

Data / Parameter	$N_{y,i,j}$
Data unit	Number
Description	Number of project devices of type i and batch j operating during year y.
Source of data	Monitoring
Description of measurement methods and procedures to be applied	Measured directly or based on a representative sample. Sampling standard shall be used for determining the sample size to achieve 95/10 confidence precision according to the latest version of Standard for sampling and surveys for project activities and programme of activities.
Frequency of monitoring/recording	At least once every two years
Value monitored	350,000
Monitoring equipment	Monitoring survey

QA/QC procedures to be applied	The total number of devices in operation compared to the total number of distributed (according to the monitoring database) will be surveyed. Data from the monitoring survey will be collected at least once every two years. The unique reference number of each ICS shall be logged in the monitoring database showing the total number of ICSs. Data from the sampling plan will be collected in each monitoring period by trained project staff and applied in the emission reduction calculations.
Purpose of the data	Calculation of baseline emissions
Calculation method	The percentage of Ecozen stove was found in operation from survey is 100% $N_{y,i,j} = 100\% * 350,000 = 350,000$
Comments	Proportion of operational stoves obtained from the survey is multiplied by the total commissioned stoves to arrive at this value

Data / Parameter	$\eta_{new,y,i,j}$						
Data unit	Fraction						
Description	Efficiency of the device of each type <i>i</i> and batch <i>j</i> implemented as part of the project activity						
Source of data	Calculation						
Description of measurement methods and procedures to be applied	To adopt Option 5 given in the methodology: “Efficiency of the improved cookstoves to be estimated using equation 5 above where loss in efficiency per year is calculated, and therefore this parameter does not need to be monitored”						
Frequency of monitoring/recording	Annually						
Value monitored	For ex ante calculation, the value below is applied <table border="1"> <thead> <tr> <th>Year (y)</th><th>$\eta_{new,i,j}$</th></tr> </thead> <tbody> <tr> <td>1</td><td>0.3613</td></tr> <tr> <td>2</td><td>0.3577</td></tr> </tbody> </table>	Year (y)	$\eta_{new,i,j}$	1	0.3613	2	0.3577
Year (y)	$\eta_{new,i,j}$						
1	0.3613						
2	0.3577						
Monitoring equipment	Calculated value						
QA/QC procedures to be applied	This parameter has been calculated using equation 5 of the applied methodology						
Purpose of the data	Calculation of baseline emission						

Calculation method	Calculation to be performed using equation below: $\eta_{new,y,i,j} = \eta_p \times (DF_n)^{y-1} \times 0.94$ Year 1: $\eta_{new,1,i,j} = 0.3844 \times 0.99^{1-1} \times 0.94 = 0.3613$ Year 2: $\eta_{new,y2,i,j} = 0.3844 \times 0.99^{2-1} \times 0.94 = 0.3577$
Comments	No comments

Data / Parameter	$B_{y=1,new,i,j,survey}$
Data unit	Tonnes
Description	Quantity of woody biomass used by project devices in tonnes per device of type i.
Source of data	Monitoring survey
Description of measurement methods and procedures to be applied	Standard for sampling and surveys for CDM project activities and programme of activities version 09 was used for determining the sample size. This parameter was determined within the first year of the introduction of the devices through sample survey.
Frequency of monitoring/recording	Determined in the first year of project implementation
Value monitored	1.392
Monitoring equipment	Weighing Scale
QA/QC procedures to be applied	Calibration of weighing scales used for measuring the fuel wood was done in house before start using on site
Purpose of the data	Calculation of baseline emissions
Calculation method	-
Comments	At the first monitoring survey, the surveyor enquired for firewood consumption for each stove installed in the household

Data /Parameter	Life span
Data unit	Number of years
Description	The operating lifetime of the project device. The life span should be reported if the methodology equation 5 is adopted to determine the project stove efficiency
Source of data	Manufacture's specification
Description of measurement methods	PP will conduct periodic audits and surveillance of the stoves that will be distributed under the project activity to ensure their proper

and procedures to be applied	functioning throughout the project lifetime. This along with spot audits and after installation maintenance services, will ensure that the project stoves continue to work at efficiencies as specified by the manufacturer.
Frequency of monitoring/recording	Once at the time of project stove installation
Value monitored	10
Monitoring equipment	-
QA/QC procedures to be applied	This parameter is referred from the manufacture's specification
Purpose of the data	For calculation of baseline emission
Calculation method	-
Comments	-

