



Sustainable Development Verified Impact Standard

CLEAN COOKING-COOK STOVE FOR RURAL INDIA



Document Prepared by EKI Energy Services Ltd.

Project Title	Clean Cooking- Cook Stove for Rural India
Version	01
Date of Issue	07-October-2024
Project Location	India
Project Proponent(s)	1. Vitol Asia Pte Ltd Contact - +65 6737 9922 Email - jga@vitol.com 2. EKI Energy Services Ltd Contact - +91 99075 34900 Email - manish@enkingint.org and registry@enkingint.org
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Project Lifetime	01 June 2022 – 31 May 2029; 7-year lifetime
Monitoring Period of this Report	01-January-2024 to 30-September-2024 (Inclusive of both dates)
History of SD VSta Status	Verification of MP 3 in progress
Other Certification Programs	Verified Carbon Standard Project identification Number - VCS 2942
Expected Future Assessment Schedule	Verification of MP-3 Will complete up to February 2025

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1 SUMMARY OF SDG CONTRIBUTIONS

Table 1: Summary of SDG Contributions

Row number	Quantitative Project Contributions during Monitoring Period	Contributions during Project Lifetime	SDG Target	SDG Indicator	Net Impact on SDG Indicator	Section Reference	Claim, Asset or Label
1)	In the baseline scenario for this project was traditional cookstove, and the beneficiaries didn't have clean cooking access. This project contributed by providing access to basic services (clean cooking technology considered as basic service under access to modern energy) to the poor and vulnerable communities of India. Due to the project activity 571,460 numbers of beneficiaries were able to use clean cook stoves during the current monitoring period i.e. 01-January-2024 to 30-	Due to the project 571,460 (234,114+337,346) numbers of households continue to access to the clean cook stoves during the project lifetime (i.e. from project start to end of current monitoring period). Thus, the project has provided the impoverished and vulnerable communities of India access to basic services which is clean cooking technology, a fundamental service under access to modern energy.	1.4 ¹	Project specific indicator: No. of households receiving the improved cook stoves as an access to clean fuels and technology.	Implemented activities to increase.	Section: 3.1 Impact #1	SD VISta labeled VCUs

¹ <https://unstats.un.org/sdgs/metadata/>

	September-2024. (Inclusive of first and last date)						
2)	The project monitoring survey results shown that 100% of the sampled respondents reported to have experienced comparatively good indoor air quality with multiple positive outcomes e.g. Reduce eye problems and other respiratory illness (as reported by the beneficiaries during the survey), thus improving overall health and reducing the burdens of disease. Thus, the project has achieved SDG Goal 3: Ensure Healthy lives and promote well-being for all at all ages.	The project activity in its lifetime (i.e. from project start to end of current monitoring period) has contributed to improved health and well-being brought about by reduction in particulate matter emitted during cooking within the user households which has been reported by 100% of the end user households during the monitoring survey. Thus, the project has achieved SDG Goal 3: Ensure Healthy lives and promote well-being for all at all ages.	3.9 ²	Project-specific indicator: Percentage of end user households reporting a reduction in smoke while cooking which indicates improved health of end users.	Implemented activities to decrease	Section: 3.1 Impact #2	SD VISta labeled VCUs
3)	Contributed to increasing the vocational and relevant skills of 22 individuals by providing non-formal education and training on issues related to climate change, with specific skill building in operations and surveying activities related to stove monitoring of project	The project, in its lifetime (i.e. from project start to end of current monitoring period), through its vocational and relevant skills development program has trained total 281 (222+37+22) individuals. Thus, the project has achieved SDG Goal 4: Ensure	4.3 ³	Project-specific indicator: Number of individuals who received any informal training to enable their employment in project activity or elsewhere.	Implemented activities to Increase	Section: 3.1 Impact #3	SD VISta labeled VCUs

² <https://unstats.un.org/sdgs/metadata/>
³ <https://unstats.un.org/sdgs/metadata/>

	activity under VCS for the current monitoring period. Thus, the project has achieved SDG Goal 4: Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all.	inclusive and equitable quality education and promote lifelong learning opportunities for all.					
4)	The project monitoring survey results augment 100% of the sampled respondents reported to having experienced fewer trips for wood collection in comparison to the baseline, freeing up their time for other activities. Therefore, the project has successfully achieved SDG Goal 5: Gender Equality and empowerment of all women and girls.	The project has led to time savings and reduced drudgery in 100% households during the project lifetime (i.e. from project start to end of current monitoring period). The women can use the time saved for doing more productive activities or personal care. Thus, the project will achieve SDG Goal 5: Achieve Gender Equality and empower all women and girls.	5.4	Project-specific indicator: Percentage of end users reporting reduction in their time spent on unpaid domestic and care work, by sex, age, and location.	Implemented activities to decrease	Section: 3.1 Impact #4	SD VISta labeled VCUs
5)	The project focuses on distributing 571,460 ICS to households, which are clean cooking technologies. Its primary goal is to significantly reduce PM 2.5 and CO emissions compared to the baseline stove technology, as confirmed by reliable lab test reports.	In its lifetime, the project will contribute to increasing access to clean cooking technology with Improved Cook stove (ICS) installations in approx. 0.5 million Indian households that have been using traditional three-stone fire.	7.1	7.1.2 Proportion of population with primary reliance on clean fuels and technology	Implemented activities to Increase	Section: 3.1 Impact #5	SD VISta labeled VCUs

	Thus, the project contributed to increasing access to clean cooking technology with Improved Cook stove (ICS) installations in 571,460 Indian households that have been using traditional three-stone fire in the current monitoring period. Thus, the project has achieved SDG Goal 7: Ensure access to affordable, reliable, sustainable, and modern energy for all.	Thus, the project will achieve SDG Goal 7: Ensure access to affordable, reliable, sustainable, and modern energy for all.					
6)	The project has contributed to the generation of employment in the 26 employees with a male: female ratio of 23:03 by contracting locals for distribution monitoring of project activity. Since the project led to the generation of employment opportunities, it has achieved SDG Goal 8: Promote Sustained, inclusive, and sustainable economic growth, full and productive employment, and Decent Work for all.	The project will contribute to the generation of employment in the informal sector by contracting locals with targeted employment of 1,500 employees for varying lengths of time over the project's lifetime with a focus on hiring females. The project has contributed to 1,018 (637+355+26) individuals for generation of employment till end of this monitoring period for this project activity. Since the project leads to the generation of employment opportunities, it achieves SDG Goal 8: Promote Sustained, inclusive, and sustainable economic growth,	8.5	Project-specific indicator: Number jobs created.	Implemented activities to Increase	Section: 3.1 Impact #6	SD VISta labeled VCUs

