



**Verified Carbon
Standard**

GROUPED PROJECTS FOR VIET NAM COOKSTOVE PROGRAM

Document Prepared by

Sustainability Investment Promotion and Development Joint Stock
Company (SIPCO)

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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 Cooking Stove (ICS) in the households (hereafter “users”) of Viet Nam for cooking households. 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 Viet Nam's climate change respond and sustainable development.

The project activity targets households with no previous ICS access. The geographical boundary is in Viet Nam. 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 Viet Nam through participation of the people in adopting energy efficient stoves. This will also contribute to improvement in quality of lives of the people from Viet Nam 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.

The improved cookstoves (model Ecozen and improved TK90) covered under the project has been manufactured by Viet Charcoal Production Company Limited. The equipment lifetime is 10 years. The credits shall be claimed only till the end of the operational life of the project devices.

Currently, there are 78 project instances under the grouped project¹. The first ICS was distributed on 07/01/2022. The first monitoring period is from 07/01/2022 to 30/11/2022. Till the end of first monitoring period, a total of 670,962 ICSs was reported installed under the project. Detail below:

¹ The detail of the 78 project instances is mentioned in the section 3.1

Table 1: Distribution schedule

Month of installation	Number of ICSs
01/2022	134
04/2022	65,669
05/2022	58,485
06/2022	58,833
07/2022	63,338
08/2022	75,463
09/2022	106,342
10/2022	94,317
11/2022	148,381
Total	670,962

The total GHG emission reductions generated in the first monitoring from 07/01/2022 to 30/11/2022 is 1,020,903 tCO₂e GHG emission reductions.

Audit Type	Period	Program	VVB Name	Number of years
Verification	07/01/2022 – 30/11/2022	VCS	Carbon Check (India) Private Ltd.	0.9
Total	1	1	1	0.9

1.2 Sectoral Scope and Project Type

The project activity under consideration is a grouped project activity. The project activity instances as part of the grouped project will have following sectoral scope, project type and methodologies:

Sectoral Scope applicable to project: 03 – Energy Demand

Project type: Type II – Energy efficiency improvement project

Methodology: VMR0006 “Methodology for installation of high efficiency firewood cookstoves”, version 1.1

1.3 Project Proponent

Organization name	Sustainability Investment Promotion and Development Joint Stock Company. (SIPCO)
Contact person	Mr. Hoang Anh Dung
Title	Chairman
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Email	dung.hoang@carbonvietnam.com

1.4 Other Entities Involved in the Project

Not Applicable

1.5 Project Start Date

The starting date is on 07/01/2022.

As per section 3.7 of the VCS Standard (v4.3), 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 cookstove under the project has been operating from 07/01/2022. Thus, the project start date is 07/01/2022.

1.6 Project Crediting Period

The crediting period: From 07 Jan 2022 to 06 Jan 2032.

The first monitoring period: From 07 Jan 2022 to 30 November 2022 (both days included).

Total number of years: 10 years 00 month

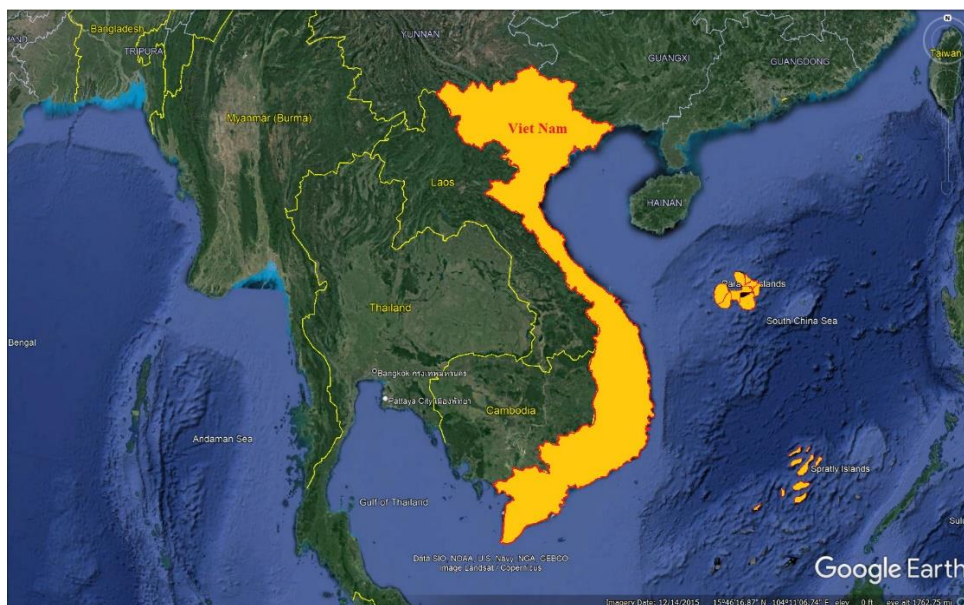
1.7 Project Location

The grouped project will be hosted by Viet Nam. The grouped project covers the 30 provinces of Viet Nam bounded between.

Latitudes: 14.315425 N

Longitudes: 108.339537 E

The details of coordinates are being submitted separately as KML file.



Map 1: Map of grouped project

Detail geographic information of the project activity instance is below:

Project activity Instance	Province	Coordinate
PA 1	Lao Cai	22.3381° N, 104.1487°E
PA 4		https://www.google.com/maps/place/L%C3%A0+Cai,+Vi%E1%BB%87t+Nam/@21.2083468,103.1400565,7z/data=!4m6!3m5!1s0x36cd3b8cbf4c0e07:0x21a2b6b9fb469068!8m2!3d22.3380865!4d104.1487055!16zL20vMDI0czE3?hl=vi-VN
PA 2	Nam Dinh	20.2792° N, 106.2051°E
PA 3		https://www.google.com/maps/place/Nam+%C4%90%E1%BB%8Bnh,+Vi%E1%BB%87t+Nam/@19.7105244,107.5739664,8z/data=!4m6!3m5!1s0x31360c2151521bdf:0xc8eba2bffe25df62!8m2!3d20.2791804!4d106.2051484!16zL20vMDdtMWRq?hl=vi-VN
PA 5	Dien Bien	21.8042° N, 103.1077°E
PA 6		https://www.google.com/maps/place/%C4%90i%E1%BB%87n+Bi%C3%AAn,+Vi%E1%BB%87t+Na
PA 7		
PA 8		

		m/@21.7191452,102.3094314,9z/data=!3m1!4b1!4m6!3m5!1s0x312d1f0ee0d1fbf3:0x48718c8562df0ef4!8m2!3d21.8042309!4d103.1076525!16zL20vMDJnajiJr?hl=vi-VN
PA 10	Lai Chau	22.3687° N, 103.3119°E
PA 11		https://www.google.com/maps/place/Lai+Ch%C3%A2u,+Vi%E1%BB%87t+Nam/@22.2482639,102.8718826,10z/data=!3m1!4b1!4m6!3m5!1s0x312d322c39d1b451:0xe229916091483c2e!8m2!3d22.3686613!4d103.3119085!16zL20vMDJ3aDls?hl=vi-VN
PA 12	Son La	21.1022° N, 103.7289°E https://www.google.com/maps/place/S%C6%A1n+La,+Vi%E1%BB%87t+Nam/@21.3009206,103.5568492,9z/data=!3m1!4b1!4m6!3m5!1s0x31325990dc3d1dd5:0x582d645a6a0f387b!8m2!3d21.1022284!4d103.7289167!16zL20vMDdtMWpj?hl=vi-VN
PA 13	Quang Ninh	21.0064° N, 107.2925°E https://www.google.com/maps/place/Qu%E1%BA%A3ng+Ninh,+Vi%E1%BB%87t+Nam/@21.1506388,106.992521,10z/data=!3m1!4b1!4m6!3m5!1s0x314b01d79a78852f:0xed0779f4f0a5866a!8m2!3d21.006382!4d107.2925144!16zL20vMDZnX3M5?hl=vi-VN
PA 14	Bac Ninh	21.1214° N, 106.1111°E
PA 15		https://www.google.com/maps/place/B%E1%BA%AFc+Ninh,+Vi%E1%BB%87t+Nam/@21.3386452,105.8196901,10z/data=!4m6!3m5!1s0x31350a5d26af7a51:0xe55920c0c6558f70!8m2!3d21.121444!4d106.1110501!16zL20vMDNxNmZ3?hl=vi-VN
PA 16		
PA 17	Ha Nam	20.5835° N, 105.9230°E https://www.google.com/maps/place/H%C3%A0+Nam,+Vi%E1%BB%87t+Nam/@20.533743,105.8357658,11z/data=!3m1!4b1!4m6!3m5!1s0x3135c511181964e1:0x74a9b90d3b326852!8m2!3d20.5835196!4d105.92299!16zL20vMDdtMTli?hl=vi-VN
PA 18	Vinh Phuc	21.3609° N, 105.5474°E
PA 19		https://www.google.com/maps/place/V%C4%A9nh+Ph%C3%Bac,+Vi%E1%BB%87t+Nam/@21.3629465,105.4178304,11z/data=!3m1!4b1!4m6!3m5!1s

		0x3134e54d82ea2dbb:0xc0d08e3fe11b105f!8m2!3d21.3608805!4d105.5474373!16zL20vMDdtMWtk?hl=vi-VN
PA 20	Quang Binh	17.6103° N, 106.3487°E https://www.google.com/maps/place/Qu%E1%BA%A3ng+B%C3%ACnh,+Vi%E1%BB%87t+Nam/@17.5049575,106.0197994,10z/data=!3m1!4b1!4m6!3m5!1s0x3138b0f638296f2d:0x901f872e6223598f!8m2!3d17.6102715!4d106.3487474!16zL20vMDdsX3h2?hl=vi-VN
PA 21		
PA 22		
PA 23	Phu Yen	13.0882° N, 109.0929°E https://www.google.com/maps/place/Ph%C3%BA+Y%C3%AAn,+Vi%E1%BB%87t+Nam/@13.2011058,108.7842812,10z/data=!3m1!4b1!4m6!3m5!1s0x316f70bf634caeff:0xfe6ebe1c1c171a80!8m2!3d13.0881861!4d109.0928764!16zL20vMDdtMWhu?hl=vi-VN
PA 24		
PA 25		
PA 26	Dak Lak	12.7100° N, 108.2378°E https://www.google.com/maps/place/%C4%90%E1%BA%AFk+L%E1%BA%AFk,+Vi%E1%BB%87t+Nam/@12.7877909,107.9590977,10z/data=!3m1!4b1!4m6!3m5!1s0x3171f7daf7307157:0x8ef97694d9883315!8m2!3d12.7100116!4d108.2377519!16zL20vMDUzZDU3?hl=vi-VN
PA 27		
PA 28		
PA 29		
PA 30		
PA 31	Kon Tum	14.6612° N, 107.8389°E https://www.google.com/maps/place/Kon+Tum,+Vi%E1%BB%87t+Nam/@14.6686635,107.3793971,9z/data=!3m1!4b1!4m6!3m5!1s0x316be72358aad1df:0x619b11aacc88a54!8m2!3d14.661167!4d107.83885!16zL20vMDU3cTAz?hl=vi-VN
PA 32		
PA 34	Lam Dong	11.5753° N, 108.1429°E https://www.google.com/maps/place/L%C3%A2m+%C4%90%E1%BB%93ng,+Vi%E1%BB%87t+Nam/@11.7651411,107.7169621,10z/data=!3m1!4b1!4m6!3m5!1s0x3171132659f3db7d:0xbb5ad2df5f54f56c!8m2!3d11.5752791!4d108.1428669!16zL20vMDdianox?hl=vi-VN
PA 37		18.2944° N, 105.6745°E https://www.google.com/maps/place/H%C3%A0+T
PA 38		