4.3 Monitoring Plan

- The organizational structure, responsibilities and competencies of the personnel that carried out the monitoring activities.
- The methods used for generating/measuring, recording, storing, aggregating, collating and reporting the data on monitored parameters.
- The procedures used for handling any internal auditing performed and any non-conformities identified.
- The implementation of sampling approaches, including target precision levels, sample sizes, sample site locations, stratification, frequency of measurement and QA/QC procedures. Where applicable, demonstrate whether the required confidence level or precision has been met.

(a) Sampling Methodology

Representative sampling is undertaken that is designed in line with the requirements of the VMR0006 methodology applied and the “Standard for sampling and surveys for CDM project activities and programme of activities”, version 09.0. This sampling plan follows the recommended outline as contained in “Guidelines for sampling and surveys for CDM project activities and programme of activities”, version 04.0.

Monitoring Parameters

Parameter	Description	Parameter type /frequency	Methods to be applied
$N_{y,i,j}$	Number of commissioned project devices of type i and batch j operating during year y	Proportion/ biennially	Visiting to the premises, visual inspection and interview with ICS end-user

To monitor the required parameters data will be collected from a statistically valid sample of ICS in the database for the monitoring period, as per this sampling plan. The method of collecting data is field surveys and the frequency of data collection is as per the frequency defined for each parameter in the above section. Data is collected from the field surveys, entered in the database and included in the monitoring report.

As per approved methodology, the following guidance is being used for the representative sampling method:

“A statistically valid sample of the locations where the devices are deployed, with consideration, in the sampling design, of occupancy and demographic differences can be used to determine parameter values used to calculate emission reductions, as per the relevant requirements for sampling in the “Standard for sampling and surveys for CDM project activities and programmes of activities”. When biennial inspection is chosen a 95 per cent confidence interval and a 10 per cent margin of error shall be achieved for the sampling parameter. On the other hand, when the project proponent chooses to inspect annually, a 90 per cent confidence interval and a 10 per cent margin of error shall be achieved for the sampled parameters. In cases where survey results indicate that 90/10 precision or 95/10 precision are not achieved, the lower bound of the 90 per cent or 95 per cent confidence interval of the parameter value may be chosen as an alternative to repeating the survey efforts to achieve the 90/10 or 95/10 precision.”

As per para 3 of “Standard: Sampling and Surveys for CDM project activities and programme of activities”, version 09” The general requirements of sampling methods shall be applicable to PoAs with any requirement specified in the applicable methodologies having precedence”.

As per approved methodology, the following guidance is being used for the representative sampling method:

“When biennial inspection is chosen a 95% confidence interval and a 10% margin of error shall be achieved for the sampling parameter. On the other hand, when the project proponent chooses to inspect annually, a 90% confidence interval and a 10% margin of error shall be achieved for the sampled parameters. In cases where survey results indicate that 90/10 precision or 95/10 precision are not achieved, the lower bound of the 90% or 95% confidence interval of the parameter value may be chosen as an alternative to repeating the survey efforts to achieve the 90/10 or 95/10 precision.”

Additional requirement for grouped project as per sampling standard, version 09, para 21 to 23, EB 110 is followed:

In case a single sampling plan for more than one instance is used, “parameter values shall be estimated by sampling in accordance with the requirements in the applied methodology separately and independently for each of the instance project activity included in the grouped project except when a single sampling plan covering a grouped project is undertaken applying 95/10 confidence/precision for the sample size calculation”.

(b) Sample Frame

The sampling frame refers to all the information in the database. The grouped project is open to different instance Implementers and different models of ICS. As explained below, to take the different characteristics of different project proponent and ICS models and other factors that may affect estimates into consideration, the instances shall be either sampled separately and independently, or grouped together under a single sampling plan across instances, in each case using strata that have unique combinations of these factors.