		full and productive employment, and Decent Work for all.					
7)	The project monitoring survey results augment the above claim as 100% of the sampled respondents reported to having no fire incidents after adopting the project stoves. Since the project ensures a safe household to the beneficiaries, it has achieved SDG Goal 11: Make cities inclusive, safe, resilient and sustainable.	By the end of the project's lifespan, approximately 0.5 million clean cook stoves will be distributed. Thus, the project, in its lifetime will provide safer and healthier household to 0.5 million individual and thus, will achieve SDG Goal 11: A safer and healthier cooking environment is promoted by regular monitoring that shows a considerable decrease in fire incident compared to the baseline cook stoves.	11.1	Project-specific indicator: Percentage of end users reporting a decrease in fire incident compared to the baseline cook stoves.	Implemented activities to Increase	Section: 3.2 Impact #8	SD VISta labeled VCUs
8)	The project has reduced the removal of 166,229 tons of renewable woody biomass from forests, which helps prevent deforestation, supports the natural regeneration of forests, and promotes the efficient use of resources. This reduction aligns with sustainable consumption and production patterns by ensuring that biomass is used responsibly, allowing it to remain a renewable resource and	The project will contribute an estimated reduction in the removal of woody biomass (firewood) to the tune of ~1.4 million tons during the first crediting period, from the forests surrounding the communities thereby contributing towards sustainable consumption and production of renewable woody biomass in the project area. The project has contributed to a reduction in the removal of 447,081(14,718+266,134+166,229) tons of renewable	12.2	Project-specific indicator: Tons of renewable woody biomass (firewood) saved.	Implemented activities to Increase	Section: 4.1 Impact #1	SD VISta labeled VCUs

	contributing to the achievement of SDG Goal 12.	woody biomass (firewood) till end of this monitoring period for this project activity. Thus, the project has achieved SDG Goal 12: Ensure sustainable consumption and production patterns.					
9)	In the current monitoring period, the project has contributed to GHG emission reduction through a reduction of 2,563,286 tCO ₂ e by replacing 571,460 baseline stoves with ICS. Thus, the project has achieved SDG Goal 13: Take urgent action to combat Climate Change and its impacts	Total 6,810,597 (148,546+4,098,765+2,563,286) GHG emission reduction achieved till end of this monitoring period for this project activity. Thus, the project will achieve SDG Goal 13: Take urgent action to combat Climate Change and its impacts	13.0	13.0 Tonnes of greenhouse gas emissions avoided	Implemented activities to Decrease	VCS verification report for the period 01-January-2024 to 30-September-2024	SD VISta-labeled VCU
10)	The project has contributed to a reduction in the removal of non-renewable woody biomass at the tune of 1,251,257 tons in the current monitoring period, from forests surrounding the communities. Reduced wood collection in the project area allows trees to grow without being harvested, leading to an increase in above-ground	The project has contributed by reduction in the removal of Total 3,324,563 (72,512+2,000,794+1,251,257) non-renewable woody biomass till the end of this monitoring period for this project activity, from forests surrounding the communities thereby leading to an	15.2	Project-specific indicator: Tons of non-renewable woody biomass (firewood) saved.	Implemented activities to increase.	Section: 4.1 Impact #2	SD VISta-labeled VCU

	biomass as trees mature and accumulate more carbon in their trunks, branches, leaves, and roots and supported SDG Goal 15. Thus, the project will achieve SDG Goal 15: Protect, restore, and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss.	increase in above-ground biomass in these forests. Thus, the project will achieve SDG Goal 15: Protect, restore, and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss.					
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2 PROJECT DESIGN

2.1 Project Objectives, Context and Long-term Viability

2.1.1 Summary of Project Sustainable Development Objective(s)

Distribution of fuel-efficient Improved Cook Stoves (ICS) in different Indian states is the project's primary goal. The low-efficient baseline cook stoves will be replaced by the ICS distributed as part of this project.

Compared to conventional cook stoves, these stoves will be more efficient. The stoves' innovative air-induction technology improves combustion of Fuel and thus greatly lowers smoke emissions and fuel consumption.

The project activity enables household-level access to sustainable development by, distributing, installing, and maintaining fuel-efficient ICSs in India. The project locations for initial Project Activity Instances are in Maharashtra, Chhattisgarh, Gujarat, Madhya Pradesh, Rajasthan, Bihar, Uttar Pradesh, Jharkhand, Dadra and Nagar Haveli states of India and may expand further to other parts of India. EKI has distributed 571,460 (234,114 ICS in 1st Monitoring Period and 337,346 ICS added in 2nd monitoring Period) within the project boundary. The details of the same are as follows

Sl. No.	Location	Cookstove Distributed in each Monitoring period			
		1 st Monitoring period from 16-June-2022 to 30-September-2022)	2 nd Monitoring period from 01-October-2022 to 31-December-2023	3 rd Monitoring period from 01-January-2024 to 30-September-2024)	Total Cookstove distributed
1	Chhattisgarh	48,506	42,892	0	91,398
2	Maharashtra	11,498	9,400	0	20,898
3	Madhya Pradesh	42,656	6,476	0	49,132
4	Rajasthan	74,769	131,224	0	205,993
5	Bihar	26,993	60,304	0	87,297
6	Gujrat	29,692	29,754	0	59,446
7	Uttar Pradesh	0	32,800	0	32,800
8	Jharkhand	0	10,000	0	10,000
9	Dadra and Nagar Haveli	0	14,496	0	14,496
Total Cookstove distributed		234,114	337,346	0	571,460

The project aligns with and will contribute to sustainable development objectives outlined below in Table 1: Summary of SDG Contributions.

Table 1: Summary of SDG Contributions				
	SDG Goal Addressed	Target beneficiary	Impact in the current monitoring period	Impact envisaged through the project's lifetime
Economic Well Being	SDG 1	End users receiving project stoves	571,460 households receiving project stoves	0.5 million households
	SDG 8	Employees hired during various stages of project – ICS monitoring activity operation.	The project has contributed to the generation of employment in the 26 employees with a male: female ratio of 23:03 for contracting locals for monitoring project activity.	1,500 numbers of men & women
Social well Being	SDG 4	Staff receiving non-formal education & training	22 numbers of men & women receiving informal education & training	500 numbers of men & women
	SDG 5	Women and girls	100% women who are primary cooks in 571,460 households, reporting reduction in their time spent on unpaid domestic and care work	100% of 0.5 million women who are primary cooks in 0.5 million households

	SDG 7	End-user households	571,460 households are experiencing reduced indoor air pollution.	0.5 million project beneficiary households will have access to clean technology which they would not have been able to afford.
	SDG 11	End-user households	100% of households reporting a decrease in fire incident compared to the baseline cook stoves.	100% of 0.5 million beneficiary that will benefit from the project will have access to clean technology and be protected from fire hazards.
Environmental well being	SDG 3	End-user households with a focus on Indoor air quality	100% households experiencing reduced indoor air pollution.	0.5 million households are expected to experience reduced indoor air pollution.
	SDG 12	Natural Capital	In the current monitoring period, the project has helped to reduce the removal of 166,229 tonnes of renewable woody biomass (firewood) from the forests surrounding the communities. This has helped to promote the sustainable production and consumption of renewable woody biomass in the project area.	Avoid the removal of approximately ~0.72 million tons of renewable woody biomass per year over the 7 years of the first crediting period, from forests surrounding the communities.