PA 39	Ha Tinh	%C4%A9nh,+Vi%E1%BB%87t+Nam/@18.3600801,105.5234041,10z/data=!3m1!4b1!4m6!3m5!1s0x313828a1eee9c3c7:0x1ac77b26b87d106b!8m2!3d18.2943776!4d105.6745247!16zL20vMDdmc3N5?hl=vi-VN
PA 40		
PA 41		
PA 42		
PA 43		
PA 44		
PA 45	Quang Tri	16.7943° N, 106.9634°E https://www.google.com/maps/place/Qu%E1%BA%A3ng+Tr%E1%BB%8B,+Vi%E1%BB%87t+Nam/@16.7345587,106.6717562,10z/data=!3m1!4b1!4m6!3m5!1s0x3140e4abaa1df129:0xe471fae020d54d28!8m2!3d16.7943472!4d106.963409!16zL20vMDVyd3Jq?hl=vi-VN
PA 46		
PA 47		
PA 48	Tuyen Quang	22.1727° N, 105.3131°E https://www.google.com/maps/place/Tuy%C3%AA n+Quang,+Vi%E1%BB%87t+Nam/@22.0969536,104.9422137,10z/data=!3m1!4b1!4m6!3m5!1s0x3134adfb5491ee1:0x7f5401719284787f!8m2!3d22.1726708!4d105.3131185!16zL20vMDdjZHMx?hl=vi-VN
PA 49		
PA 97		
PA 51	Bac Kan	22.3033° N, 105.8760°E https://www.google.com/maps/place/B%E1%BA%AFc+K%E1%BA%A1n,+Vi%E1%BB%87t+Nam/@22.272135,105.5579457,10z/data=!3m1!4b1!4m6!3m5!1s0x36cae0484a85eb4d:0xbf0390482b496ed0!8m2!3d22.3032923!4d105.876004!16zL20vMDNxZ21n?hl=vi-VN
PA 52		
PA 53	Lang Son	21.8564° N, 106.6291°E https://www.google.com/maps/place/L%E1%BA%A1ng+S%C6%A1n,+Vi%E1%BB%87t+Nam/@21.8928274,106.4485828,10z/data=!3m1!4b1!4m6!3m5!1s0x36b5543eb745256f:0xfa3d34da85826e5a!8m2!3d21.8563705!4d106.6291304!16zL20vMDZuMnhx?hl=vi-VN
PA 54	Ha Giang	22.7662° N, 104.9389°E https://www.google.com/maps/place/H%C3%A0+Giang,+Vi%E1%BB%87t+Nam/@22.7788949,104.6736905,10z/data=!3m1!4b1!4m6!3m5!1s0x36cc79
PA 55		
PA 56		

		caead371b1:0x834878b09acb80a8!8m2!3d22.7662056!4d104.9388853!16zL20vMDI0bjdj?hl=vi-VN
PA 59	Hai Duong	20.9386° N, 106.3207°E
PA 60		https://www.google.com/maps/place/H%E1%BA%A3i+D%C6%B0%C6%A1ng,+Vi%E1%BB%87t+Nam/@20.958668,106.2274023,11z/data=!3m1!4m6!3m5!1s0x314a7af448e05235:0x82e957d1041d9053!8m2!3d20.9385958!4d106.3206861!16zL20vMDdtMTg1?hl=vi-VN
PA 61		
PA 62	Hung Yen	20.8526° N, 106.0170°E
		https://www.google.com/maps/place/H%C6%B0ng+Y%C3%AAn,+Vi%E1%BB%87t+Nam/@20.8100609,105.9403332,11z/data=!3m1!4m6!3m5!1s0x3135af35301d265d:0xa7a9ea16cfd6d482!8m2!3d20.8525711!4d106.0169971!16zL20vMDdtMWZ4?hl=vi-VN
PA 64	Thua Thien Hue	16.4674° N, 107.5905°E
PA 65		https://www.google.com/maps/place/Th%E1%BB%ABa+Thi%C3%AAn+Hu%E1%BA%BF,+Vi%E1%BB%87t+Nam/@16.3686343,107.3230359,10z/data=!3m1!4b1!4m6!3m5!1s0x31419c87726490f7:0xab1c0fcac7cb84b5!8m2!3d16.467397!4d107.5905326!16zL20vMDYyNG5j?hl=vi-VN
PA 66		
PA 67		
PA 68	Quang Nam	15.5394° N, 108.0191°E
PA 69		https://www.google.com/maps/place/Qu%E1%BA%A3ng+B%C3%ACnh,+Vi%E1%BB%87t+Nam/@17.5049575,106.0197994,10z/data=!3m1!4b1!4m6!3m5!1s0x3138b0f638296f2d:0x901f872e6223598f!8m2!3d17.6102715!4d106.3487474!16zL20vMDdsX3h2?hl=vi-VN
PA 70		
PA 71		
PA 72		
PA 73		
PA 74		
PA 76	Quang Ngai	15.0760° N, 108.7126°E
PA 77		https://www.google.com/maps/place/Qu%E1%BA%A3ng+Ng%C3%A3i,+Vi%E1%BB%87t+Nam/@14.9817272,108.4080347,10z/data=!3m1!4b1!4m6!3m5!1s0x31683eeca9160973:0x4da18d6e3239edb1!8m2!3d15.0759838!4d108.7125791!16zL20vMDZmNW1k?hl=vi-VN
PA 78	Binh Thuan	11.0904° N, 108.0721°E

		https://www.google.com/maps/place/B%C3%ACnh+Thu%E1%BA%ADn,+Vi%E1%BB%87t+Nam/@11.0141029,107.923566,10z/data=!3m1!4b1!4m6!3m5!1s0x3176c3f2d68f59a1:0x2737428edf34c28e!8m2!3d11.0903703!4d108.0720781!16zL20vMDUzY3Bm?hl=vi-VN
PA 80	Khanh Hoa	12.2585° N, 109.0526° E
PA 81		https://www.google.com/maps/place/Kh%C3%A1nh+H%C3%B2a,+Vi%E1%BB%87t+Nam/@12.3185715,108.7883157,10z/data=!3m1!4b1!4m6!3m5!1s0x31701b8ca8dcd395:0x69c20827322308ce!8m2!3d12.2585098!4d109.0526076!16zL20vMDdsX19w?hl=vi-VN
PA 82		
PA 83	Ninh Thuan	11.6739° N, 108.8630° E https://www.google.com/maps/place/Ninh+Thu%E1%BA%ADn,+Vi%E1%BB%87t+Nam/@11.7379248,108.6112455,10z/data=!3m1!4b1!4m6!3m5!1s0x3170956e17fa09af:0xf8f5929e768e9e45!8m2!3d11.6738767!4d108.8629572!16zL20vMDdtMDFm?hl=vi-VN
PA 86	Dak Nong	12.2646° N, 107.6098° E https://www.google.com/maps/place/%C4%90%E1%BA%AFk+N%C3%B4ng,+Vi%E1%BB%87t+Nam/@12.2799563,107.3798706,10z/data=!3m1!4b1!4m6!3m5!1s0x3173b5ece644a927:0x7530e130f4a387ad!8m2!3d12.2646476!4d107.609806!16zL20vMDVo eGti?hl=vi-VN
PA 89	Gia Lai	13.8079° N, 108.1094° E
PA 90		https://www.google.com/maps/place/Gia+Lai,+Vi%E1%BB%87t+Nam/@13.7989509,107.6002884,9z/data=!3m1!4b1!4m6!3m5!1s0x316c1f82022f81a3:0x8c52b5f68143b50d!8m2!3d13.8078943!4d108.109375!16zL20vMDdtMTFs?hl=vi-VN
PA 91		

1.8 Title and Reference of Methodology

The methodology applied for this project is VMR0006: “Methodology for installation of High efficiency firewood cookstoves”, version 1.1

This grouped project also refers to the approved versions of the following tools and methodologies:

- AMS-I.E.: “Switch from non-renewable biomass for thermal applications by the user”, version”. Version 12.0
- TOOL30: Calculation of the fraction of non-renewable biomass, version 03.0.

1.9 Participation under other GHG Programs

The project is not registered under any other GHG Programs.

1.10 Other Forms of Credit and Supply Chain (Scope 3) Emissions

- The project has not generated any other form of GHG emissions from trading program or any other mechanism.
- The project has not applied for any other programme to create another form of GHG related environment credit.
- SIPCO have sent the notification of the project and the potential risk of Scope 3 emission double claiming to Viet Charcoal Production Company Limited via email.
- Viet Charcoal Production Company Limited is in charge of manufacturing improved cookstoves for SIPCO's greenhouse gas emission reduction projects. The company received an email from SIPCO requesting a public statement for scope 3 emission of the project. However, Viet Charcoal's website is only used to introduce their products to partners, and does not publish information on their partners' projects to avoid misunderstanding. Therefore, all public statements for supply chain of scope 3 emission will be announced directly by the project proponents (SIPCO) on their websites instead in this crediting period. Content of statement below: *“VCUs may be issued for the greenhouse gas emission reductions and removals associated with TK90 and Ecozen stoves, manufactured by Viet Charcoal Production Company Limited in Di Su commune, My Hao District, Hung Yen Province, Vietnam, distributed by Sustainability Investment Promotion and Development Joint Stock Company (SIPCO) under their project activity titled “Grouped Projects for Viet Nam Cookstove Program” (VCS ID: 2923). (detail in Appendix 1 of this report).*

1.11 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 will contribute 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 will lead 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 will support 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 will improve 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 will be 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 will alleviate 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 will be 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.

The project aligns with and will contribute to sustainable development objectives outlined in Table 1 below.

Table 1: Sustainable Development Contributions

Row number	SDG Target	SDG Indicator	Net Impact on SDG Indicator	Current Project Contributions	Contributions Over Project Lifetime
Sequential row number	SDG Target number	Number and text of SDG indicator or, if no official SDG indicator is applicable, user-defined indicator	Indicate the project's contribution to the SDG Indicator (implemented activities to increase or decrease)	Brief description of the quantifiable impact of the project's activities related to the SDG indicator, during the monitoring period.	Brief description of the cumulative quantifiable impact of the project's activities related to the SDG indicator, over the project lifetime.
1)	1.1	1.1.1 Proportion of population below the international poverty line, by sex, age, employment status and geographical location (urban/rural).	Implemented activities to decrease	No further changes this monitoring period	Implement activities to promote income increases through money and time saved using ICS Technology. The project will increase monthly income of families who purchase and collect wood fuel. Contribute to the eradication of extreme poverty (measured at less than \$1.25 per day. Save an average of 2 -3 days/week in time for families who collect firewood.
	1.4	1.4.1. Proportion of population living in households with access to basic services	Implemented activities to increase	Provide 670,962 families in this monitoring period with greater access to basic services in the form of clean cooking technology	No further changes compare with this monitoring period

2)	3.9	3.9.1: Mortality rate attributed to household and ambient air pollution	Implemented activities to decrease	No further changes this monitoring period	The project will lead to reduction in Household Air Pollution (HAP) thereby resulting in improved health conditions of women and children
3)	5.4	5.4.1: Proportion of time spent on unpaid domestic and care work, by sex, age and location	Implemented activities to decrease	No further changes this monitoring period	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	Implemented activities to increase	With the installation of 670,962 ICSs in first project activity to replace traditional stove, the project will improve energy efficiency in beneficiary homes and greater access to basic services in the form of clean cooking technology	No further changes compare with this monitoring period
5)	8.3	8.3.1. Proportion of informal employment in total employment, by sector and sex	Implemented activities to increase	The project will generate around 50 employment opportunities for assembling of ICSs, distribution of ICSs and post-sale operation & Maintenance of ICSs	No further changes compare with this monitoring period

6)	13.0	Tonnes of greenhouse gas emissions avoided or removed	Implemented activities to increase	Reduce the total fuelwood usage in the project area to generate approximately 1,020,903tCO ₂ e of emission reductions	No further changes compare with this monitoring period
7)	15.0	15.1.1. Forest area as a proportion of total land area 15.2.1 Progress towards sustainable forest management.	Implemented activities to increase	By replacing inefficient open cooking fires with 670,962 stoves in this monitoring period and performing energy efficiency improvements in improved cookstoves, the project activity will save woody biomass.	No further changes compare with this monitoring period

2 SAFEGUARDS

2.1 No Net Harm

Greenhouse gas reductions: Project implementation will result in GHG reductions because it will reduce the consumption of non-renewable biomass in countries where the biomass harvested for fuel use is typically non-renewable.

Air quality: Users (especially women and children) will be exposed to fewer air pollutants through reduced emission of not only CO₂, but also carbon monoxide and particulate matter. Air pollution from cooking with solid fuel is a key risk factor for childhood pneumonia as well as many other respiratory, cardiovascular and ocular diseases.

Biodiversity: will be improved as the programme reduces pressure on remaining forest reserves in Viet Nam. No negative impacts can be identified.

2.2 Local Stakeholder Consultation

An invitation letter was sent to related local stakeholders including DNA Vietnam, Government Authorities, NGOs, project developers, manufacturers, local vendors and households in 31st December 2021 in order to inform about the local stakeholder consultation meeting conducting in 07th Jan 2022 at the head quarter of Lao Cai Women Union. We also sent email and made the phone call to all invited local stakeholders for clearer clarification on the project and getting the confirmation of the meeting attendance. Stakeholders were identified as those whose activities directly or indirectly impact the project, and those who were to be impacted by the project activities. The invitations were welcoming written comments as well as physical attendance. The consultation was held for the Grouped projects for Viet Nam Cookstove Program. Many stakeholders attended the consultation meeting.

Ms. Nguyen Thi Hong Hanh, Director of SIPCO, made a presentation on the social, economic and environmental impacts of the project activity to local communities. The project activity aims to distribute freely improved cookstoves all over Vietnam and the pilot project activity of free distribution of 10,000 improved cookstove (ICS) to households who using traditional cookstove to cooking at Lao Cai Province. Ms. Hanh as well as a brief introduction of VCS projects. After the presentation and the questions and answer section made by the stakeholders.

Each attendee was handed out feedback form, project description presentation therefore, their comment could be collected directly in the meeting or in other hand sent to CME via email within 10 days after the date of the local stakeholder meeting.

Currently, the project received all supportive comments from local stakeholders without any negative one.

Consultation will continue throughout the project lifetime, and will continue to influence project design. Adaptations will be made if deemed necessary.

Women Union's chairman at level Commune, District and Province were the major contacts that provided a broad overview of issues and challenges related to cookstove using. They will give detailed information about the issues regarding the use of cookstoves. Similar meetings will be conducted with the households in various regions to discuss, and register their feedback regarding the improved cookstoves. Their opinions will be taken into consideration wherever necessary. The improved cookstove itself has been designed in continuous consultations with women, and other direct users of cookstoves, and this trend of taking user feedback will be continued. In case of any grievances, if required a meeting will be held as early as possible, depending upon the situation to discuss any solutions. For all such meetings advance invitation to users will be given along with a public notice in the local village office.