(c) Target Population

The overall target population is the ICS distributed. The ICS to be sampled from the list of individual ICS serial ID numbers contained in the sales record database, which is maintained by the distributor

(d) Sampling method

Sampling is conducted using stratified random sampling techniques, and detailed calculations are provided within the monitoring plan as per CDM guidelines “Sampling and surveys for CDM project activities and programmes of activities”. Optionally, other sampling approaches may be used in accordance with “Sampling and surveys for CDM project activities and programmes of activities” and Guideline for Sampling and Surveys for CDM Project. Activities when sampling techniques or statistical analysis necessitates it.

(e) Sample size

The sample size is calculated using the EB 86, “Guidelines for Sampling and Surveys for CDM Project Activities and Programme of Activities”, version 04.0.

According to the “Standard for sampling and surveys for CDM project activities and programme of activities”, if there is more than one parameter to be estimated, then a sample size calculation should be done for each of them. Then either the largest number for the sample size is chosen as sampling effort with one common survey, or separate sampling efforts and surveys are undertaken for each parameter.

In order to calculate the required sample size estimates, values for the proportions, mean values, and standard deviations are required. As per Guidelines for Sampling and surveys for CDM project activities and programmes of activities (version 04.0) Appendix 1 paragraph 5, there are different ways available to obtain the estimates of the parameter of interest:

- (a) Refer to the result of previous studies and use these results;
- (b) In a situation where information from previous studies is not available, a preliminary sample as a pilot could be conducted and use that sample is used to provide the estimates;
- (c) Use best guesses based on the researcher’s own experiences.

For the registration/inclusion purpose of instance, option C shall be applied. Thus, there are different equations to calculate a required sample size for different situations. Different equation that will be used, depends on the type of parameter of interest, that is either:

- (a) A percentage – retention rate of improved cookstove
- (b) A numeric value – the mean value of operating efficiency of improved cookstove

For all of the parameters 95% confidence is required that the margin of error in the estimate is not more than $\pm 10\%$ in relative terms.

For parameter $N_{y,i,j}$

$$n \geq \frac{1.96^2 N \times p(1-p)}{(N-1) \times 0.1^2 \times p^2 + 1.96^2 p(1-p)}$$

Where:

- N : Sample size
- $N=N_y$: Number of ICS in the instance project activity installed in year y = total number of households.
- p : Our expected proportion of the installed (ICS) will be in use and operating at the specified efficiency)
- 1.96 : Represents the 95 % confidence required
- 0.1 : Represents the 10 % relative precision

Based on the above assumption, the resulting sampling size for a 95/10 confidence/precision is calculated for total population size, the result below:

Monitoring Parameter		Stove Operating Fraction for determination of N_y			
Sampling frame (s)		Given stove age population			
Sampling approach		Stratified random sampling across stove age			
Sampling population (Batch)	Age	Stove population	Expected operational proportion	Calculated Sample Size (n)	Actual Monitored sample size
Ecozen	1	167,999	0.90	21	26
Ecozen	2	182,001	0.90	22	28
Sample size determination					
Estimated Operation (p)					0.90
$V_{operation} = p(1-p)/p^2$					0.111
Sample Size required (SOF)					43

Additionally, as per registered sampling plan, it's recommended that the CME may choose to use the same samples to monitor more than one parameter, where parameters have same units. Sampling more than one parameter within the same sample (household) helps reduce travel needs for monitoring and the associated costs. At the same time this

approach ensures the random selection of samples for every parameter. Also, oversampling is strongly encouraged, not only to compensate for any attrition, outliers or nonresponse associated with the sample, but also to prevent a situation at the analysis stage where the required reliability is not achieved and additional sampling efforts would be required. We expect the response rate from the sampled households to be 80%. Thus, we would decide to sample $43/0.8 = 54$ samples. A total of 54 samples were selected.

Data Analysis

Analysis of data monitored through sampling revealed the following results

ANALYSIS for parameter Ny	
Samples Monitored	54
Operation fraction Measured	1.000
Standard Error of operation	0.000
Upper Boundary Level	100.00%
Lower Boundary Level	100.00%
Relative precision (Margin of error)	0.00%
Check precision	0.00%
Result	Ok, reliability level met
Lower Bound confidence value	Not applicable

For detailed calculations refer ER calculator sheet.