	SDG 13	Natural Capital	In the current monitoring period, the project has contributed to GHG emission reduction through a reduction of 2,563,286 tCO ₂ e by replacing 571,460 baseline stoves with ICS.	Estimated GHG emission reduction of ~9.45million tCO ₂ e over the 7 years of the first crediting period.
	SDG 15	Natural Capital	The project has contributed to a reduction in the removal of non-renewable woody biomass at the tune of ~1,251,257 tons in the current monitoring period, from forests surrounding the communities, thereby leading to an increase in above-ground biomass in these forests.	Avoid the removal of ~ 4.61 million tons of woody biomass over the 7 years of the first crediting period, from forests surrounding the communities.

The aims of this project activity are,

1. Reduction of demand for woody biomass as fuel,
2. Slowing down local deforestation,
3. Reduction of the drudgery of collecting wood fuel– performed mainly by women and children,
4. Reduction of time spent on cooking over open fires resulting in extended exposure to toxic smoke,

5. Increasing time spent on improving quality of life i.e., through economic endeavours and knowledge dissemination,
6. Improving health status through reduced exposure to household air pollutants (HAPs).

Summary of objectives listing goal to claim for SDG labels and further corresponding evidence of the project activity are as follows:

Economic Wellbeing

The project will provide access to basic services, i.e., modern energy in the form of clean cooking alternatives to the rural and peri-urban communities of India. The project will lead to a distribution of 0.5 million energy-efficient ICS throughout its lifetime. Thus, the project will achieve:

- **SDG GOAL 1:** The project has distributed 571,460 numbers of ICSs which are providing access to clean fuel and technology, a basic service necessary to lead a healthy and productive life, including saving time at the household level (1.4)⁴

Further, the project will result in generating employment opportunities, both long-term as well as short-term, for the local individuals in the nine states of India. Long-term employment under the project refers to engaging individuals for at least six months while short-term refers to an engagement of a minimum of 1 week.

- **SDG GOAL 8:** The project led to the generation of 26 employment opportunities in monitoring project activity has been done during the current monitoring period (8.5)⁵.

Social Wellbeing

The project is envisaged to improve the overall social well-being within the project implementation area by yielding human health benefits, increasing awareness levels, reducing gender inequality, and providing access to clean cooking technology to economically weaker sections of society that do not have affordability and access to this technology. Each of the benefits aligned with the respective SDG has been explained in the following points:

The projects will address SDG 4, SDG 5, SDG 7 and SDG 11 in the following ways:

- **SDG GOAL 4:** Contributed in increasing vocational and relevant skills of 22 numbers of individuals by introducing them to issues related to climate change, and bringing awareness about the importance of sustainable development, health, nutrition, and well-being, through formal and informal training which will enhance their avenues for getting decent jobs and employment opportunities in future (4.4).

The employed individuals will be provided with regular training to enhance their vocational skills related to various aspects of project implementation and monitoring which would increase their employability

⁴ Applies to employment of individuals who were absent from the formal sector and previously lived near, at, or below the international poverty level.

⁵ Applies to employment of staff at full and productive levels with decent work for all, with equal pay for work of equal value across sexes – the ethos of SDG 8.

and chances of getting long-term employment even after the completion of the project. The field executive officer will be specifically trained in stove operation and GHG awareness.

- **SDG Goal 5:** Usage of ICS reduced women's and children's drudgery in 100% of the end users (primary cooks), i.e. 571,460 number of households during the current monitoring period, through time savings by reducing time spent cutting, collecting, and carrying firewood from trees far removed from households and reducing time spent cooking over toxic smoky open fires. These tasks are a major cause of gender inequality in rural communities of India which is being addressed by the project activities by providing the women and children opportunities to involve in more productive activities (5.4)⁶.

By switching to fuel in small, twig-sized pieces of woody biomass, women, and girls save time collecting, cutting, and carrying heavy wood over long distances. Also, as the ICS burns at a higher temperature, with less fuel used, due to the combustion chamber and stove design, cooking the day's meal takes approximately an hour less than it would take to cook the same meal with the baseline stove.

Children, particularly girls, are frequently kept at home to support household chores, like cooking and collecting firewood, estimated on average to be 10 hours per week, with an ICS more time can be dedicated to education – attending school and studying.

- **SDG Goal 7:** The project has distributed 571,460 numbers of ICSs free of cost to nine states of the Indian population that are predominantly reliant on wood fuel based basic stoves for meeting their cooking need and are unable to afford improved cook stoves. Being a clean cooking technology, these ICS provides an essential tool to address energy poverty and ensuring sustainable energy security in 571,460 numbers of households in India during the project lifecycle, the project will generate an overall positive impact on the community (7.1.2).
- **SDG Goal 11:** 100% of the end users, i.e. 571,460 numbers of households have stopped using open fields since the successful installation of 571,460 ICSs. Because of its portability, ICSs can be easily installed anywhere in the home, providing security against environmental risks like CO₂, CO and PM_{2.5} emissions as well as reduce accidental burns in infants and children due to its design comprising of a closed combustion chamber and stable base. A safer and healthier cooking environment is promoted by regular monitoring which shows a considerable reduction in fire incidents emissions compared to baseline cook stoves (11.1).

Environmental Wellbeing

The distribution of ICSs is expected to reduce fuel wood consumption for cooking purposes which will not only reduce the amount of GHG emissions being released into the atmosphere but also reduce the burden on forest ecosystems in and around the project area. Thus, the project will contribute to SDG 3, SDG 12, SDG 13 and SDG 15 in the following ways:

- **SDG Goal 3:** Reduced emission of smoke, fine particulate matter (PM_{2.5}) and CO resulting in lowering of household air pollution due to use of the ICS, improving well-being for women and

⁶ <https://www.nature.com/articles/s41599-020-0488-2>

children in 100% of the end users' households, i.e. 571,460 numbers of households so far (3.9)⁷.