Mechanism for ongoing communication

SIPCO engages with a number of stakeholders (Women's Union) through annual reports, records and SIPCO's social media communication. Women's Unions are large organizations at all administrative levels (Commune, District, Province, State).

- Annual Reports includes information about the operation throughout the year. Women's Unions at commune and ward levels regularly come to exchange information with Beneficiaries and report to the District's level and the District's level will report it province's level. The province's Women Union has responsibly for summarizing and reporting to SIPCO. If these Beneficiaries have any comment in using cookstove, the Women Union will report immediately to SIPCO.
- Records will send to project donors about 2 times a year. The records include updates on current projects, community stories to share, fund raising appeals and much more.
- Social media communications are crucial to stay engaged with a variety of stakeholders. Below mentioned mechanism will be used by stakeholders to communicate their grievances with the Project owner:
 - Communication via phone call (+84) 243 519 0955 or email info@carbonvietnam.com
 - Through you tube
(<https://www.youtube.com/channel/UCrbpu4M164imNEcFT4WvDFA>)
 - By informing Women Union at levels.

SIPCO will continue to implement these informal ongoing consultation procedures, alongside formalized consultation via our annual survey.

Feedback was requested from local stakeholders for the “Grouped Projects for Viet Nam Cookstove Program” in period from 07 Jan 2022 to 30 Nov 2022 sent to SIPCO and we responded it as following:

Representative of stakeholder	Feed back	Response by SIPCO
Women Union of Dak Lak Province	There are many households in Dak Lak province are using traditional cookstove to cook meal but have not yet received project cookstove. We hope the project will continue to be expanded so that households who need a cookstove can be received it.	The ICS is currently distributing in the 30 provinces in Viet Nam and will be completed distribution in January 2023. We will prioritize distribution to households that meet the project criteria and expect all selected households to have access to the product of project.
Household in Lang Son Province	Hopefully the manufacture can increase the size of the project cookstove so that in addition to cooking, we can also use the project stove to cook bran and wine.	The manufacturer has tried to consider the cost and cooking demand to design the cookstove accordingly. In the future, we will consider increasing the size to better fit people's needs.
Household in Quang Nam Province	For households in the coastal area of Quang Nam, when the flood season come, the project cookstove is really essential because we can carry it around easily. Thank you so much for the project	We are very pleased when the project brings practical benefits to the people.

There were no negative or adverse comments received from stakeholders in this monitoring period.

2.3 AFOLU-Specific Safeguards

This section is not applicable because the project is a non – AFOLU project.

3 IMPLEMENTATION STATUS

3.1 Implementation Status of the Project Activity

Table 02: Timeline of project activities (PAs)

Project activity	Steps	Timeline
Grouped project	Registration date	25/11/2022
PA 1	Start date of first crediting period	07/01/2022
	Project start date (the first equipment distributed)	07/01/2022
	Inclusion date	25/11/2022
	Implementation status as on 30/11/2022 (number of ICSs distributed)	134 ICSs were distributed in Jan 2022 9,370 ICSs were distributed in April 2022 496 ICSs were distributed in May 2022
	Total of ICSs have been distributed as on 30/11/2022	10,000 ICSs
PA 2	Start date of first crediting period	07/01/2022
	Project start date (the first equipment distributed)	13/04/2022
	Inclusion date	To be included in this monitoring period
	Implementation status as on 30/11/2022 (number of ICSs distributed)	1,500 ICSs were distributed in April 2022 8,500 ICSs were distributed by August 2022
	Total of ICSs have been distributed as on 30/11/2022	10,000 ICSs
	Start date of first crediting period	07/01/2022

PA 3	Project start date (the first equipment distributed)	01/08/2022
	Inclusion date	To be included in this monitoring period
	Implementation status as on 30/11/2022 (number of ICSs distributed)	10,000 ICSs were distributed in August 2022
	Total of ICSs have been distributed as on 30/11/2022	10,000 ICSs
PA 4	Start date of first crediting period	07/01/2022
	Project start date (the first equipment distributed)	14/10/2022
	Inclusion date	To be included in this monitoring period
	Implementation status as on 30/11/2022 (number of ICSs distributed)	5,000 ICSs were distributed in Oct 2022
	Total of ICSs have been distributed as on 30/11/2022	5,000 ICSs
PA 5	Start date of first crediting period	07/01/2022
	Project start date (the first equipment distributed)	17/04/2022
	Inclusion date	To be included in this monitoring period
	Implementation status as on 30/11/2022 (number of ICSs distributed)	10,000 ICSs were distributed in April 2022
	Total of ICSs have been distributed as on 30/11/2022	10,000 ICS
PA 6	Start date of first crediting period	07/01/2022
	Project start date (the first equipment distributed)	20/04/2022
	Inclusion date	To be included in this monitoring period
	Implementation status as on 30/11/2022 (number of ICSs distributed)	720 ICSs were distributed in April 2022 5,210 ICSs were distributed in May 2022 4,070 ICSs were distributed in June 2022

	Total of ICSs have been distributed as on 30/11/2022	10,000 ICS
PA 7	Start date of first crediting period	07/01/2022
	Project start date (the first equipment distributed)	12/06/2022
	Inclusion date	To be included in this monitoring period
	Implementation status as on 30/11/2022 (number of ICSs distributed)	6,228 ICSs were distributed in June 2022 3,772 ICSs were distributed in Nov 2022
	Total of ICSs have been distributed as on 30/11/2022	10,000 ICS
PA 8	Start date of first crediting period	07/01/2022
	Project start date (the first equipment distributed)	14/11/2022
	Inclusion date	To be included in this monitoring period
	Implementation status as on 30/11/2022 (number of ICSs distributed)	4,000 ICSs were distributed in Nov 2022
	Total of ICSs have been distributed as on 30/11/2022	4,000 ICS
PA 10	Start date of first crediting period	07/01/2022
	Project start date (the first equipment distributed)	01/03/2022
	Inclusion date	To be included in this monitoring period
	Implementation status as on 30/11/2022 (number of ICSs distributed)	5,000 ICSs were distributed in May 2022 5,000 ICSs were distributed in June 2022
	Total of ICSs have been distributed as on 30/11/2022	10,000 ICS
PA 11	Start date of first crediting period	07/01/2022
	Project start date (the first equipment distributed)	15/06/2022
	Inclusion date	To be included in this monitoring period

	Implementation status as on 30/11/2022 (number of ICSs distributed)	2,180 ICSs were distributed in May 2022 2,820 ICSs were distributed in June 2022
	Total of ICSs have been distributed as on 30/11/2022	5,000 ICS
PA12	Start date of first crediting period	07/01/2022
	Project start date (the first equipment distributed)	17/05/2022
	Inclusion date	To be included in this monitoring period
	Implementation status as on 30/11/2022 (number of ICSs distributed)	5,036 ICSs were distributed in May 2022
	Total of ICSs have been distributed as on 30/11/2022	5,036 ICS
PA13	Start date of first crediting period	07/01/2022
	Project start date (the first equipment distributed)	05/07/2022
	Inclusion date	To be included in this monitoring period
	Implementation status as on 30/11/2022 (number of ICSs distributed)	2,860 ICSs were distributed in July 2022
	Total of ICSs have been distributed as on 30/11/2022	2,860 ICS
PA14	Start date of first crediting period	07/01/2022
	Project start date (the first equipment distributed)	07/04/2022
	Inclusion date	To be included in this monitoring period
	Implementation status as on 30/11/2022 (number of ICSs distributed)	7,185 ICSs were distributed in April 2022 2,815 ICSs were distributed in May 2022
	Total of ICSs have been distributed as on 30/11/2022	10,000 ICS
PA15	Start date of first crediting period	07/01/2022

	Project start date (the first equipment distributed)	14/07/2022
	Inclusion date	To be included in this monitoring period
	Implementation status as on 30/11/2022 (number of ICSs distributed)	• 10,000 ICSs were distributed in July 2022
	Total of ICSs have been distributed as on 30/11/2022	• 10,000 ICS
PA16	Start date of first crediting period	07/01/2022
	Project start date (the first equipment distributed)	16/07/2022
	Inclusion date	To be included in this monitoring period
	Implementation status as on 30/11/2022 (number of ICSs distributed)	• 625 ICSs were distributed in July 2022 • 2,890 ICSs were distributed in Sept 2022
	Total of ICSs have been distributed as on 30/11/2022	• 3,515 ICS
PA17	Start date of first crediting period	07/01/2022
	Project start date (the first equipment distributed)	18/07/2022
	Inclusion date	To be included in this monitoring period
	Implementation status as on 30/11/2022 (number of ICSs distributed)	• 2,300 ICSs were distributed in July 2022 • 2,700 ICSs were distributed in Oct 2022.
	Total of ICSs have been distributed as on 30/11/2022	• 5,000 ICS
PA18	Start date of first crediting period	07/01/2022
	Project start date (the first equipment distributed)	08/07/2022
	Inclusion date	To be included in this monitoring period
	Implementation status as on 30/11/2022 (number of ICSs distributed)	• 2,145 ICSs were distributed in July 2022 • 6,432 ICSs were distributed in August 2022 • 1,423 ICSs were distributed in Sep 2022

	Total of ICSs have been distributed as on 30/11/2022	10,000 ICS
PA19	Start date of first crediting period	07/01/2022
	Project start date (the first equipment distributed)	04/09/2022
	Inclusion date	To be included in this monitoring period
	Implementation status as on 30/11/2022 (number of ICSs distributed)	7,581 ICSs were distributed in Sep 2022
	Total of ICSs have been distributed as on 30/11/2022	7,581 ICS
PA20	Start date of first crediting period	07/01/2022
	Project start date (the first equipment distributed)	05/06/2022
	Inclusion date	To be included in this monitoring period
	Implementation status as on 30/11/2022 (number of ICSs distributed)	6,000 ICSs were distributed in June 2022 4,000 ICSs were distributed in July 2022
	Total of ICSs have been distributed as on 30/11/2022	10,000 ICS
PA21	Start date of first crediting period	07/01/2022
	Project start date (the first equipment distributed)	09/07/2022
	Inclusion date	To be included in this monitoring period
	Implementation status as on 30/11/2022 (number of ICSs distributed)	10,000 ICSs were distributed in July 2022
	Total of ICSs have been distributed as on 30/11/2022	10,000 ICS
PA22	Start date of first crediting period	07/01/2022
	Project start date (the first equipment distributed)	22/07/2022
	Inclusion date	To be included in this monitoring period

	Implementation status as on 30/11/2022 (number of ICSs distributed)	10,000 ICSs were distributed in July 2022
	Total of ICSs have been distributed as on 30/11/2022	10,000 ICS
PA23	Start date of first crediting period	07/01/2022
	Project start date (the first equipment distributed)	11/06/2022
	Inclusion date	To be included in this monitoring period
	Implementation status as on 30/11/2022 (number of ICSs distributed)	3,580 ICSs were distributed in June 2022 6,420 ICSs were distributed in July 2022
	Total of ICSs have been distributed as on 30/11/2022	10,000 ICS
PA24	Start date of first crediting period	07/01/2022
	Project start date (the first equipment distributed)	21/07/2022
	Inclusion date	To be included in this monitoring period
	Implementation status as on 30/11/2022 (number of ICSs distributed)	4,796 ICSs were distributed in July 2022 5,204 ICSs were distributed in Aug 2022
	Total of ICSs have been distributed as on 30/11/2022	10,000 ICS
PA 25	Start date of first crediting period	07/01/2022
	Project start date (the first equipment distributed)	04/08/2022
	Inclusion date	To be included in this monitoring period
	Implementation status as on 30/11/2022 (number of ICSs distributed)	10,000 ICSs were distributed in Aug 2022
	Total of ICSs have been distributed as on 30/11/2022	10,000 ICS
	Start date of first crediting period	07/01/2022

PA 26	Project start date (the first equipment distributed)	12/04/2022
	Inclusion date	To be included in this monitoring period
	Implementation status as on 30/11/2022 (number of ICSs distributed)	10,000 ICSs were distributed in April 2022
	Total of ICSs have been distributed as on 30/11/2022	10,000 ICS
PA 27	Start date of first crediting period	07/01/2022
	Project start date (the first equipment distributed)	12/04/2022
	Inclusion date	To be included in this monitoring period
	Implementation status as on 30/11/2022 (number of ICSs distributed)	5,000 ICSs were distributed in April 2022 2,800 ICSs were distributed in May 2022 2,200 ICSs were distributed in Jun 2022
	Total of ICSs have been distributed as on 30/11/2022	10,000 ICS
PA 28	Start date of first crediting period	07/01/2022
	Project start date (the first equipment distributed)	05/09/2022
	Inclusion date	To be included in this monitoring period
	Implementation status as on 30/11/2022 (number of ICSs distributed)	10,000 ICSs were distributed in Sep 2022
	Total of ICSs have been distributed as on 30/11/2022	10,000 ICS
PA 29	Start date of first crediting period	07/01/2022
	Project start date (the first equipment distributed)	01/09/2022
	Inclusion date	To be included in this monitoring period
	Implementation status as on 30/11/2022 (number of ICSs distributed)	8,500 ICSs were distributed in Sep 2022 1,500 ICSs were distributed in Oct 2022