(f) Survey implementation schedule

The sample to be surveyed is drawn randomly with a geographical spread within the project boundary of the project activity instance

The survey was conducted through: physical on-site visit (face-to-face) from 15-Dec-2023 to 23-Dec-2023. For the physical on-site visit (face-to-face interview), data is collected through hard-copy questionnaires.

Training

Before implementing survey, SICO conducted a training about sampling and survey for employees on 13-Dec-2023. Attendees included Director, manager of project coordination, manager of project consultant and employees participating in the survey. Major focus is on understanding collection of data as per the survey questionnaire.

5 QUANTIFICATION OF GHG EMISSION REDUCTIONS AND REMOVALS

5.1 Baseline Emissions

In accordance with the applied methodology, the baseline scenario is continued use of non-renewable wood fuel (firewood) by the target population to meet similar thermal energy needs as provided by project cookstoves in absence of project activity

The actual baseline scenario is the use of non-renewable biomass. The quantity of biomass used in absence of the project activity for target consumers will be determined at the Instance level. Assessments, information used in initial instances may be used in subsequent instances in lieu of conducting fresh assessments at each instance level.

The methodology does not account for baseline emissions separately, but instead quantifies net emission reductions achieved by the project. Please refer to Section 5.4.

5.2 Project Emissions

Refer to section 5.4 for the calculation of emission reductions resulting from the proposed project. There are no project emissions considered)

5.3 Leakage Emissions

As detailed in section 8.3 of the applied methodology VMR0006, version 1.1, leakage shall be considered as default 0.95.

5.4 GHG Emission Reductions and Carbon Dioxide Removals

Emission reductions are calculated as follows:

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

Where:

i	Indices for the situation where more than one type/model of improved cookstove is introduced to replace three stone fire.
j	Indices for the situation where there is more than one batch of improved cookstove of type i
ER _y	Emission reductions during year y in t CO ₂ e
ER _{y,i,j}	Emission reductions by improved cookstove of type i and batch j during year y in tCO ₂ e

Since the project activity instance involves the deployment of ICS, the following equation is applicable as per VMR0006, version 1.1:

$$ER_{y,i,j} = B_{y,savings,i,j} \times NCV_{wood\ fuel} \times f_{NRB,y} \times (EF_{wf,CO_2} + EF_{wf,non\ CO_2}) \times N_{y,i,j} \times 0.95$$

Where:

- $B_{y,savings,i,j}$: Quantity of woody biomass that is saved in tonnes per improved cookstove of type i and batch j during year y
- $f_{NRB,y}$: Fraction of woody biomass that can be established as non-renewable biomass (f_{NRB})
- $NCV_{woodfuel}$: Net calorific value of the non-renewable woody biomass that is substituted or reduced (IPCC default for wood fuel, 0.0156 TJ/tonne)
- EF_{wf,CO_2} : CO₂ emission factor for the use of wood fuel in baseline scenario (IPCC default for wood fuel, 112 tCO₂/TJ)
- $EF_{wf,non\ CO_2}$: Non CO₂ emission factor for the use of wood fuel in baseline scenario (IPCC default for wood fuel, 26.23 tCO₂/TJ)
- $N_{y,i,j}$: Number of improved cookstoves of type i and batch j operating during year y.
- 0.95 : Discount factor to account for leakage.

To calculate $B_{y,savings,i,j}$ used the following equation of the applied methodology:

$$B_{y,savings,i,j} = B_{y=1,new,i,survey} \times (\eta_{new,i,j} / \eta_{old} - 1).$$

Where:

- $B_{y=1,new,i,survey}$: Annual quantity of woody biomass used by improved cookstoves in tonnes per device of type i and batch j, determined in the first year of the implementation of the project through a sample survey.
- η_{old} : Efficiency of baseline cookstove
- $\eta_{new,i,j}$: Efficiency of the improved cookstove type i and batch j determined through water boiling test (WBT) during year y. Alternatively, efficiency may be determined using equation 5 of methodology.