- **SDG Goal 12:** Reducing 166,229 tons of renewable biomass consumption during the current monitoring period. This promotes the efficient utilization of renewable biomass resources while achieving sustainable energy practices (12.0).
- **SDG Goal 13:** Reduce carbon emissions by approximately 2,563,286 tCO₂e during the current monitoring period (13.0).
- **SDG Goal 15:** Reduced deforestation and degradation by up to 1,251,257 tons, during its second monitoring period. Forest, observed as a public place is often used for the collection of non-renewable fuel woods, which significantly contributes to deforestation and degradation. The distribution of the ICSs will reduce non-renewable woody biomass consumption and hence reduce the pressure on the forests. Due to ICS's efficiency and widespread community use, there will be a reduction in non-renewable firewood collection resulting in better management of protected areas.

2.1.2 Description of the Project Activity

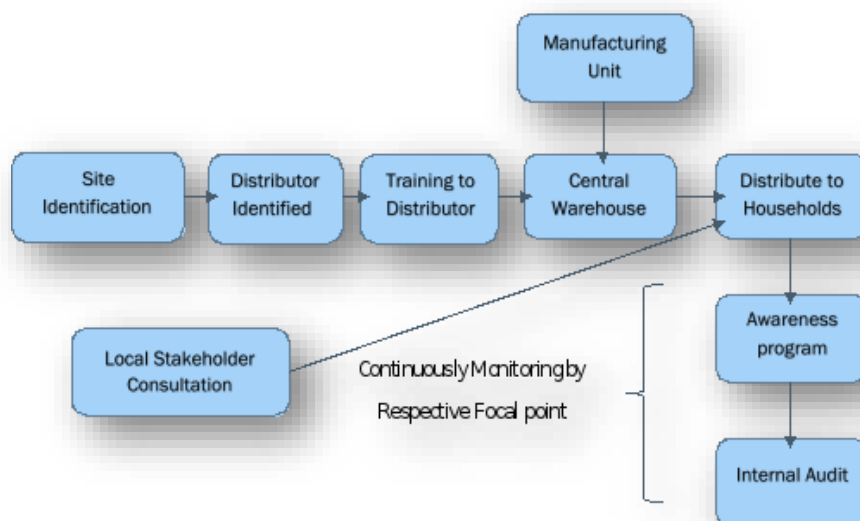
The project involves the distribution of fuel-efficient improved cook stoves (ICS) to replace the baseline traditional cook stoves in households.

The ICS deployed under this project is energy-efficient which substantially reduces fuel consumption and emissions for conducting cooking activities in homes. The ICS improves the efficiency of combustion and thermal transfer to the pot compared with traditional pot support or three-stone fire by incorporating energy-efficient technology which provides a conducive environment for clean and efficient combustion of wood. It substantially reduces wood fuel consumption compared with a less efficient three-stone fire or traditional pot support.

EKI has procured the ICSs from the manufacturer and provided the same to the distribution agency at a central point near the distribution area. The distribution agency has trained its teams for the distribution and registration process. Further, the distribution teams have distributed the stoves to the end users. The distribution teams have educated the end-user on the proper use of the ICS, its benefits for the user, and how it improves the environment. Additionally, EKI is also conducting regular training programs and field visits for ensuring continual communication with the local stakeholders. Furthermore, in case of any support for repair/maintenance of the stove, the end-user can contact the support team using the customer support number available on the box of ICS.

Figure 1: Cook stove Flow Chart

⁷ <https://www.sciencedirect.com/science/article/pii/S0160412018324772>



For the implementation of the improved stoves, EKI has identified the potential location where the majority of the population was using the traditional mud and/or three-stone fuel wood fire stoves. Based on previous experience in other projects, available information, or baseline survey, ICS implementation was planned. EKI prioritized the appointment of a local implementation partner for the delivery of ICS and local men's and women's teams contracted and trained for the implementation of ICS. This boosts local employment and the income of local people. Awareness about the implementation and use of the ICS has been provided to the local community through awareness programs. EKI has conducted the distribution of ICS door-to-door or by selecting a dedicated central point accessible to the intended user. EKI has deployed a team to train end users for the proper use of ICS and to educate users about the benefits towards climate due to the use of ICS. The team ensures the proper functioning of ICS and takes feedback from users about ICS and addresses their concerns.

The ICS deployed under the grouped project activity are the portable cook stove manufactured by GHG Reduction Technologies Pvt LTD., having thermal efficiency of includes more than 25% (as per applied methodology VMR 0006).

Technical Specifications of cook stoves distributed under the project activity instance to date are as below:

GHG Reduction Technologies Pvt LTD. is ISO 9001:2015 Certified Organization. They have ample experience in metal fabrication along with in-house testing and assembly facility and have strategic tie-ups with tool room and powder coating setups.

Technical Details:

A)	Cook Stove Type/Category	AGNEEKAA ECO MINI STOVE MODEL4 SE
		Natural Draft
B)	Secondary Air Supply	Through Natural Draft

C)	Stove Material Used	Body	Galvanized Iron Sheet
		Body Material Thickness	0.6mm
		Combustion Chamber	Stainless Steel SS 202 grade
		Combustion Chamber Material Thickness	1 mm SS 202 grade
		Insulating Material	Thermal Wool
		Insulating Material Thickness	6 to 8mm
		Top Plate	Stainless Steel SS 202 grade
		Top Plate Material Thickness	1 mm
D)	Physical Structure	External Dimension	Length: 260mm
			Width: 260mm
			Height: 248mm
		Combustion Chamber Dimension	Diameter: 125mm
E)	Grate Thickness	2 mm Material HR sheet	
F)	Wight Of the Stove	3.8 Kg	
G)	Type of Fuel Wood	Firewood 30 to 50 mm diameter	
H)	Feeding Process	Continuous Feeding Front Loading	
I)	Expected life of stove	7 Years	
J)	Box Dimension	Outer Side Box Dimension	Length: 300mm
			Width: 300mm
			Height: 270mm
K)	Thermal Efficiency	36.42%	

The above specifications have been considered for the actual ER calculation of the project activity instances in this monitoring report (MR).

The thermal efficiency of the implemented cook stove was tested at the manufacturer's end by a competent third-party following BIS protocol IS: 13152: 2013. Further, continuous research and development activities are being conducted by the manufacturer to improve the efficiency, quality, and design of the stove, by incorporating feedback from end users through routine follow-ups and site visits. EKI may adopt the modified stove models with improves efficiency for future distribution under the current grouped project activity. This will be transparently reflected during subsequent verifications and the details and specifications of respective cook stoves will be considered for ER calculation of project activity instance.