	Total of ICSs have been distributed as on 30/11/2022	10,000 ICS
PA 30	Start date of first crediting period	07/01/2022
	Project start date (the first equipment distributed)	01/10/2022
	Inclusion date	To be included in this monitoring period
	Implementation status as on 30/11/2022 (number of ICSs distributed)	5,000 ICSs were distributed in Oct 2022
	Total of ICSs have been distributed as on 30/11/2022	5,000 ICS
PA 31	Start date of first crediting period	07/01/2022
	Project start date (the first equipment distributed)	10/05/2022
	Inclusion date	To be included in this monitoring period
	Implementation status as on 30/11/2022 (number of ICSs distributed)	9,520 ICSs were distributed in May 2022 480 ICSs were distributed in Jun 2022
	Total of ICSs have been distributed as on 30/11/2022	10,000 ICS
PA 32	Start date of first crediting period	07/01/2022
	Project start date (the first equipment distributed)	16/05/2022
	Inclusion date	To be included in this monitoring period
	Implementation status as on 30/11/2022 (number of ICSs distributed)	20 ICSs were distributed in May 2022
	Total of ICSs have been distributed as on 30/11/2022	20 ICS
PA 34	Start date of first crediting period	07/01/2022
	Project start date (the first equipment distributed)	10/05/2022
	Inclusion date	To be included in this monitoring period

	Implementation status as on 30/11/2022 (number of ICSs distributed)	• 5,500 ICSs were distributed in May 2022 • 1,300 ICSs were distributed in Jun 2022
	Total of ICSs have been distributed as on 30/11/2022	• 6,800 ICS
PA 37	Start date of first crediting period	07/01/2022
	Project start date (the first equipment distributed)	18/04/2022
	Inclusion date	To be included in this monitoring period
	Implementation status as on 30/11/2022 (number of ICSs distributed)	• 4,129 ICSs were distributed in April 2022 • 460 ICSs were distributed in May 2022 • 5,411 ICSs were distributed in Jun 2022
	Total of ICSs have been distributed as on 30/11/2022	• 10,000 ICS
PA 38	Start date of first crediting period	07/01/2022
	Project start date (the first equipment distributed)	18/07/2022
	Inclusion date	To be included in this monitoring period
	Implementation status as on 30/11/2022 (number of ICSs distributed)	• 2,174 ICSs were distributed in July 2022 • 7,826 ICSs were distributed in August 2022
	Total of ICSs have been distributed as on 30/11/2022	• 10,000 ICS
PA 39	Start date of first crediting period	07/01/2022
	Project start date (the first equipment distributed)	05/08/2022
	Inclusion date	To be included in this monitoring period
	Implementation status as on 30/11/2022 (number of ICSs distributed)	• 10,000 ICSs were distributed in August 2022
	Total of ICSs have been distributed as on 30/11/2022	• 10,000 ICS

PA 40	Start date of first crediting period	07/01/2022
	Project start date (the first equipment distributed)	05/08/2022
	Inclusion date	To be included in this monitoring period
	Implementation status as on 30/11/2022 (number of ICSs distributed)	10,000 ICSs were distributed in August 2022
	Total of ICSs have been distributed as on 30/11/2022	10,000 ICS
PA 41	Start date of first crediting period	07/01/2022
	Project start date (the first equipment distributed)	05/08/2022
	Inclusion date	To be included in this monitoring period
	Implementation status as on 30/11/2022 (number of ICSs distributed)	6,791 ICSs were distributed in August 2022 3,209 ICSs were distributed in Sep 2022
	Total of ICSs have been distributed as on 30/11/2022	10,000 ICS
PA 42	Start date of first crediting period	07/01/2022
	Project start date (the first equipment distributed)	03/09/2022
	Inclusion date	To be included in this monitoring period
	Implementation status as on 30/11/2022 (number of ICSs distributed)	10,000 ICSs were distributed in Sep 2022
	Total of ICSs have been distributed as on 30/11/2022	10,000 ICS
PA 43	Start date of first crediting period	07/01/2022
	Project start date (the first equipment distributed)	04/09/2022
	Inclusion date	To be included in this monitoring period
	Implementation status as on 30/11/2022 (number of ICSs distributed)	10,000 ICSs were distributed in Sep 2022

	Total of ICSs have been distributed as on 30/11/2022	10,000 ICS
PA 44	Start date of first crediting period	07/01/2022
	Project start date (the first equipment distributed)	04/09/2022
	Inclusion date	To be included in this monitoring period
	Implementation status as on 30/11/2022 (number of ICSs distributed)	2,861 ICSs were distributed in Sep 2022
	Total of ICSs have been distributed as on 30/11/2022	2,861 ICS
PA 45	Start date of first crediting period	07/01/2022
	Project start date (the first equipment distributed)	22/04/2022
	Inclusion date	To be included in this monitoring period
	Implementation status as on 30/11/2022 (number of ICSs distributed)	5,100 ICSs were distributed in April 2022 4,900 ICSs were distributed in Sep 2022
	Total of ICSs have been distributed as on 30/11/2022	10,000 ICS
PA 46	Start date of first crediting period	07/01/2022
	Project start date (the first equipment distributed)	07/09/2022
	Inclusion date	To be included in this monitoring period
	Implementation status as on 30/11/2022 (number of ICSs distributed)	8,318 ICSs were distributed in Sep 2022 1,682 ICSs were distributed in Oct 2022
	Total of ICSs have been distributed as on 30/11/2022	10,000 ICS
PA 47	Start date of first crediting period	07/01/2022
	Project start date (the first equipment distributed)	12/10/2022
	Inclusion date	To be included in this monitoring period

	Implementation status as on 30/11/2022 (number of ICSs distributed)	10,000 ICSs were distributed in Oct 2022
	Total of ICSs have been distributed as on 30/11/2022	10,000 ICS
PA 48	Start date of first crediting period	07/01/2022
	Project start date (the first equipment distributed)	18/09/2022
	Inclusion date	To be included in this monitoring period
	Implementation status as on 30/11/2022 (number of ICSs distributed)	10,000 ICSs were distributed in Sep 2022
	Total of ICSs have been distributed as on 30/11/2022	10,000 ICS
PA 49	Start date of first crediting period	07/01/2022
	Project start date (the first equipment distributed)	22/09/2022
	Inclusion date	To be included in this monitoring period
	Implementation status as on 30/11/2022 (number of ICSs distributed)	372 ICSs were distributed in Sep 2022 9,608 ICSs were distributed in Nov 2022
	Total of ICSs have been distributed as on 30/11/2022	10,000 ICS
PA 51	Start date of first crediting period	07/01/2022
	Project start date (the first equipment distributed)	21/09/2022
	Inclusion date	To be included in this monitoring period
	Implementation status as on 30/11/2022 (number of ICSs distributed)	471 ICSs were distributed in Sep 2022 9,529 ICSs were distributed in Oct 2022
	Total of ICSs have been distributed as on 30/11/2022	10,000 ICS
	Start date of first crediting period	07/01/2022

PA 52	Project start date (the first equipment distributed)	08/10/2022
	Inclusion date	To be included in this monitoring period
	Implementation status as on 30/11/2022 (number of ICSs distributed)	7,000 ICSs were distributed in Oct 2022
	Total of ICSs have been distributed as on 30/11/2022	7,000 ICS
PA 53	Start date of first crediting period	07/01/2022
	Project start date (the first equipment distributed)	28/07/2022
	Inclusion date	To be included in this monitoring period
	Implementation status as on 30/11/2022 (number of ICSs distributed)	1,150 ICSs were distributed in July 2022 8,850 ICSs were distributed in Nov 2022
	Total of ICSs have been distributed as on 30/11/2022	10,000 ICS
PA 54	Start date of first crediting period	07/01/2022
	Project start date (the first equipment distributed)	10/05/2022
	Inclusion date	To be included in this monitoring period
	Implementation status as on 30/11/2022 (number of ICSs distributed)	8,050 ICSs were distributed in May 2022 1,950 ICSs were distributed in Jun 2022
	Total of ICSs have been distributed as on 30/11/2022	10,000 ICS
PA 55	Start date of first crediting period	07/01/2022
	Project start date (the first equipment distributed)	13/06/2022
	Inclusion date	To be included in this monitoring period
	Implementation status as on 30/11/2022 (number of ICSs distributed)	6,150 ICSs were distributed in Jun 2022 3,850 ICSs were distributed in Oct 2022

	Total of ICSs have been distributed as on 30/11/2022	10,000 ICS
PA 56	Start date of first crediting period	07/01/2022
	Project start date (the first equipment distributed)	06/10/2022
	Inclusion date	To be included in this monitoring period
	Implementation status as on 30/11/2022 (number of ICSs distributed)	5,010 ICSs were distributed in Oct 2022
	Total of ICSs have been distributed as on 30/11/2022	5,010 ICS
PA 59	Start date of first crediting period	07/01/2022
	Project start date (the first equipment distributed)	05/08/2022
	Inclusion date	To be included in this monitoring period
	Implementation status as on 30/11/2022 (number of ICSs distributed)	510 ICSs were distributed in Aug 2022 9,490 ICSs were distributed in Sep 2022
	Total of ICSs have been distributed as on 30/11/2022	10,000 ICS
PA 60	Start date of first crediting period	07/01/2022
	Project start date (the first equipment distributed)	10/09/2022
	Inclusion date	To be included in this monitoring period
	Implementation status as on 30/11/2022 (number of ICSs distributed)	4,452 ICSs were distributed in Sep 2022 5,548 ICSs were distributed in Nov 2022
	Total of ICSs have been distributed as on 30/11/2022	10,000 ICS
PA 61	Start date of first crediting period	07/01/2022
	Project start date (the first equipment distributed)	07/11/2022
	Inclusion date	To be included in this monitoring period

	Implementation status as on 30/11/2022 (number of ICSs distributed)	9,725 ICSs were distributed in Nov 2022
	Total of ICSs have been distributed as on 30/11/2022	9,725 ICS
PA 62	Start date of first crediting period	07/01/2022
	Project start date (the first equipment distributed)	20/07/2022
	Inclusion date	To be included in this monitoring period
	Implementation status as on 30/11/2022 (number of ICSs distributed)	200 ICSs were distributed in July 2022
	Total of ICSs have been distributed as on 30/11/2022	200 ICS
PA 64	Start date of first crediting period	07/01/2022
	Project start date (the first equipment distributed)	04/07/2022
	Inclusion date	To be included in this monitoring period
	Implementation status as on 30/11/2022 (number of ICSs distributed)	1,257 ICSs were distributed in July 2022 8,743 ICSs were distributed in Oct 2022
	Total of ICSs have been distributed as on 30/11/2022	10,000 ICS
PA 65	Start date of first crediting period	07/01/2022
	Project start date (the first equipment distributed)	14/10/2022
	Inclusion date	To be included in this monitoring period
	Implementation status as on 30/11/2022 (number of ICSs distributed)	6,378 ICSs were distributed in Oct 2022 3,622 ICSs were distributed in Nov 2022
	Total of ICSs have been distributed as on 30/11/2022	10,000 ICS
	Start date of first crediting period	07/01/2022

PA 66	Project start date (the first equipment distributed)	21/11/2022
	Inclusion date	To be included in this monitoring period
	Implementation status as on 30/11/2022 (number of ICSs distributed)	10,000 ICSs were distributed in Nov 2022
	Total of ICSs have been distributed as on 30/11/2022	10,000 ICS
PA 67	Start date of first crediting period	07/01/2022
	Project start date (the first equipment distributed)	21/11/2022
	Inclusion date	To be included in this monitoring period
	Implementation status as on 30/11/2022 (number of ICSs distributed)	10,000 ICSs were distributed in Nov 2022
	Total of ICSs have been distributed as on 30/11/2022	10,000 ICS
PA 68	Start date of first crediting period	07/01/2022
	Project start date (the first equipment distributed)	23/04/2022
	Inclusion date	To be included in this monitoring period
	Implementation status as on 30/11/2022 (number of ICSs distributed)	10,000 ICSs were distributed in April 2022
	Total of ICSs have been distributed as on 30/11/2022	10,000 ICS
PA 69	Start date of first crediting period	07/01/2022
	Project start date (the first equipment distributed)	23/04/2022
	Inclusion date	To be included in this monitoring period
	Implementation status as on 30/11/2022 (number of ICSs distributed)	1,973 ICSs were distributed in April 2022 507 ICSs were distributed in June 2022 7,520 ICSs were distributed in Nov 2022

	Total of ICSs have been distributed as on 30/11/2022	10,000 ICS
PA 70	Start date of first crediting period	07/01/2022
	Project start date (the first equipment distributed)	08/11/2022
	Inclusion date	To be included in this monitoring period
	Implementation status as on 30/11/2022 (number of ICSs distributed)	10,000 ICSs were distributed in Nov 2022
	Total of ICSs have been distributed as on 30/11/2022	10,000 ICS
PA 71	Start date of first crediting period	07/01/2022
	Project start date (the first equipment distributed)	10/11/2022
	Inclusion date	To be included in this monitoring period
	Implementation status as on 30/11/2022 (number of ICSs distributed)	10,000 ICSs were distributed in Nov 2022
	Total of ICSs have been distributed as on 30/11/2022	10,000 ICS
PA 72	Start date of first crediting period	07/01/2022
	Project start date (the first equipment distributed)	03/11/2022
	Inclusion date	To be included in this monitoring period
	Implementation status as on 30/11/2022 (number of ICSs distributed)	10,000 ICSs were distributed in Nov 2022
	Total of ICSs have been distributed as on 30/11/2022	10,000 ICS
PA 73	Start date of first crediting period	07/01/2022
	Project start date (the first equipment distributed)	07/11/2022
	Inclusion date	To be included in this monitoring period