$B_{y=1,new,i,survey}$: Annual quantity of woody biomass used by ICS in tonnes per device of type i and batch j, determined in the first year of the implementation of the project through a sample survey. The value is 1.392 tonnes/year

$$\eta_{old} = 10\%$$

$$\eta_{new,Ecozen, 1} = 36.13\%$$

$$\eta_{new,Ecozen, 2} = 35.77\%$$

Result calculation for each instances depend on number of distributed ICS and proportion activity days in a year, detail below (refer to ER sheet):

Name of instance	Age	Quantity	Start date of distribution ICS in a month	End date of distribution ICS in a month	Start date of stove crediting (considering the start date of the second monitoring period)	End date of stove crediting (considering the end date of the second monitoring period)	Equivalent Operational year in the monitoring period	CERs
PA 001	2	8,000	2-May-22	3-May-22	1-Apr-23	31-Dec-23	0.75	31,764
PA 002	2	8,000	4-May-22	5-May-22	1-Apr-23	31-Dec-23	0.75	31,764
PA 003	2	8,000	7-May-22	8-May-22	1-Apr-23	31-Dec-23	0.75	31,764
PA 004	2	2,272	7-Jun-22	7-May-22	1-Apr-23	31-Dec-23	0.75	9,021
PA 005	2	8,000	12-May-22	14-May-22	1-Apr-23	31-Dec-23	0.75	31,764
PA 006	1	2,000	9-Jan-23	11-Jan-23	1-Apr-23	31-Dec-23	0.75	8,052
PA 007	2	8,000	2-Aug-22	3-Aug-22	1-Apr-23	31-Dec-23	0.75	31,764
PA 008	2	8,000	6-Aug-22	7-Aug-22	1-Apr-23	31-Dec-23	0.75	31,764
PA 009	2	8,000	4-Sep-22	6-Sep-22	1-Apr-23	31-Dec-23	0.75	31,764
PA 010	2	8,000	9-Sep-22	10-Sep-22	1-Apr-23	31-Dec-23	0.75	31,764
PA 011	2	71	10-Sep-22	10-Sep-22	1-Apr-23	31-Dec-23	0.75	282
PA 012	2	8,000	2-Nov-22	3-Nov-22	1-Apr-23	31-Dec-23	0.75	31,764
PA 013	2	8,000	4-Nov-22	5-Nov-22	1-Apr-23	31-Dec-23	0.75	31,764
PA 014	2	8,000	7-Nov-22	8-Nov-22	1-Apr-23	31-Dec-23	0.75	31,764
PA 015	2	8,000	8-Nov-22	10-Nov-22	1-Apr-23	31-Dec-23	0.75	31,764
PA 016	2	8,000	5-Jul-22	6-Jul-22	1-Apr-23	31-Dec-23	0.75	31,764
PA 017	2	7,800	3-Aug-22	7-Aug-22	7-Aug-22	31-Dec-23	1.40	30,970
	1	200	3-Apr-23	3-Apr-23	4-Apr-23	31-Dec-23	0.75	796
PA 018	1	7,181	3-Apr-23	5-Apr-23	6-Apr-23	31-Dec-23	0.74	28,385
PA 019	1	8,000	6-Apr-23	10-Apr-23	11-Apr-23	31-Dec-23	0.73	31,036
PA 020	1	8,000	3-Jul-23	7-Jul-23	8-Jul-23	31-Dec-23	0.48	20,730
PA 021	1	5,500	10-Jul-23	12-Jul-23	13-Jul-23	31-Dec-23	0.47	13,849
	1	2,500	2-Oct-23	2-Oct-23	3-Oct-23	31-Dec-23	0.25	3,294
PA 022	1	8,000	3-Oct-23	6-Oct-23	7-Oct-23	31-Dec-23	0.24	10,072
PA 023	1	6,538	9-Oct-23	11-Oct-23	12-Oct-23	31-Dec-23	0.22	7,753
	1	1,462	4-Dec-23	4-Dec-23	5-Dec-23	31-Dec-23	0.07	578
PA 024	1	1,149	5-Dec-23	5-Dec-23	6-Dec-23	31-Dec-23	0.07	437
PA 025	2	8,000	2-Dec-22	3-Dec-22	1-Apr-23	31-Dec-23	0.75	31,764