Data collection of ICS end-user

ICS distribution agency is responsible for stove distribution and data collection. The distribution agency follows an SOP designed by EKI for stove distribution and registration. The ICS registration process was carried out by manual recording process or using ICT (e.g., using a mobile app). The distribution team gets training that includes a brief introduction to the project activity, the objective of the distribution of ICS as well as ICS distribution and data collection process.

The project proponent gathered the necessary information to identify households using its ICS during the course of the project. To facilitate this process, each ICS has been assigned a unique serial number. This number has been recorded during the registration process together with the following information (as appropriate and as available):

- Name of ICS user or head of the household
- Address/ Village name of ICS household
- Stove model Distributed
- Date of distribution/installation
- ICS serial number
- Retailer/distributor/Manufacturer information

The information collected has been stored in hard copies and/or electronic database excel sheets which serve as a project database for project monitoring and sampling purposes.

2.1.3 Implementation Schedule

Date	Milestone(s) in the Project's Development and Implementation
12 April 2022	The earliest stakeholder's meeting for the project activity at Rata, Valsad (Gujarat)
16 April 2022	Listing of VCS PD on VERRA
16 June 2022	Project start date: project activity commenced with ICS installations
20 December 2022	PP applies for VERRA's Sustainable Development Verified Impact Standard (SD VISta) SDG labeling.
18 January 2023	Project listed for VERRA's Sustainable Development Verified Impact Standard (SD VISta)
06 February 2023 to 11 February 2023	VVB Site Visit for Joint Validation and Verification of the project activity
16 January 2024	Registration of VCS PD on VERRA
04 June 2024	Registration of SD VISta PD on VERRA

2.1.4 Project Proponent

Organization Name	Vitol Asia Pte Ltd
Role in the Project	Primary Project Proponent
Contact Person	Jonathan Gan

Title	Originator
Address	260 Orchard Road, #15-02, The Heerlen, Singapore 238855
Telephone	+65 67379922
Email	jga@vitol.com

Organization Name	EKI Energy Services Ltd.
Role in the Project	Project Proponent
Contact Person	Manish Dabkara
Title	Managing Director & Chief Executive Officer
Address	Office No 201, Plot No 48, Scheme 78, Vijay Nagar Part- II, Indore 452010, India
Telephone	+91 9907534900
Email	manish@enkingint.org and registry@enkingint.org

2.1.5 Other Entities Involved in the Project

Organization Name	GHG Reduction Technologies Pvt. Ltd.
Role in the Project	Manufacturing
Contact Person	Mr. Soumitra Kulkarni
Title	Director
Address	A-11/2/3, Nagargoje Industries PVT LTD, Summet Compound Amdad, Nashik Maharashtra – 422010
Telephone	+91 982287213
Email	Soumitra.kulkarni@enkingint.org

Organization Name	JPS Enterprises
Role in the Project	Distributor
Contact Person	Yogesh Kumar Sharma
Title	Chief Executive Officer
Address	G-1, Plot no. 62-A, Prem Nagar II, Gurjar ki Thadi, Jaipur-302019

Telephone	+91 9057244624
Email	yogeshsharma@jpsenterprises.co.in

Organization Name	Quick Edge Integrated LLP
Role in the Project	Distributor
Contact Person	Anirudha Chaliha
Title	Director
Address	6-G, Parashmoni Grand Hill Apartment, DPS road, Guwahati 781035
Telephone	+91 9957199028
Email	qedgeint@gmail.com

Organization Name	Bibsikha LLP
Role in the Project	Distributor
Contact Person	Bibek Bora
Title	Chief Executive Officer
Address	Bora Khongia Gaon Borkhongia P.O Tekelavia Ga Tanga Na, Jorhat, Assam- 785001
Telephone	+91 7002513935
Email	bibek@bibsikha.in

Organization Name	Pradnya Consultant
Role in the Project	Distributor
Contact Person	Hemant Bhamre
Title	Managing Director
Address	1st floor, D1/20, MIDC, Ambad, Nashik, Maharashtra-422010
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Organization Name	Envro Queen Pvt. Ltd.
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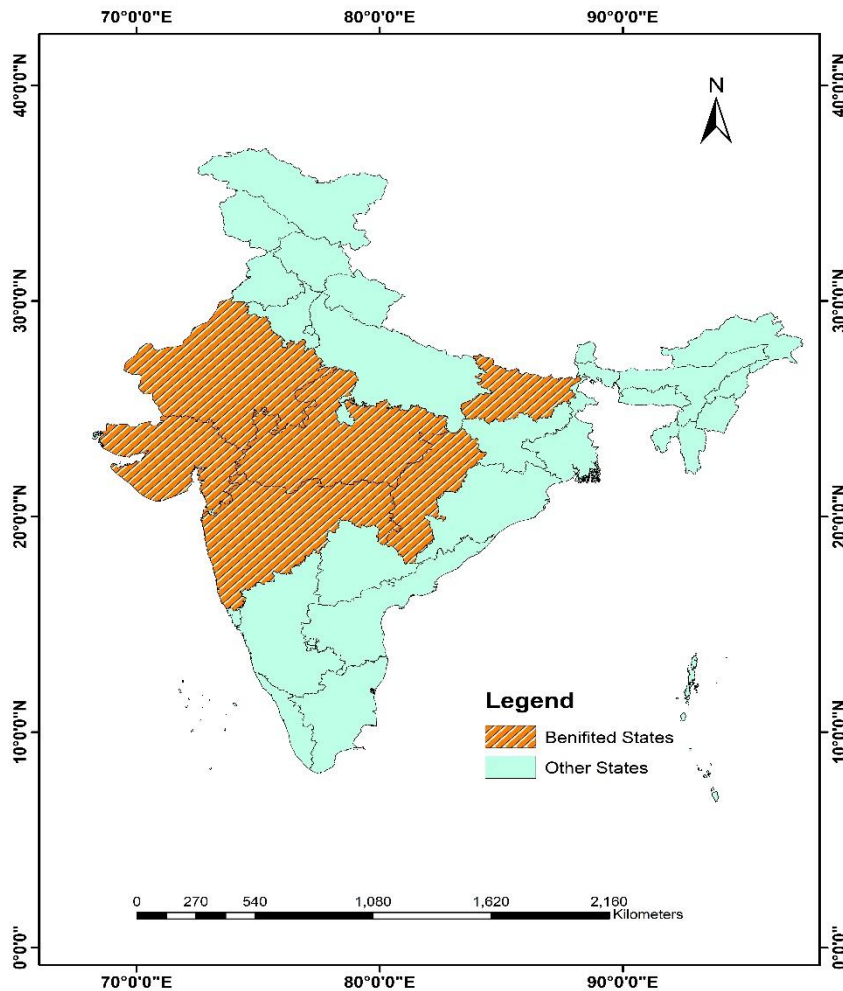
Role in the Project	Distributor
Contact Person	Samir Bagchi
Title	Chief Executive Officer
Address	130, Mahalaxmi Nagar, Dhar (MP) – 454001
Telephone	+91 8871965144
Email	sg65410@gmail.com

2.1.6 Project Location

All the project activity instances in the proposed grouped project activity would be located within geographical boundaries of India. The geographical boundary for projects located in India is delineated in the form of extreme geographic coordinates of India as follows:

Latitude - 8° 4' to 37° 6' N

Longitude - 68° 7' to 97° 25' E



2.1.7 Project Description Deviations

No project description deviations were applied during previous and current verification.