	Implementation status as on 30/11/2022 (number of ICSs distributed)	10,000 ICSs were distributed in Nov 2022
	Total of ICSs have been distributed as on 30/11/2022	10,000 ICS
PA 74	Start date of first crediting period	07/01/2022
	Project start date (the first equipment distributed)	01/11/2022
	Inclusion date	To be included in this monitoring period
	Implementation status as on 30/11/2022 (number of ICSs distributed)	8,376 ICSs were distributed in Nov 2022
	Total of ICSs have been distributed as on 30/11/2022	8,376 ICS
PA 76	Start date of first crediting period	07/01/2022
	Project start date (the first equipment distributed)	16/08/2022
	Inclusion date	To be included in this monitoring period
	Implementation status as on 30/11/2022 (number of ICSs distributed)	200 ICSs were distributed in Aug 2022 9,800 ICSs were distributed in Sep 2022
	Total of ICSs have been distributed as on 30/11/2022	10,000 ICS
PA 77	Start date of first crediting period	07/01/2022
	Project start date (the first equipment distributed)	06/09/2022
	Inclusion date	To be included in this monitoring period
	Implementation status as on 30/11/2022 (number of ICSs distributed)	2,075 ICSs were distributed in Sep 2022 7,925 ICSs were distributed in Oct 2022
	Total of ICSs have been distributed as on 30/11/2022	10,000 ICS
	Start date of first crediting period	07/01/2022

PA 78	Project start date (the first equipment distributed)	30/06/2022
	Inclusion date	To be included in this monitoring period
	Implementation status as on 30/11/2022 (number of ICSs distributed)	528 ICSs were distributed in June 2022
	Total of ICSs have been distributed as on 30/11/2022	528 ICS
PA 80	Start date of first crediting period	07/01/2022
	Project start date (the first equipment distributed)	18/06/2022
	Inclusion date	To be included in this monitoring period
	Implementation status as on 30/11/2022 (number of ICSs distributed)	5,460 ICSs were distributed in June 2022 4,540 ICSs were distributed in Nov 2022
	Total of ICSs have been distributed as on 30/11/2022	10,000 ICS
PA 81	Start date of first crediting period	07/01/2022
	Project start date (the first equipment distributed)	06/11/2022
	Inclusion date	To be included in this monitoring period
	Implementation status as on 30/11/2022 (number of ICSs distributed)	10,000 ICSs were distributed in Nov 2022
	Total of ICSs have been distributed as on 30/11/2022	10,000 ICS
PA 82	Start date of first crediting period	07/01/2022
	Project start date (the first equipment distributed)	03/11/2022
	Inclusion date	To be included in this monitoring period
	Implementation status as on 30/11/2022 (number of ICSs distributed)	10,000 ICSs were distributed in Nov 2022
	Total of ICSs have been distributed as on 30/11/2022	10,000 ICS

PA 83	Start date of first crediting period	07/01/2022
	Project start date (the first equipment distributed)	16/06/2022
	Inclusion date	To be included in this monitoring period
	Implementation status as on 30/11/2022 (number of ICSs distributed)	8,200 ICSs were distributed in Jun 2022
	Total of ICSs have been distributed as on 30/11/2022	8,200 ICS
PA 86	Start date of first crediting period	07/01/2022
	Project start date (the first equipment distributed)	09/05/2022
	Inclusion date	To be included in this monitoring period
	Implementation status as on 30/11/2022 (number of ICSs distributed)	8,250 ICSs were distributed in May 2022
	Total of ICSs have been distributed as on 30/11/2022	8,250 ICS
PA 89	Start date of first crediting period	07/01/2022
	Project start date (the first equipment distributed)	11/05/2022
	Inclusion date	To be included in this monitoring period
	Implementation status as on 30/11/2022 (number of ICSs distributed)	5,000 ICSs were distributed in May 2022 5,000 ICSs were distributed in Jun 2022
	Total of ICSs have been distributed as on 30/11/2022	10,000 ICS
PA 90	Start date of first crediting period	07/01/2022
	Project start date (the first equipment distributed)	04/10/2022
	Inclusion date	To be included in this monitoring period
	Implementation status as on 30/11/2022 (number of ICSs distributed)	10,000 ICSs were distributed in Oct 2022

	Total of ICSs have been distributed as on 30/11/2022	10,000 ICS
PA 91	Start date of first crediting period	07/01/2022
	Project start date (the first equipment distributed)	09/10/2022
	Inclusion date	To be included in this monitoring period
	Implementation status as on 30/11/2022 (number of ICSs distributed)	10,000 ICSs were distributed in Oct 2022
	Total of ICSs have been distributed as on 30/11/2022	10,000 ICS
PA 97	Start date of first crediting period	07/01/2022
	Project start date (the first equipment distributed)	29/04/2022
	Inclusion date	To be included in this monitoring period
	Implementation status as on 30/11/2022 (number of ICSs distributed)	692 ICSs were distributed in April 2022 328 ICSs were distributed in May 2022
	Total of ICSs have been distributed as on 30/11/2022	1,020 ICS

3.2 Deviations

Not applicable. No methodology deviations were applied.

3.3 Deviations

3.2.1 Methodology Deviations

Not applicable. No project description deviations were applied.

3.2.2 Project Description Deviations

Not applicable. No project description deviations were applied.

3.4 Grouped Projects

New project activity instances included under this grouped project ensure that it meets the eligibility criteria below.

No.	Eligibility criterion - Category	How the new project activity instances to comply	Supporting evidence for inclusion
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, set out in section 3.2 of this project description.	The new project activities including PA002, PA003, PA004, PA005, PA006, PA007, PA008, PA010, PA011, PA012, PA013, PA014, PA015, PA016, PA017, PA018, PA019, PA020, PA021, PA022, PA023, PA024, PA025, PA026, PA027, PA028, PA029, PA030, PA031, PA032, PA034, PA037, PA038, PA039, PA040, PA041, PA042, PA043, PA044, PA045, PA046, PA047, PA048, PA049, PA051, PA052, PA053, PA054, PA055, PA056, PA059, PA060, PA061, PA062, PA064, PA065, PA066, PA067, PA068, PA069, PA070, PA071, PA072, PA073, PA074, PA076, PA077, PA078, PA080, PA081, PA082, PA083, PA086, PA089, PA090, PA091, PA097 meet all applicability conditions listed in section 3.2 of the final PD.
2	Use the technologies or measures specified in the project description	Each Instance under this Grouped project will consist of the distribution of ICS with a thermal efficiency of at least 25% to household users cooking with non-renewable biomass in the baseline scenario. The instance consists of replacement of conventional firewood cookstoves for biomass fired ICS as defined in the Grouped project.	Only Ecozen and TK90 cookstoves, with the efficiency is 38.44% and 30.25% respectively to be adopted 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. ICS shall have a thermal efficiency of at least 25%.	Both TK90 and Ecozen Cookstove with efficiency of 30.25% and 38.44% respectively will be included in the grouped project and they will replace traditional cookstoves in household.
4	Are subject to the baseline scenario determined in the project description for the specified project activity and geographic area.	Are installed within the geographic area specified in Section 1.12, thus subject to the same baseline scenario determined in Section 3.3	The new project activities have been implemented in the households of 30 provinces in Viet Nam, detail below: • Lao Cai Province: PA004 • Nam Dinh Province: PA002, PA003 • Dien Bien: PA005, PA006, PA007, PA008 • Lai Chau: PA010, PA011 • Son La: PA012 • Quang Ninh: PA013 • Bac Ninh: PA014, PA015, PA016 • Ha Nam: PA017 • Vinh Phuc: PA018, PA019 • Quang Binh: PA020, PA01, PA022 • Phu Yen: PA023, PA024, PA025 • Dak Lak: PA026, PA027, PA028, PA029, PA030 • Kon Tum: PA031, PA032 • Lam Dong: PA034 • Ha Tinh: PA037, PA38, PA039, PA040, PA041, PA042, PA043, PA044 • Quang Tri: PA045, PA046, PA047 • Tuyen Quang: PA048, PA049, PA097 • Bac Kan: PA051, PA052 • Lang Son: PA053 • Ha Giang: PA054, PA055, PA056 • Hai Duong: PA059, PA060, PA061 • Hung Yen: PA062 • Thua Thien Hue: PA064,

			PA065, PA066, PA067 - Quang Nam: PA068, PA069, PA070, PA071, PA072, PA073, PA074 - Quang Ngai: PA076, PA077 - Binh Thuan: PA078 - Khanh Hoa: PA080, PA081, PA082 - Ninh Thuan: PA083 - Dak Nong: PA086 - Gia Lai: PA089, PA090, PA091
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 applicability conditions of the methodology	The new project activities eligible when the CME have provided the confirmation that the ICSs are distributed for free to the 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,	Each ICS in project activity instance is uniquely identifiable and not part of any other CDM registered project or CPA of other PoA. The ICS will carry unique IDs comprised of the project instance number, ICS number and household subscribed to each ICS. The labels are below:

		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..	PA002: ICS-N002-00001 to ICS-N002-10000. PA003: ICS-N003-00001 to ICS-N003-10000. PA004: ICS-N004-00001 to ICS-N004-05000. PA005: ICS-N005-00001 to ICS-N005-10000. PA006: ICS-N006-00001 to ICS-N006-10000. PA007: ICS-N007-00001 to ICS-N007-10000. PA008: ICS-N008-00001 to ICS-N008-10000. PA010: ICS-N010-00001 to ICS-N010-10000. PA011: ICS-N011-00001 to ICS-N010-05000. PA012: ICS-N012-00001 to ICS-N012-05036. PA013: ICS-N013-00001 to ICS-N013-2860. PA014: ICS-N014-00001 to ICS-N014-10000 PA015: ICS-N015-00001 to ICS-N015-10000. PA016: ICS-N016-00001 to ICS-N016-03515. PA017: ICS-N017-00001 to ICS-N017-05000. PA018: ICS-N018-00001 to ICS-N018-10000.
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			PA019: ICS-N019-00001 to ICS-N019-07581.
			PA020: ICS-N020-00001 to ICS-N020-10000.
			PA021: ICS-N021-00001 to ICS-N021-10000.
			PA022: ICS-N022-00001 to ICS-N022-10000.
			PA023: ICS-N023-00001 to ICS-N023-10000.
			PA024: ICS-N024-00001 to ICS-N024-10000.
			PA025: ICS-N025-00001 to ICS-N025-10000.
			PA026: ICS-N026-00001 to ICS-N026-10000.
			PA027: ICS-N027-00001 to ICS-N027-10000.
			PA028: ICS-N028-00001 to ICS-N028-10000.
			PA029: ICS-N029-00001 to ICS-N029-10000.
			PA030: ICS-N030-00001 to ICS-N030-05000.
			PA031: ICS-N031-00001 to ICS-N031-10000.
			PA032: ICS-N032-00001 to ICS-N032-00020.
			PA034: ICS-N034-00001 to ICS-N034-68000.
			PA037: ICS-N037-00001 to ICS-N037-10000.

			PA038: ICS-N038-00001 to ICS-N038-10000.
			PA039: ICS-N039-00001 to ICS-N039-10000.
			PA040: ICS-N040-00001 to ICS-N040-10000.
			PA041: ICS-N041-00001 to ICS-N041-10000.
			PA042: ICS-N042-00001 to ICS-N042-10000.
			PA043: ICS-N043-00001 to ICS-N043-10000.
			PA044: ICS-N044-00001 to ICS-N044-02861.
			PA045: ICS-N045-00001 to ICS-N045-10000.
			PA046: ICS-N046-00001 to ICS-N046-10000
			PA047: ICS-N047-00001 to ICS-N047-10000
			PA048: ICS-N048-00001 to ICS-N048-10000
			PA049: ICS-N049-00001 to ICS-N049-10000
			PA051: ICS-N051-00001 to ICS-N051-10000
			PA052: ICS-N052-00001 to ICS-N052-07000
			PA053: ICS-N053-00001 to ICS-N053-10000
			PA054: ICS-N054-00001 to ICS-N051-10000

			PA055: ICS-N055-00001 to ICS-N055-10000
			PA056: ICS-N056-00001 to ICS-N056-05010
			PA057: ICS-N057-00001 to ICS-N057-10000
			PA059: ICS-N059-00001 to ICS-N059-10000
			PA060: ICS-N060-00001 to ICS-N060-10000
			PA061: ICS-N061-00001 to ICS-N061-09725
			PA062: ICS-N062-00001 to ICS-N062-00200
			PA064: ICS-N064-00001 to ICS-N064-10000
			PA065: ICS-N065-00001 to ICS-N065-10000
			PA066: ICS-N066-00001 to ICS-N066-10000
			PA067: ICS-N067-00001 to ICS-N067-10000
			PA068: ICS-N068-00001 to ICS-N068-10000
			PA069: ICS-N069-00001 to ICS-N069-10000
			PA070: ICS-N070-00001 to ICS-N070-10000
			PA071: ICS-N071-00001 to ICS-N071-10000
			PA072: ICS-N072-00001 to ICS-N072-10000

			PA073: ICS-N070-00001 to ICS-N073-10000 PA074: ICS-N074-00001 to ICS-N07-08376 PA076: ICS-N076-00001 to ICS-N076-10000 PA077: ICS-N077-00001 to ICS-N077-10000 PA078: ICS-N078-00001 to ICS-N078-00528 PA080: ICS-N080-00001 to ICS-N080-10000 PA081: ICS-N081-00001 to ICS-N081-10000 PA082: ICS-N082-00001 to ICS-N082-10000 PA083: ICS-N081-00001 to ICS-N081-08200 PA086: ICS-N086-00001 to ICS-N086-08250 PA089: ICS-N089-00001 to ICS-N089-10000 PA090: ICS-N090-00001 to ICS-N90-10000 PA091: ICS-N091-00001 to ICS-N091-10000 PA097: ICS-N097-00001 to ICS-N097-01020
7	Capacity Limit	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	The new project activities have energy saving do not exceed the applicable limit, which is 180 GWhth/y.