PA 026	2	8,000	3-Oct-22	4-Oct-22	1-Apr-23	31-Dec-23	0.75	31,764
PA 027	2	8,000	6-Oct-22	7-Oct-22	1-Apr-23	31-Dec-23	0.75	31,764
PA 028	2	8,000	5-Jun-22	6-Jun-22	1-Apr-23	31-Dec-23	0.75	31,764
PA 029	2	2,222	6-Jun-22	6-Jun-22	1-Apr-23	31-Dec-23	0.75	8,822
	1	5,778	1-Mar-23	2-Mar-23	3-Mar-23	31-Dec-23	0.83	23,262
PA 030	1	5,659	12-Apr-23	15-Apr-23	16-Apr-23	31-Dec-23	0.71	22,783
PA 031	1	8,000	2-May-23	9-May-23	10-May-23	31-Dec-23	0.65	27,640
PA 032	1	8,000	10-May-23	16-May-23	17-May-23	31-Dec-23	0.63	26,820
PA 033	1	8,000	1-Aug-23	7-Aug-23	8-Aug-23	31-Dec-23	0.40	17,099
PA 034	1	5,588	8-Aug-23	11-Aug-23	12-Aug-23	31-Dec-23	0.39	11,617
	1	2,412	1-Sep-23	4-Sep-23	5-Sep-23	31-Dec-23	0.32	4,167
PA 035	1	5,546	5-Sep-23	7-Sep-23	8-Sep-23	31-Dec-23	0.32	9,337
PA 036	1	8,000	1-Jun-23	7-Jun-23	8-Jun-23	31-Dec-23	0.57	24,244
PA 037	1	8,000	8-Jun-23	13-Jun-23	14-Jun-23	31-Dec-23	0.55	23,541
PA 038	1	1,900	14-Jun-23	15-Jun-23	16-Jun-23	31-Dec-23	0.55	5,535
	1	6,100	8-Sep-23	12-Sep-23	13-Sep-23	31-Dec-23	0.30	9,823
PA 039	1	8,000	13-Sep-23	18-Sep-23	19-Sep-23	31-Dec-23	0.28	12,180
PA 040	1	8,000	1-Nov-23	7-Nov-23	8-Nov-23	31-Dec-23	0.15	6,324
PA 041	1	8,000	8-Nov-23	13-Nov-23	14-Nov-23	31-Dec-23	0.13	5,622
PA 042	1	4,486	5-Dec-23	8-Dec-23	9-Dec-23	31-Dec-23	0.06	1,511
PA 043	1	1,000	11-Jan-23	11-Jan-23	1-Apr-23	31-Dec-23	0.75	4,026
	1	7,000	6-Mar-23	8-Mar-23	1-Apr-23	31-Dec-23	0.75	28,182
PA 044	1	8,000	7-Feb-23	8-Feb-23	1-Apr-23	31-Dec-23	0.75	32,208
PA 045	2	8,000	7-Nov-22	27-Nov-22	1-Apr-23	31-Dec-23	0.75	31,764
PA 046	2	8,000	4-Jun-22	7-Jun-22	1-Apr-23	31-Dec-23	0.75	31,764
PA 047	2	8,000	5-Dec-22	13-Dec-22	1-Apr-23	31-Dec-23	0.75	31,764
PA 048	2	8,000	3-Jul-22	5-Jul-22	1-Apr-23	31-Dec-23	0.75	31,764
PA 049	2	1,636	6-Jul-22	6-Jul-22	1-Apr-23	31-Dec-23	0.75	6,496
Total		350,000						1,143,538

Net GHG emission reductions achieved under this grouped project are summarized below:

Vintage period	Baseline emissions (tCO ₂ e)	Project emissions (tCO ₂ e)	Leakage emissions (tCO ₂ e)	Reduction VCUs (tCO ₂ e)	Removal VCUs (tCO ₂ e)	Total VCUs (tCO ₂ e)
From 01-Apr-2023 to 31-Dec-2023	1,203,724	0	60,186	1,143,538	0	1,143,538
Total	1,203,724	0	60,186	1,143,538	0	1,143,538