2.1.8 Threats to the Project

Human-induced risks and natural-induced threats are the two types of potential threats to the project activity. This section explains the potential hazards and measures that the PP will take to neutralize these threats to ensure the project activity's smooth implementation.

Human-Induced Threat:

Threat 01:

The perception of a larger fire as superior limits the acceptance of upgraded cook stoves, and it is typically challenging for people to modify their behaviours.

Solution:

To convey the advantages of the cook stoves in local languages and from their cultural viewpoints, the project's proponent has conducted an awareness drive in distribution areas.

Threat 02:

Due to budgetary limitations, many households cannot buy the new ICS.

Solution:

Project's proponent has distributed the ICSs free of cost.

Threat 03:

Stove users' lack of upkeep of the stove results in either malfunctioning of the stove as designed or lack of stove use.

Solution:

To find problems with stove maintenance, PP mandates that its Distributing units (DPs) hire, train, and supervise its employees to visit each household to inspect the stoves once a year. This reduced the threat listed above. Additionally, PP local staffs perform spot checks or sample size reviews to identify lapses in stove upkeep. Moreover, each stove has unique identification (I.D.) number and QR code embossed on the metal plate and attached with each ICS for proper identification and all users are registered on a mobile-based app. As soon as users found any problem with the ICS, they can call on the helpline number, given in the ID card provided with the ICS. They will be located easily by the I.D. of the ICS and the local DP will address the problem immediately.

Threat 04:

Failure of behaviour change results in high levels of non-adoption.

Solution:

Research outcomes, whether formal or informal, are included in future training and community sensitizations to continue to positively, shape knowledge, enhance positive peer-to-peer influence, follow-up visits by the Implementing partner (once a year), and increase women's sense of empowerment, feeding into social cognitive theory on identity and self-belief.

Threat 05:

Carbon-financed stove distribution is not shown to have an increased impact on household uptake.

Solution:

Co-benefits like time savings and increased health advantages (reduced morbidity/mortality from HAP and decreased acute respiratory disease for mothers and children) are connected with the adoption of ICS work as key motivations for increasing the uptake of the stoves. PP's training emphasizes that, while ICS is offered free of charge, variables such as time savings, health advantages, and so on are essential in large-scale adoption. Furthermore, raising knowledge about the benefits of cooking with ICS is being utilized to combat this menace.

Project Proponent (PP) has discussed project benefits with the stakeholders during all stages of the project implementation:

Before distribution – PP’s representatives discussed the project benefits with the district and Village level authorities.

During distribution – Distributing unit provides a detailed presentation to the end-users on stove performance, how to use the stoves, its benefits, carbon waiver agreement, etc. PP uses project flyers and pictorial illustrations to educate the end-users on project benefits.

Post distribution - Distributing unit follow-up visits each household once a year to ensure the proper usage of project cook stoves and to explain to the beneficiaries regarding the cook stove maintenance, best practices, and health benefit.

Nature-Induced Threats

Threat 01:

Climate crisis-induced displacement/migration (shock-related drought or flood) causes households to change their location.

Solution:

The ICS installed under the project are a portable type of stove that can be easily transported. This technology can travel easily with the household in their migration and can be installed and used at a new location by the end user. Additionally, the end users are given the necessary training and information for stove maintenance should it become necessary.

Threat 02:

Continued deforestation and degradation make firewood an untenable source of biomass.

Solution:

Although greater scarcity would encourage the use of the ICS, there is a chance that as the population grows, there will come a time when firewood is no longer a viable source. Although future ICS households might not be able to afford or access contemporary fuels, this will increase their reliance on biomass cooking. The ICS that PP is distributing is made to use crop leftovers and small branches and twigs as a nearby source of regenerative biomass.

2.1.9 Benefit Permanence

By distributing improved cook stoves (ICS), which allow households to reduce their fuel consumption, save time cooking, improve their health by reducing indoor air pollution, and increase employment opportunities available to them, the project activity aims to change the cooking habits of households. Due to the advantages associated with improved cook stoves, it is guaranteed that both rural and urban households will continue to use them beyond project completion. This will result in considerable environmental and socioeconomic benefits. The project activity also guarantees that the benefits are long-lasting and cannot be undone until the project's devices are operational.

2.2 Stakeholder Engagement

2.2.1 Stakeholder Consultation and Adaptive Management

Consultations with local stakeholders are essential steps in implementing a project. Different stakeholders participated in interactive training and demonstration sessions led by the project proponent and Distributing units. These sessions gave the participants details on the benefits of improved cook stoves, the advantages for the environment and human health, how to use ICS, and maintenance. PP welcomed any inquiries about stoves from the stakeholders throughout the consultation. The villages were identified and village representatives like village heads, sarpanch were taken the survey. For the proposed project activity, household owners (end users), village heads, distributors, and their representatives are relevant main local stakeholders. The public notice was placed in common places in villages and village heads were invited telephonically to consult their feedback.