		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, where by 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 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	- For CPAs use TK90 stove: The maximum energy saving is 99 GWhth/PA (Detail in ER sheet) - For CPAs use Ecozen stove, the maximum energy saving 141 GWhth/PA (Detail in ER Sheet) The annual energy saving for each ICS of project activity instance is below 1% (1.8 GWhth) of the limit. Detail below: - For TK90 stove: 0.0099 GWhth <1.8 GWhth - For Ecozen stove: .0.014 GWhth<1.8 GWhth Therefore, no project activity instance is identified and divided into clusters and thus the limit does not apply to the proposed grouped project.
8	Target group	Each project instance will target end users which includes households who use traditional cookstove to cook meal.	The new project activity instance satisfies the criteria. Each households in project activity instances must sign a beneficiary agreement to commit that they are using traditional cookstove to cook meal.

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 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 Report by third Party
Value applied	94.03
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. The analysis was independently completed by third party. 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.
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	IPCC Default value
Purpose of Data	Calculation of baseline emission
Comments	This parameter shall remain fixed for the monitoring periods

Data / Parameter	EF_{wf,CO_2}
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	$EF_{wf,nonCO_2}$
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	IPCC default value

measurement methods and procedures applied	
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	- TK 90: 0.3025 - Ecozen: 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.
Frequency of monitoring/recording	At least once every two years
Value applied	670,962

Monitoring equipment	Monitoring survey
QA/QC procedures to be applied	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.
Purpose of data	Calculation of baseline emissions
Calculation method	Proportion of operational stoves obtained from the survey is multiplied by the total commissioned stoves to arrive at this value. Proportion of operational stoves: 100% $N_{y,i,j} = 100\% * 670,962 = 670,962$
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 applied	The value below is applied <table><tr><th>Year (y)</th><th>$\eta_{new,i,j}$, TK90</th><th>$\eta_{new,i,j}$, Ecozen</th></tr><tr><td>1</td><td>0.2844</td><td>0.3613</td></tr></table>	Year (y)	$\eta_{new,i,j}$, TK90	$\eta_{new,i,j}$, Ecozen	1	0.2844	0.3613
Year (y)	$\eta_{new,i,j}$, TK90	$\eta_{new,i,j}$, Ecozen					
1	0.2844	0.3613					
Monitoring equipment	Calculated value						
QA/QC procedures to be applied	-						

Purpose of data	Calculation of baseline emission
Calculation method	-
Comments	Calculation to be performed using equation below: $\eta_{new,y,i,j} = \eta_p \times (DF_n)^{y-1} \times 0.94$ For TK90: $\eta_{new,y,i,j} = 0.3025 \times 0.99^{1-1} \times 0.94 = 0.2844$ For Ecozen: $\eta_{new,y,i,j} = 0.3844 \times 0.99^{1-1} \times 0.94 = 0.3613$

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	Minimum sample size of each type i and batch j should be in line with the latest version of Standard for sampling and surveys for CDM project activities and programme of activities or guidelines provided in methodology Section 8.4 option (b). Determined in the first year of the introduction of the devices (e.g.during the first year of the crediting period, $y=1$) through measurement campaigns at representative households and/or sample survey. Sample surveys to estimate this parameter, that are solely based on questionnaires or interviews (i.e. that do not implement measurement campaigns) may only be used if the following conditions are satisfied. (i) Baseline cookstoves have been completely decommissioned and only improved cookstoves are exclusively used in the project households; (ii) If multiple devices are used in the project, it is possible from the results of the survey questions to clearly differentiate the quantity of fire wood being used by each device. In other words, if more than one device, or another device that consumes firewood, are in use in project households, then the sample survey needs to distinguish the quantity of firewood used by the project device and the other devices that use firewood.
Frequency of monitoring/recording	Determined in the first year of project implementation
Value applied	1.242

Monitoring equipment	Weighing scale	
	Model	FCF-15K5N
	Manufactured	Kern – Germany
	Max	15kg
	Division	5g
	Accuracy	Class III
	Date of calibration	29/12/2021
	Until	30/12/2022
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 data	Calculation of baseline emissions	
Calculation method	-	
Comments	At the time of 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 and procedures to be applied	PP will conduct periodic audits and surveillance of the stoves that will be distributed under the project activity to ensure their proper 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 applied	10
Monitoring equipment	

QA/QC procedures to be applied	
Purpose of data	For calculation of baseline emission
Calculation method	-
Comments	

4.3 Monitoring Plan

(a) Sampling Methodology

Representative sampling will be 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	Visits to the premises, visual inspection and interview with ICS end-user
$B_{y=1.new,l,survey}$	Quantity of woody biomass used by project devices in tonnes per device of type l and batch j	Mean/Once, at first monitoring period. This value will be fixed for entire crediting period	Visits to the premises, visual inspection, measurement 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 will be field surveys and the frequency of data collection is as per the frequency defined for each parameter in the above section. Data will be 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.”

Sample size will be chosen for a 95/10 precision (95% confidence interval and 10% margin of error); in cases where survey results indicate that 90/10 precision is not achieved, the lower bound of a 95% confidence interval of the parameter value may be chosen as an alternative to repeating the survey efforts to achieve a 95/10 precision.

As per “Standard for Sampling and Surveys for CDM Project Activities and Programme of Activities”, version 09, the following Sampling plan has been developed:

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 will be 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.

(i) Target Population

The target population is total ICS population served under the project instance in the monitoring database. The ICS to be sampled will be drawn from the list of individual ICS serial ID numbers contained in the sales record database, which is maintained by the distributor

(ii) Sampling method

Sampling will be 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.

(iii) Sample size

The sample size will be 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 cookstoves
- (b) A numeric value –the mean value of operating efficiency of improved cookstoves.

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.

Parameter $N_{y,i,j}$

For population who use improved cookstove serviced by the project activity in year y ($N_{y,i,j}$), the equation that will be used is:

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

Where:

- n : Sample size
- $N=N_y$: Population who consumes the improved cookstove serviced by the project activity in year y
- p : Our expected proportion of the installed improved cookstove 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 assumptions, the resulting sampling size for a 95/10 confidence/precision is calculated for total population size, the result below:

Monitoring parameter(s)	Stove Operating Fraction for determination of N_y
Sampling frame(s)	Given stove model and age population
Sampling approach	Stratified random sampling across stove model and age

Sampling Population (Batch)	Age	Stove population	Expected operational proportion)	Calculated Sample Size (n)	Actual Monitored sample size
Ecozen Batch 1	1	430,035	0.90	28	35
TK90 Batch 1	1	240,927	0.90	15	19
Sample size determination					
Estimated Operation (p)				0.90	
Voperation= p(1-p)/p2				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.

Parameter B_{y=1,news,1,survey}

For quantity of woody biomass used by project devices. This is a numeric value –the mean value of operating efficiency of improved cookstoves for monitoring period, the equation that will be used is:

$$1.96^2 NV$$

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

$$V = \left(\frac{SD}{mean} \right)^2$$

Where:

n : Sample size

N=Ny : Population size (Total number of households/ICS)

1.96 : Represents the 95% confidence required

0.1 : Represents the 10% relative precision

Mean : Expected mean of ICS thermal efficiency

SD : Our expected standard deviation

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

Monitoring Parameter	Quantity of woody biomass used $B_{y=1,new,i,2022}(\text{age } 1)$				
Sampling Frame requirement as per Grouped PD	Given stove model and vintage population				
Sampling approach	Stratified random sampling across stove model and vintage				
Sampling Category	Sampling frame size	Expected Mean Efficiency (Fraction)	Expected SD	Calculated Sample Size	Actual Monitored sample size
Ecozen Batch 1 (age 1)	430,035	0.3844	0.0384	5	7
Tk90 Batch 1 (age 1)	240,927	0.3025	0.0303	3	4
Sample size determination					
Estimated efficiency (mean)				0.35	
Estimated Standard Deviation of efficiency (SD)				0.04	
$V_{\text{mean}} = (SD/\text{mean})^2$				0.01	
Minimum Sample Size required (efficiency)				4	
tDistribution sample size adjustment				Iteration 1	11
				Iteration 2	6
				Iteration 3	7
				Iteration 4	7
				Iteration 5	7
				Iteration 6	7
				Iteration 7	7

Since parameters $N_{y,j,j}$ and $B_{y=1,new,i, \text{survey}}$ share the same sampling units, CME may choose to have one common survey for these two parameters with largest number of sample size between these two parameters being chosen. 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.

Therefore the sample size for parameters $N_{y,i,j}$ and $B_{y=1,new,i,j,survey}$ is 35 samples for Ecozen Cookstove and 19 samples for TK90 cookstove

(a) Analysis of data collected and confidence/precision achieved

Analysis of the data monitored through sampling revealed the following results

Parameter $N_{y,i,j}$

ANALYSIS for parameter N_y	
Samples Monitored	54
Survey result	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.

(b) Implementation plan

Survey Implementation Schedule:

The survey for collecting the details of monitoring parameters will be conducted at least annually and will be scheduled during the last month of the crediting monitoring period.

The overall monitoring and the implementation of the sampling will be co-ordinated by the project proponent and the management staff. They will ensure successful monitoring of the emission reductions of the proposed project during its crediting period. Furthermore, the survey of the representative sample for the parameters will be carried out by the distributor together with the project proponent.

The survey method has been used by project proponent include:

(a) Hard-copy questionnaires

(b) Face to face interview

All sampling efforts will be conducted by qualified personnel who have undergone training as part of the grouped project. Any samplers will be required to speak the native language(s) in which improved cookstoves have been implemented, allowing for full understanding of any responses given by users, and any questions therein.

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 4.4

5.2 Project Emissions

Refer to section 4.4 for the calculation of emission reductions resulting from the proposed project. There is no project emissions considered.

5.3 Leakage

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

5.4 Net GHG Emission Reductions and Removals

Emission reductions are calculated as follows:

Emission reductions are calculated as:

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

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 t CO ₂ e

Since the project activity instance involves the deployment of improved cookstove, the following equation is applicable as per VMR0006, Version 1.1:

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

- **Quantity of woody biomass $B_{y,savings,i,j}$**

$B_{y,savings,i,j}$ is calculated using the following formula in accordance with equation 4 of the approved methodology VMR0006 Version 1.1:

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

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, the value is 3.403 kg/day = 1.242 tons/year.