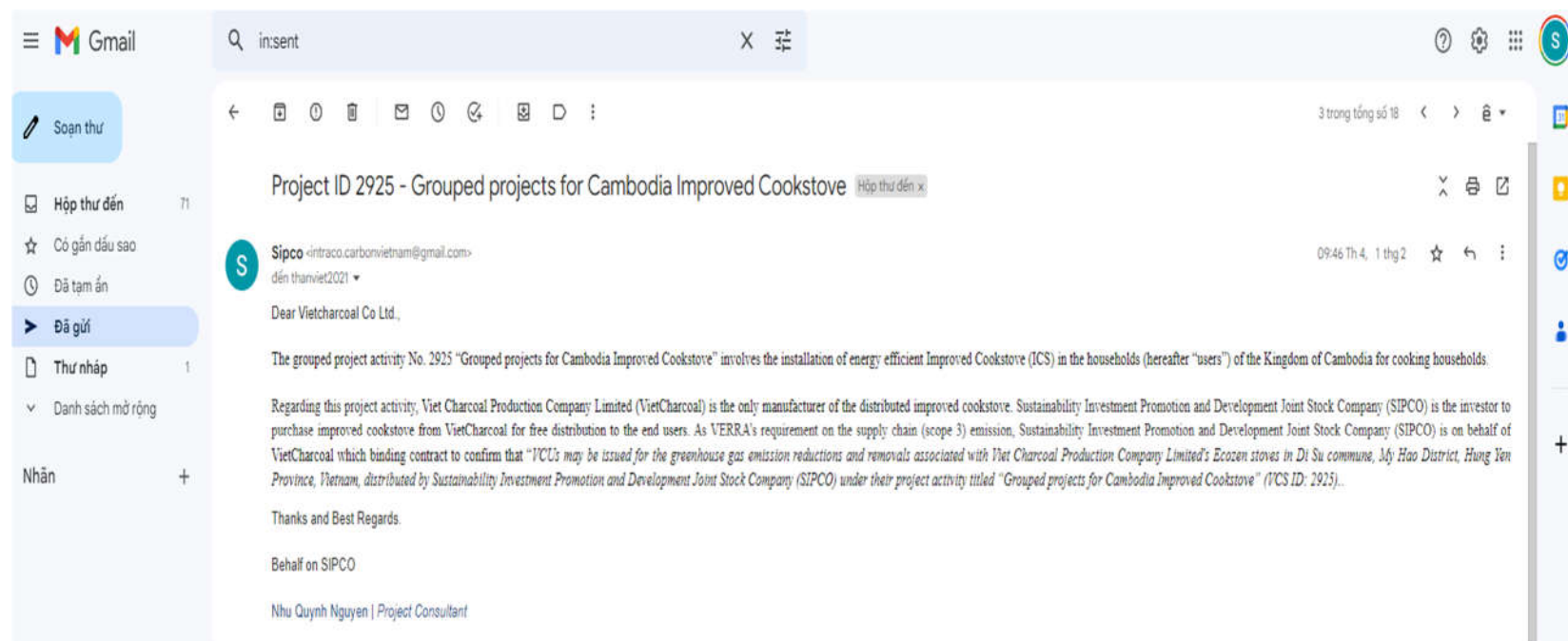
Vintage period	Ex-ante estimated reductions/removals	Achieved reductions/removals	Percent difference	Explanation for the difference
PA001 From 01-Apr-2023 to 31-Dec-2023	53,612	31,764	-40.75%	- Parameter $B_{y=1,new,i,j,survey}$ is estimated value in registered PD, during the monitoring period, this value is decrease. - The number of stoves distributed in many days, not fully distributed on the first day of distribution. - PP uses the updated value of fNRB which is voluntarily deducted the calculated fNRB by 26% based on the new Verra cookstove methodology (VMR 0006 version 1.2)
Total	53,612	31,764	-40.75%	

APPENDIX 1: COMMERCIALY SENSITIVE INFORMATION

Not Applicable.

APPENDIX 2: SUPPLY CHAIN (SCOPE 3)

1. Email of SIPCO sent to Viet Charcoal about supply chain



2. Public statement has been posted on SIPCO's website:

<https://intracocarbon.com/public-announcement-on-grouped-projects-for-cambodia-improved-cookstove-id-2925>