The details of the Stakeholder Meetings are as follows:

Date of invitation – 02/09/2022

Date of Meeting – 13/09/2022

Location of Meeting – Chakai, Ghatigari, Jamui, Bihar

Date of invitation – 06/08/2022

Date of Meeting – 12/09/2022

Location of Meeting – Chandan, Panchayati, Raj Bhawan Chandan, Banka, Bihar

Date of invitation – 25/07/2022

Date of Meeting – 22/08/2022

Location of Meeting – Bari Jana, Begusarai, Bihar

Date of Invitation – 15/06/2022

Date of Meeting – 05/07/2022

Location of Meeting – Nalcha, Dhar, Madhya Pradesh

Date of Invitation – 06/05/2022

Date of Meeting – 11/06/2022

Location of Meeting – Atari, Chattisgarh, Raipur, Chattisgarh

Date of Invitation – 20/05/2022

Date of Meeting – 08/06/2022

Location of Meeting – Raude, Nashik, Maharashtra

Date of Invitation – 12/04/2022

Date of Meeting – 12/05/2022

Location of Meeting – Rata, Valsad, Gujarat

Date of Invitation – 21/07/2022

Date of Meeting – 16/08/2022

Location of Meeting – Pander, Bhilwara, Rajasthan

Date of Invitation – 21/07/2022

Date of Meeting – 17/07/2022

Location of Meeting – Ajitsar, Churu, Rajasthan

Date of Invitation – 20/07/2022

Date of Meeting – 17/07/2022

Location of Meeting – Jakhali gram panchayat, Nagour, Rajasthan

Date of Invitation – 19/07/2022

Date of Meeting – 17/08/2022

Location of Meeting – Bhavan, Tonk, Rajasthan

In all the stakeholder meetings, the representative of PP welcomed the gathering and gave a brief about the climate mitigation project activity. After the introductory speech, stakeholders explained the purpose of distribution of highly efficient cook stoves which will burn wood more efficiently thereby improving thermal transfer to pots, hence saving fuel. The project also reduces the rapidly progressing deforestation but will also reduce health hazards from indoor smoke pollution and women and children will have to spend less time collecting contributing to a reduction in GHG emissions. The Project will also assist the local population by providing employment opportunities to both skilled & unskilled labours.

The Minutes of the meeting with stakeholders' queries and invitation letter will be submitted to the DOE.

The meeting started with an opening speech by a representative of the project participant. He introduced all guests to the dais. The representative of the project participant explained the technical

aspects of the project to the stakeholders. He also explained the social, environmental & economic benefits of the project. He also elaborated on the carbon mechanism & its requirement for the current project. After the detailed discussions, the session was open to questions from stakeholders. Most of the questions were related to employment opportunities, economic development, benefits from the project to villagers and other development activities. The questions raised by the villagers are summarised below:

Q: Does this cook stove run-on electricity?

A: No, the cook stove is not run on electricity it runs only on wood blocks, shreds, etc.

Q: What is wood consumption?

A: The wood consumption of traditional cook stoves is high but it will reduce by 60% less than traditional cook stoves.

Q: Does it make smoke?

A: No, this cook stove does not produce any kind of smoke.

Q: Can we use it easily?

A: Yes, you can use this cook stove very easily.

Q: How to light this stove with kerosene or paper?

A: You don't need kerosene or any other fuel to light this cook stove.

Q: Why it does not make smoke?

A: This cook stove is scientifically made so it uses oxygen properly and it doesn't make any smoke.

Q: Can we carry it during travel?

A: No, you can't carry it on travel.

Q: If we touch the cook stove steel will it burn our hand or not?

A: Yes, it will burn your hand but the handle will not.

Q: Can we wash it?

A: No, you can't wash it.

The stakeholders are satisfied due to the health and environmental benefits and there are no negative comments from stakeholders.

As a part of ongoing communication with local stakeholders, they are also informed about the grievance register. If any concerns are received during the operation of the project activity, the same will be addressed if relevant to the project activity. There were no grievances received during the current monitoring period.

Continued Consultation and Adaptive Management

As a part of ongoing communication with local stakeholders, end users are being provided with an ID card which is having a helpline number for registering grievances. The field survey team will also have the responsibility to take grievances regarding the project activity during the field survey and the same will be conveyed to PP during the operation of the project activity. Thus, ongoing communication of stakeholders will be followed through a grievance mechanism. If any concerns are received during the operation of the project activity, the same will be addressed if relevant to the project activity.

Every direct stakeholder, including local leaders, shall have their comments taken into account as soon as possible and as needed. Women and other direct users of cook stoves were continuously consulted during the design of the ICS, and this practice of soliciting user input will continue. If a meeting is necessary to discuss potential remedies in the event of any complaints, it will be set up as soon as possible.

Grievance Redressal Process

- **Beneficiary Card Distribution:** The distributor has provided a beneficiary card to each beneficiary. This card is provided by the manufacturer and includes a toll-free number.
- **Grievance Registration:** Beneficiaries can directly register any issues or grievances by calling the toll-free number printed on the card.
- **Resolution Timeline:** Once a grievance is registered, the EKI team will address and resolve the issue within 24 hours from the time the complaint is logged.

. The project's promoter will make an effort to start a comprehensive transformation in the socioeconomic circumstances of the surrounding districts. Although changing cook stoves may seem like a minor concern, PP's social surveys have shown how closely cook stoves are related to other socioeconomic problems. The project's supporters will follow the sustainable development goals for India throughout its existence as a guide to community involvement and community welfare. The project activities will include community development initiatives.

PP also collects feedback from beneficiaries through various methods throughout the project life, ranging from informal meetings to more formal local stakeholder consultations, and additional channels of surveys that include questions specifically about ICS use and uptake to ensure ongoing progress and feedback from stakeholders, particularly the beneficiaries, and future beneficiaries.

Comments received during Public Comment period (spanning in between 13-July-2023 to 12-August-2023):-

Sr. no.	Comments by the Stakeholders	Response by the PP
1	If burning would it is not enough to just give the stove they need to be trained. There are stoves on the market which allows for	PP agrees that providing training alongside stoves is essential for safe and effective use. PP does emphasize training programs to ensure users get the most out of the equipment. Additionally, PP is actively exploring stoves that

	bio char production as well. Is this something that has been considered?	support bio char production, as they present a sustainable option. PP is committed to exploring and implementing innovative solutions like these to enhance the impact of our initiatives.
2	Demonstrate the reduction in indoor pollution in the pdf.	Particulate matter (PM2.5) and carbon monoxide (CO) stand as the primary pollutants contributing to indoor air pollution within rural Indian households. Existing literature publicly demonstrates that traditional three-stone stoves exhibit considerably higher pollutant emissions compared to improved stoves, owing to their inefficiency. Enhanced wood-burning efficiency leads to reduced PM 2.5 and CO generation. This efficiency is substantiated by the Project ICS's certification from a reputable institution, confirming its superior performance in emitting lower levels of PM 2.5 and CO relative to conventional cook stoves. Furthermore, PP conducts a periodic comprehensive monitoring survey (covering the monitoring periods of the project activity and encompassing over 100 randomly selected households in each state), where ICS implementations occurred. The survey is sought to ascertain if beneficiaries indeed experience a tangible decrease in indoor air pollution
3	The project location on the map is in Maharashtra, one of the better states in terms of GDP. Do you think people here prefer ICS over LPG?	While Maharashtra indeed boasts a relatively higher GDP, it is imperative to consider various factors when assessing household energy source preferences. Accessibility to Liquefied Petroleum Gas (LPG) and economic considerations wield substantial influence in this decision-making process. Especially in rural areas, Improved Cooking Stoves (ICS) are gaining popularity due to their cost-effectiveness, reduced fuel consumption, and alignment with local cooking practices. Furthermore, PP has proactively engaged with local communities through extensive stakeholder consultations. This endeavour was undertaken to gain a profound understanding of their specific