η_{old} : Efficiency of baseline cookstove, the value is 10%

$\eta_{new,i,j}$: Efficiency of the improved cookstove type I and batch j determined through water boiling test (WBT) during year y

- For Ecozen stove: $\eta_{new,i,j} = 36.13\%$
- For TK90 stove: $\eta_{new,i,j} = 28.44\%$

Detail for data ex ante and ex post of each project instance is description in table below:

PA	Parameter										
	$B_{y=1,new,l,survey}$	$f_{NRB,b,y}$	$NCV_{biomass}$	$E_{fw,CO2}$	$EF_{WF,nonCO2}$	η_{old}	$\eta_{new,TK90,1}$	$\eta_{new,Ecozen,1}$	$B_{y,savings,l=TK90,a=1}$	$B_{y,savings,l=Ecozen,a=1}$	Leakage factor
PA 1	1.242	0.9403	0.0156	112	26.23	10%	28.44%	-	2.290	-	0.95
PA 2	1.242	0.9403	0.0156	112	26.23	10%	28.44%	-	2.290	-	0.95
PA 3	1.242	0.9403	0.0156	112	26.23	10%	28.44%	-	2.290	-	0.95
PA 4	1.242	0.9403	0.0156	112	26.23	10%	28.44%	-	2.290	-	0.95
PA 5	1.242	0.9403	0.0156	112	26.23	10%	28.44%	-	2.290	-	0.95
PA 6	1.242	0.9403	0.0156	112	26.23	10%	28.44%	-	2.290	-	0.95
PA 7	1.242	0.9403	0.0156	112	26.23	10%	28.44%	-	2.290	-	0.95
PA 8	1.242	0.9403	0.0156	112	26.23	10%	28.44%	-	2.290	-	0.95
PA 10	1.242	0.9403	0.0156	112	26.23	10%	28.44%	-	2.290	-	0.95
PA 11	1.242	0.9403	0.0156	112	26.23	10%	28.44%	-	2.290	-	0.95
PA 12	1.242	0.9403	0.0156	112	26.23	10%	28.44%	-	2.290	-	0.95
PA 13	1.242	0.9403	0.0156	112	26.23	10%	28.44%	-	2.290	-	0.95
PA 14	1.242	0.9403	0.0156	112	26.23	10%	28.44%	-	2.290	-	0.95
PA 15	1.242	0.9403	0.0156	112	26.23	10%	28.44%	-	2.290	-	0.95
PA 16	1.242	0.9403	0.0156	112	26.23	10%	28.44%	-	2.290	-	0.95
PA 17	1.242	0.9403	0.0156	112	26.23	10%	28.44%	-	2.290	-	0.95
PA 18	1.242	0.9403	0.0156	112	26.23	10%	28.44%	-	2.290	-	0.95
PA 19	1.242	0.9403	0.0156	112	26.23	10%	28.44%	-	2.290	-	0.95
PA 20	1.242	0.9403	0.0156	112	26.23	10%	-	36.13%	-	3.245	0.95
PA 21	1.242	0.9403	0.0156	112	26.23	10%	-	36.13%	-	3.245	0.95
PA 22	1.242	0.9403	0.0156	112	26.23	10%	-	36.13%	-	3.245	0.95
PA 23	1.242	0.9403	0.0156	112	26.23	10%	-	36.13%	-	3.245	0.95
PA 24	1.242	0.9403	0.0156	112	26.23	10%	-	36.13%	-	3.245	0.95
PA 25	1.242	0.9403	0.0156	112	26.23	10%	-	36.13%	-	3.245	0.95
PA 26	1.242	0.9403	0.0156	112	26.23	10%	-	36.13%	-	3.245	0.95
PA 27	1.242	0.9403	0.0156	112	26.23	10%	-	36.13%	-	3.245	0.95

PA 28	1.242	0.9403	0.0156	112	26.23	10%	-	36.13%	-	3.245	0.95
PA 29	1.242	0.9403	0.0156	112	26.23	10%	-	36.13%	-	3.245	0.95
PA 30	1.242	0.9403	0.0156	112	26.23	10%	-	36.13%	-	3.245	0.95
PA 31	1.242	0.9403	0.0156	112	26.23	10%	-	36.13%	-	3.245	0.95
PA 32	1.242	0.9403	0.0156	112	26.23	10%	-	36.13%	-	3.245	0.95
PA 34	1.242	0.9403	0.0156	112	26.23	10%	-	36.13%	-	3.245	0.95
PA 37	1.242	0.9403	0.0156	112	26.23	10%	-	36.13%	-	3.245	0.95
PA 38	1.242	0.9403	0.0156	112	26.23	10%	-	36.13%	-	3.245	0.95
PA 39	1.242	0.9403	0.0156	112	26.23	10%	-	36.13%	-	3.245	0.95
PA 40	1.242	0.9403	0.0156	112	26.23	10%	-	36.13%	-	3.245	0.95
PA 41	1.242	0.9403	0.0156	112	26.23	10%	-	36.13%	-	3.245	0.95
PA 42	1.242	0.9403	0.0156	112	26.23	10%	-	36.13%	-	3.245	0.95
PA 43	1.242	0.9403	0.0156	112	26.23	10%	-	36.13%	-	3.245	0.95
PA 44	1.242	0.9403	0.0156	112	26.23	10%	-	36.13%	-	3.245	0.95
PA 45	1.242	0.9403	0.0156	112	26.23	10%	-	36.13%	-	3.245	0.95
PA 46	1.242	0.9403	0.0156	112	26.23	10%	-	36.13%	-	3.245	0.95
PA 47	1.242	0.9403	0.0156	112	26.23	10%	-	36.13%	-	3.245	0.95
PA 48	1.242	0.9403	0.0156	112	26.23	10%	28.44%	-	2.290	-	0.95
PA 49	1.242	0.9403	0.0156	112	26.23	10%	28.44%	-	2.290	-	0.95
PA 51	1.242	0.9403	0.0156	112	26.23	10%	28.44%	-	2.290	-	0.95
PA 52	1.242	0.9403	0.0156	112	26.23	10%	28.44%	-	2.290	-	0.95
PA 53	1.242	0.9403	0.0156	112	26.23	10%	28.44%	-	2.290	-	0.95
PA 54	1.242	0.9403	0.0156	112	26.23	10%	28.44%	-	2.290	-	0.95
PA 55	1.242	0.9403	0.0156	112	26.23	10%	28.44%	-	2.290	-	0.95
PA 56	1.242	0.9403	0.0156	112	26.23	10%	28.44%	-	2.290	-	0.95
PA 59	1.242	0.9403	0.0156	112	26.23	10%	28.44%	-	2.290	-	0.95
PA 60	1.242	0.9403	0.0156	112	26.23	10%	28.44%	-	2.290	-	0.95
PA 61	1.242	0.9403	0.0156	112	26.23	10%	28.44%	-	2.290	-	0.95
PA 62	1.242	0.9403	0.0156	112	26.23	10%	28.44%	-	2.290	-	0.95
PA 64	1.242	0.9403	0.0156	112	26.23	10%	-	36.13%	-	3.245	0.95
PA 65	1.242	0.9403	0.0156	112	26.23	10%	-	36.13%	-	3.245	0.95
PA 66	1.242	0.9403	0.0156	112	26.23	10%	-	36.13%	-	3.245	0.95
PA 67	1.242	0.9403	0.0156	112	26.23	10%	-	36.13%	-	3.245	0.95

PA 68	1.242	0.9403	0.0156	112	26.23	10%	-	36.13%	-	3.245	0.95
PA 69	1.242	0.9403	0.0156	112	26.23	10%	-	36.13%	-	3.245	0.95
PA 70	1.242	0.9403	0.0156	112	26.23	10%	-	36.13%	-	3.245	0.95
PA 71	1.242	0.9403	0.0156	112	26.23	10%	-	36.13%	-	3.245	0.95
PA 72	1.242	0.9403	0.0156	112	26.23	10%	-	36.13%	-	3.245	0.95
PA 73	1.242	0.9403	0.0156	112	26.23	10%	-	36.13%	-	3.245	0.95
PA 74	1.242	0.9403	0.0156	112	26.23	10%	-	36.13%	-	3.245	0.95
PA 76	1.242	0.9403	0.0156	112	26.23	10%	-	36.13%	-	3.245	0.95
PA 77	1.242	0.9403	0.0156	112	26.23	10%	-	36.13%	-	3.245	0.95
PA 78	1.242	0.9403	0.0156	112	26.23	10%	-	36.13%	-	3.245	0.95
PA 80	1.242	0.9403	0.0156	112	26.23	10%	-	36.13%	-	3.245	0.95
PA 81	1.242	0.9403	0.0156	112	26.23	10%	-	36.13%	-	3.245	0.95
PA 82	1.242	0.9403	0.0156	112	26.23	10%	-	36.13%	-	3.245	0.95
PA 83	1.242	0.9403	0.0156	112	26.23	10%	-	36.13%	-	3.245	0.95
PA 86	1.242	0.9403	0.0156	112	26.23	10%	-	36.13%	-	3.245	0.95
PA 89	1.242	0.9403	0.0156	112	26.23	10%	-	36.13%	-	3.245	0.95
PA 90	1.242	0.9403	0.0156	112	26.23	10%	-	36.13%	-	3.245	0.95
PA 91	1.242	0.9403	0.0156	112	26.23	10%	-	36.13%	-	3.245	0.95
PA 97	1.242	0.9403	0.0156	112	26.23	10%	28.44%		2.290		0.95

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

Name of PA	Quantity	Start date of distribution improved cookstove in a month	End date of improved cookstove in a month	Start date of stove crediting (considering the start date of monitoring period)	End date of stove crediting (considering the end date of monitoring period)	Equivalent Operation al year in the monitoring period	CERs	Total CERs for each PAs
PA 001	134	7-Jan-22	7-Jan-22	7-Jan-22	30-Nov-22	0.90	531	26,247
PA 001	9,370	18-Apr-22	29-Apr-22	29-Apr-22	30-Nov-22	0.59	24,463	
PA 001	496	4-May-22	6-May-22	6-May-22	30-Nov-22	0.57	1,253	
PA 002	1,500	13-Apr-22	29-Apr-22	29-Apr-22	30-Nov-22	0.59	3,916	15,628
PA 002	8,500	1-Aug-22	9-Aug-22	9-Aug-22	30-Nov-22	0.31	11,712	
PA 003	10,000	1-Aug-22	8-Aug-22	8-Aug-22	30-Nov-22	0.32	13,900	13,900
PA 004	5,000	14-Oct-22	16-Oct-22	16-Oct-22	30-Nov-22	0.13	2,780	2,780
PA 005	10,000	17-Apr-22	22-Apr-22	22-Apr-22	30-Nov-22	0.61	26,954	26,954
PA 006	720	20-Apr-22	20-Apr-22	20-Apr-22	30-Nov-22	0.62	1,958	22,384
PA 006	5,210	22-May-22	25-May-22	25-May-22	30-Nov-22	0.52	11,965	
PA 006	4,070	12-Jun-22	12-Jun-22	12-Jun-22	30-Nov-22	0.47	8,461	
PA 007	6,228	12-Jun-22	20-Jun-22	20-Jun-22	30-Nov-22	0.45	12,345	12,892
PA 007	3,772	16-Nov-22	19-Nov-22	19-Nov-22	30-Nov-22	0.03	547	
PA 008	4,000	14-Nov-22	16-Nov-22	16-Nov-22	30-Nov-22	0.04	725	725
PA 010	5,000	15-May-22	24-May-22	24-May-22	30-Nov-22	0.52	11,543	21,756
PA 010	5,000	10-Jun-22	15-Jun-22	15-Jun-22	30-Nov-22	0.46	10,213	
PA 011	2,180	15-Jun-22	15-Jun-22	15-Jun-22	30-Nov-22	0.46	4,453	4,930
PA 011	2,820	9-Nov-22	17-Nov-22	17-Nov-22	30-Nov-22	0.04	477	
PA 012	5,036	17-May-22	19-May-22	19-May-22	30-Nov-22	0.54	11,930	11,930
PA 013	2,860	5-Jul-22	5-Jul-22	5-Jul-22	30-Nov-22	0.41	5,151	5,151
PA 014	7,185	7-Apr-22	22-Apr-22	22-Apr-22	30-Nov-22	0.61	19,366	26,477
PA 014	2,815	6-May-22	6-May-22	6-May-22	30-Nov-22	0.57	7,111	
PA 015	10,000	14-Jul-22	22-Jul-22	22-Jul-22	30-Nov-22	0.36	15,955	15,955

PA 016	625	16-Jul-22	16-Jul-22	16-Jul-22	30-Nov-22	0.38	1,042	3,942
PA 016	2,890	9-Sep-22	9-Sep-22	9-Sep-22	30-Nov-22	0.23	2,899	
PA 017	2,300	18-Jul-22	18-Jul-22	18-Jul-22	30-Nov-22	0.37	3,781	5,641
PA 017	2,700	3-Oct-22	5-Oct-22	5-Oct-22	30-Nov-22	0.16	1,860	
PA 018	2,145	8-Jul-22	8-Jul-22	8-Jul-22	30-Nov-22	0.40	3,785	13,539
PA 018	6,432	14-Aug-22	17-Aug-22	17-Aug-22	30-Nov-22	0.29	8,241	
PA 018	1,423	4-Sep-22	4-Sep-22	4-Sep-22	30-Nov-22	0.24	1,514	
PA 019	7,581	4-Sep-22	6-Sep-22	6-Sep-22	30-Nov-22	0.24	7,880	7,880
PA 020	6,000	5-Jun-22	19-Jun-22	19-Jun-22	30-Nov-22	0.45	16,956	26,273
PA 020	4,000	18-Jul-22	18-Jul-22	18-Jul-22	30-Nov-22	0.37	9,317	
PA 021	10,000	9-Jul-22	24-Jul-22	24-Jul-22	30-Nov-22	0.36	22,266	22,266
PA 022	10,000	22-Jul-22	24-Jul-22	24-Jul-22	30-Nov-22	0.36	22,266	22,266
PA 023	3,580	11-Jun-22	11-Jun-22	11-Jun-22	30-Nov-22	0.47	10,608	25,232
PA 023	6,420	3-Jul-22	21-Jul-22	21-Jul-22	30-Nov-22	0.36	14,624	
PA 024	4,796	21-Jul-22	21-Jul-22	21-Jul-22	30-Nov-22	0.36	10,925	21,532
PA 024	5,204	4-Aug-22	4-Aug-22	4-Aug-22	30-Nov-22	0.33	10,607	
PA 025	10,000	4-Aug-22	15-Aug-22	15-Aug-22	30-Nov-22	0.30	18,498	18,498
PA 026	10,000	12-Apr-22	15-Apr-22	15-Apr-22	30-Nov-22	0.63	39,393	39,393
PA 027	5,000	12-Apr-22	12-Apr-22	12-Apr-22	30-Nov-22	0.64	19,953	36,433
PA 027	2,800	11-May-22	12-May-22	12-May-22	30-Nov-22	0.56	9,735	
PA 027	2,200	5-Jun-22	5-Jun-22	5-Jun-22	30-Nov-22	0.49	6,745	
PA 028	10,000	5-Sep-22	7-Sep-22	7-Sep-22	30-Nov-22	0.23	14,558	14,558
PA 029	8,500	1-Sep-22	5-Sep-22	5-Sep-22	30-Nov-22	0.24	12,666	14,233
PA 029	1,500	1-Oct-22	1-Oct-22	1-Oct-22	30-Nov-22	0.17	1,567	
PA 030	5,000	1-Oct-22	7-Oct-22	7-Oct-22	30-Nov-22	0.15	4,710	4,710
PA 031	9,520	10-May-22	25-May-22	25-May-22	30-Nov-22	0.52	30,980	32,476
PA 031	480	2-Jun-22	2-Jun-22	2-Jun-22	30-Nov-22	0.50	1,496	
PA 032	20	16-May-22	16-May-22	16-May-22	30-Nov-22	0.55	68	68
PA 034	5,500	10-May-22	23-May-22	23-May-22	30-Nov-22	0.53	18,086	22,139
PA 034	1,300	2-Jun-22	2-Jun-22	2-Jun-22	30-Nov-22	0.50	4,052	

PA 037	4,129	18-Apr-22	18-Apr-22	18-Apr-22	30-Nov-22	0.62	16,053	29,584
PA 037	460	15-May-22	15-May-22	15-May-22	30-Nov-22	0.55	1,576	
PA 037	5,411	18-Jul-22	25-Jul-22	25-Jul-22	30-Nov-22	0.35	11,955	
PA 038	2,174	18-Jul-22	25-Jul-22	25-Jul-22	30-Nov-22	0.35	4,803	18,877
PA 038	7,826	13-Aug-22	18-Aug-22	18-Aug-22	30-Nov-22	0.29	14,074	
PA 039	10,000	5-Aug-22	18-Aug-22	18-Aug-22	30-Nov-22	0.29	17,984	17,984
PA 040	10,000	5-Aug-22	13-Aug-22	13-Aug-22	30-Nov-22	0.30	18,840	18,840
PA 041	6,791	5-Aug-22	21-Aug-22	21-Aug-22	30-Nov-22	0.28	11,864	16,316
PA 041	3,209	1-Sep-22	11-Sep-22	11-Sep-22	30-Nov-22	0.22	4,452	
PA 042	10,000	3-Sep-22	4-Sep-22	4-Sep-22	30-Nov-22	0.24	15,072	15,072
PA 043	10,000	4-Sep-22	13-Sep-22	13-Sep-22	30-Nov-22	0.22	13,531	13,531
PA 044	2,861	4-Sep-22	13-Sep-22	13-Sep-22	30-Nov-22	0.22	3,871	3,871
PA 045	5,100	22-Apr-22	22-Apr-22	22-Apr-22	30-Nov-22	0.61	19,479	26,025
PA 045	4,900	13-Sep-22	14-Sep-22	14-Sep-22	30-Nov-22	0.21	6,546	
PA 046	8,318	7-Sep-22	14-Sep-22	14-Sep-22	30-Nov-22	0.21	11,112	12,265
PA 046	1,682	22-Oct-22	22-Oct-22	22-Oct-22	30-Nov-22	0.11	1,152	
PA 047	10,000	12-Oct-22	22-Oct-22	22-Oct-22	30-Nov-22	0.11	6,851	6,851
PA 048	10,000	18-Sep-22	22-Sep-22	22-Sep-22	30-Nov-22	0.19	8,461	8,461
PA 049	372	22-Sep-22	22-Sep-22	22-Sep-22	30-Nov-22	0.19	315	2,289
PA 049	9,608	8-Nov-22	14-Nov-22	14-Nov-22	30-Nov-22	0.05	1,974	
PA 051	471	21-Sep-22	21-Sep-22	21-Sep-22	30-Nov-22	0.19	404	5,933
PA 051	9,529	3-Oct-22	14-Oct-22	14-Oct-22	30-Nov-22	0.13	5,528	
PA 052	7,000	8-Oct-22	11-Oct-22	11-Oct-22	30-Nov-22	0.14	4,315	4,315
PA 053	1,150	28-Jul-22	28-Jul-22	28-Jul-22	30-Nov-22	0.35	1,751	3,677
PA 053	8,850	11-Nov-22	13-Nov-22	13-Nov-22	30-Nov-22	0.05	1,925	
PA 054	8,050	10-May-22	13-May-22	13-May-22	30-Nov-22	0.55	19,654	23,685
PA 054	1,950	13-Jun-22	13-Jun-22	13-Jun-22	30-Nov-22	0.47	4,030	
PA 055	6,150	13-Jun-22	24-Jun-22	24-Jun-22	30-Nov-22	0.44	11,893	14,360
PA 055	3,850	6-Oct-22	9-Oct-22	9-Oct-22	30-Nov-22	0.15	2,466	
PA 056	5,010	6-Oct-22	13-Oct-22	13-Oct-22	30-Nov-22	0.13	2,967	2,967

PA 059	510	5-Aug-22	5-Aug-22	5-Aug-22	30-Nov-22	0.32	727	9,674
PA 059	9,490	12-Sep-22	14-Sep-22	14-Sep-22	30-Nov-22	0.21	8,947	
PA 060	4,452	10-Sep-22	12-Sep-22	12-Sep-22	30-Nov-22	0.22	4,305	5,713
PA 060	5,548	7-Nov-22	10-Nov-22	10-Nov-22	30-Nov-22	0.06	1,408	
PA 061	9,725	7-Nov-22	11-Nov-22	11-Nov-22	30-Nov-22	0.05	2,351	2,351
PA 062	200	20-Jul-22	20-Jul-22	20-Jul-22	30-Nov-22	0.37	324	324
PA 064	1,257	4-Jul-22	4-Jul-22	4-Jul-22	30-Nov-22	0.41	3,229	9,369
PA 064	8,743	9-Oct-22	21-Oct-22	21-Oct-22	30-Nov-22	0.11	6,140	
PA 065	6,378	14-Oct-22	25-Oct-22	25-Oct-22	30-Nov-22	0.10	4,042	4,290
PA 065	3,622	22-Nov-22	27-Nov-22	27-Nov-22	30-Nov-22	0.01	248	
PA 066	10,000	21-Nov-22	27-Nov-22	27-Nov-22	30-Nov-22	0.01	685	685
PA 067	10,000	21-Nov-22	22-Nov-22	22-Nov-22	30-Nov-22	0.02	1,541	1,541
PA 068	10,000	23-Apr-22	26-Apr-22	26-Apr-22	30-Nov-22	0.60	37,509	37,509
PA 069	1,973	23-Apr-22	23-Apr-22	23-Apr-22	30-Nov-22	0.61	7,502	11,674
PA 069	507	15-Jun-22	15-Jun-22	15-Jun-22	30-Nov-22	0.46	1,468	
PA 069	7,520	1-Nov-22	10-Nov-22	10-Nov-22	30-Nov-22	0.06	2,705	
PA 070	10,000	8-Nov-22	23-Nov-22	23-Nov-22	30-Nov-22	0.02	1,370	1,370
PA 071	10,000	10-Nov-22	19-Nov-22	19-Nov-22	30-Nov-22	0.03	2,055	2,055
PA 072	10,000	3-Nov-22	16-Nov-22	16-Nov-22	30-Nov-22	0.04	2,569	2,569
PA 073	10,000	7-Nov-22	19-Nov-22	19-Nov-22	30-Nov-22	0.03	2,055	2,055
PA 074	8,376	1-Nov-22	17-Nov-22	17-Nov-22	30-Nov-22	0.04	2,008	2,008
PA 076	200	16-Aug-22	16-Aug-22	16-Aug-22	30-Nov-22	0.29	367	14,130
PA 076	9,800	6-Sep-22	10-Sep-22	10-Sep-22	30-Nov-22	0.22	13,764	
PA 077	2,075	6-Sep-22	8-Sep-22	8-Sep-22	30-Nov-22	0.23	2,985	10,315
PA 077	7,925	3-Oct-22	8-Oct-22	8-Oct-22	30-Nov-22	0.15	7,330	
PA 078	528	30-Jun-22	30-Jun-22	30-Jun-22	30-Nov-22	0.42	1,393	1,393
PA 080	5,460	18-Jun-22	26-Jun-22	26-Jun-22	30-Nov-22	0.43	14,775	16,953
PA 080	4,540	1-Nov-22	3-Nov-22	3-Nov-22	30-Nov-22	0.08	2,177	
PA 081	10,000	6-Nov-22	19-Nov-22	19-Nov-22	30-Nov-22	0.03	2,055	2,055
PA 082	10,000	3-Nov-22	16-Nov-22	16-Nov-22	30-Nov-22	0.04	2,569	2,569

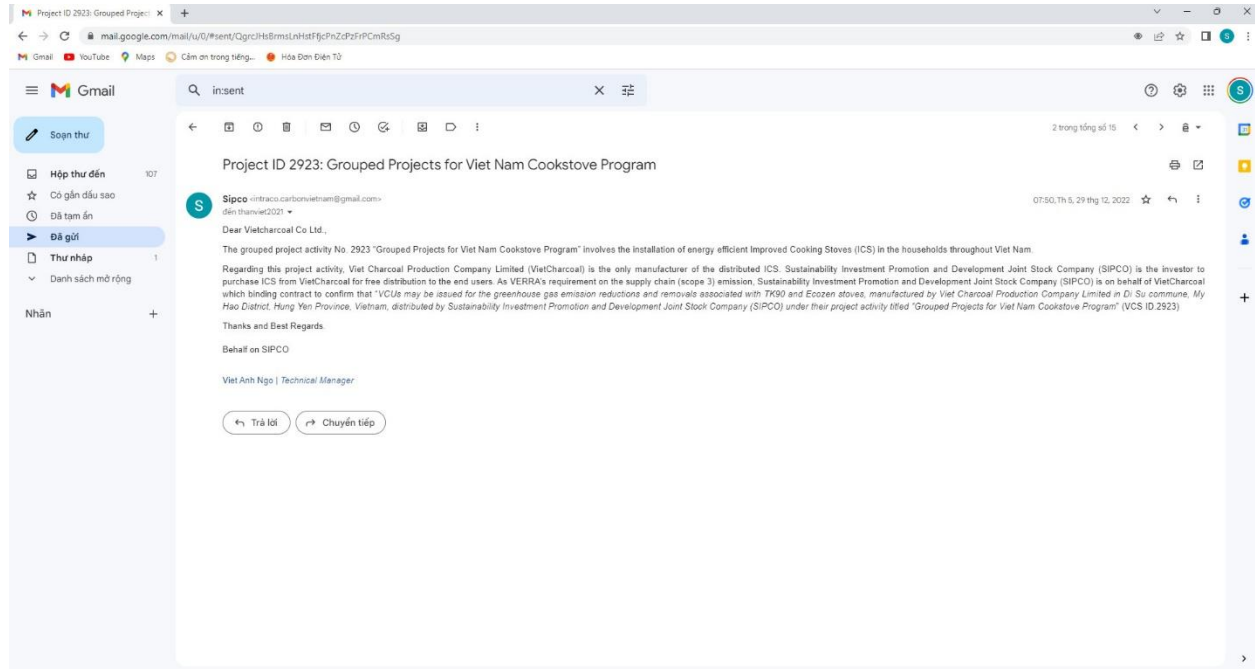
PA 083	8,200	16-Jun-22	16-Jun-22	16-Jun-22	30-Nov-22	0.46	23,595	23,595
PA 086	8,250	9-May-22	26-May-22	26-May-22	30-Nov-22	0.52	26,706	26,706
PA 089	5,000	11-May-22	30-May-22	30-May-22	30-Nov-22	0.51	15,843	31,343
PA 089	5,000	2-Jun-22	3-Jun-22	3-Jun-22	30-Nov-22	0.50	15,500	
PA 090	10,000	4-Oct-22	24-Oct-22	24-Oct-22	30-Nov-22	0.10	6,508	6,508
PA 091	10,000	9-Oct-22	28-Oct-22	28-Oct-22	30-Nov-22	0.09	5,823	5,823
PA 097	692	29-Apr-22	29-Apr-22	29-Apr-22	30-Nov-22	0.59	1,807	2,635
PA 097	328	6-May-22	6-May-22	6-May-22	30-Nov-22	0.57	829	
TOTAL								1,020,903

Year	Baseline emissions or removals (tCO ₂ e)	Project emissions or removals (tCO ₂ e)	Leakage emissions (tCO ₂ e)	Net GHG emission reductions or removals (tCO ₂ e)
From 07/01/2022 to 30/11/2022 (328 days)	1,020,903	0	0	1,020,903
Total	1,020,903	0	0	1,020,903

PA	<u>Ex-ante emissions reductions /removals</u>	<u>Achieved emissions reductions /removals</u>	<u>Percent difference</u>	<u>Justification for the difference</u>
PA 1 From 07/01/2022 to 30/11/2022 (328 days)	54,301	26,247	51.66%	-Parameter $B_{y=1,new,i,j,survey}$ is estimated value in registered PD, when do monitoring, this value is decrease. - The number of stoves distributed in many months, not fully distributed on the first day of distribution.

APPENDIX 1: SUPPLY CHAIN

1. Email SIPCO sent to Viet Charcoal about supply chain scope 3



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

<https://intracocarbon.com/public-announcement-on-grouped-projects-for-viet-nam-cookstove-program-project-id-2923>