		needs and preferences. The insights garnered from this initiative will be instrumental in gauging the acceptance and adoption of ICS compared to LPG in Maharashtra. It is crucial to recognize that the preference for ICS or LPG is ultimately a household-specific choice. PP has confirmed the absence of LPG in households during the distribution activities. Additionally, end-user agreements have been obtained wherein beneficiaries declared the absence of such improved cooking technology (e.g. LPG cook stoves), in their households.
4	How do you monitor the health impacts? How will you convince the World that clean cooking does make a difference?	The health impacts are monitored through monitoring surveys conducted with the beneficiaries. They are asked about the specific health benefits they have experienced since transitioning to the Improved Cook Stoves (ICS) from traditional cook stoves. These surveys provide valuable insights into the positive changes in health outcomes attributed to the use of ICS.
5	How do you make sure clean cook stoves are being used by the people in India?	The same can be assured through the stove usage survey of the project stoves. Moreover, the direct benefits of the ICS over traditional cook stove shall make ICS as an obvious choice for their day-to-day cooking practice. Ensuring the adoption of clean cook stoves in India is a priority for PP. PP employed a multifaceted approach to achieve this: 1. <u>Usage Surveys</u>: Conducting surveys to directly assess the usage of clean cook stoves by beneficiaries. This enables us to gather feedback and insights on their experience with the Improved Cooking Stoves (ICS) in comparison to traditional cook stoves. 2. <u>Demonstration of Direct Benefits</u>: The significant advantages of ICS over traditional cook stoves, such as reduced fuel consumption, lower emissions, and

		improved indoor air quality, make ICS an evident choice for day-to-day cooking practices. These benefits serve as a compelling incentive for households to adopt and consistently use clean cook stoves. 3. <u>Education and Awareness</u>: PP has also invested in educational programs and awareness campaigns to highlight the advantages of clean cooking practices. By providing information on health benefits, environmental impact, and cost savings associated with ICS, PP has aimed to empower individuals to make informed decisions. 4. <u>Collaboration with Local Communities</u>: PP works closely with local communities to understand their specific needs and preferences, ensuring that the design and functionality of the ICS align with their cooking practices and cultural preferences. 5. <u>Follow-up and Support</u>: PP maintains regular communication with beneficiaries, offering support and addressing any challenges they may face in using the clean cook stoves effectively. Through these comprehensive measures, PP strives to not only provide clean cook stoves but also ensure their sustained and meaningful use, contributing to a healthier and more sustainable cooking environment in India.
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The public comments have been addressed by the PP, and there are no residual actions required for the current monitoring period of the project activity.

2.2.2 Anti-Discrimination

The project activity does not endorse sexual harassment or discrimination based on a person's gender, sexual orientation, or other characteristics. All willing customers inside the project boundary have

received ICS. Women got benefitted from the project because they are now spending less time for cooking or getting fuel and because they are also able to cook in a cleaner environment.

2.2.3 Worker Training

The EKIESL distribution team is continuously being educated and trained on equipment maintenance and handling safety through ongoing processes. The training assists the workers chosen from the local communities in expanding their knowledge and developing new skills. The annual review procedure also aims to determine the expansion of knowledge and comprehension that the employee has acquired throughout the working period.

2.2.4 Equal Work Opportunities

The Project activity has an equal opportunity for women, men, or any vulnerable/marginalized community by taking into consideration of the country's law and regulations to contribute both in volunteer and working positions. Furthermore, all genders, nationalities, ethnicities, races, and religions are equally welcome to participate in the projects as they are implemented.

2.2.5 Workers' Rights

Per the International Labour Organization's (ILO)⁸ Core Labour Conventions, EKIESL upholds and supports the abolition of all forms of forced or compulsory labour, the minimum age convention, the right to organize, and the abolition of discrimination regarding paid employment and occupations.

Every single one of PP's employees is covered by a contract that outlines their duties and rights. A variety of labour laws exist in India as well, including those that forbid discrimination and child labour, ensure fair and humane working conditions, offer social security, a minimum salary, and the freedom to organise, establish unions, and enforce collective bargaining. India also has several strict laws governing layoffs and retrenchments of employees, as well as requirements for government clearance of any change in employee status in a company, regardless of whether the reason is related to the state of the economy. Additionally, India has ratified six ILO conventions. They are as follows:

- Abolition of Forced Labour Convention (No. 105)
- Forced Labour Convention (No. 29)
- Equal Remuneration Convention (No. 100)
- Minimum age Convention (No. 138)
- Discrimination (employment occupation) Convention (No. 111)

⁸ The ILO Core Labour conventions are the [Forced Labour Convention](#), 1930 (No. 29), [Freedom of Association and Protection of the Right to Organise Convention](#), 1948 (No. 87), [Right to Organise and Collective Bargaining Convention](#), 1949 (No. 98), [Equal Remuneration Convention](#), 1951 (No. 100), [Abolition of Forced Labour Convention](#), 1957 (No. 105), [Discrimination \(Employment and Occupation\) Convention](#), 1958 (No. 111), [Minimum Age Convention](#), 1973 (No. 138) and the [Worst Forms of Child Labour Convention](#), 1999 (No. 182).

- Worst Forms of Child Labour Convention (No. 182)

2.2.6 Occupational Safety Assessment

Provide an assessment of substantial risks to worker safety that have arisen due to project implementation. Describe activities and/or processes implemented to inform workers of risks and how to minimize such risks. Demonstrate how risks are minimized.

All pertinent regional regulations are followed by the project. The Project has no detrimental effects on the community's or the employees' health.

According to the National Policy on Safety, Health, and Environment at Workplace, ICS manufacturer takes appropriate mitigating measures, such as providing the necessary tools, such as safety shoes, gloves, and eyewear, to protect the health and safety of the workers. Additionally, the project's proponent makes sure that all employees receive ongoing instruction in occupational safety.

There are no unusual risks associated with the project activity. Road accidents or minor social conflicts during delivery and demonstration operations could pose risks. By educating employees about potential risks, providing them with best practices training, and providing suitable tools and equipment, risks have been reduced. These risks have been discussed verbally with the workers throughout their initial training, orientation, and refresher training sessions. According to the National Policy on Safety, Health, and Environment at Workplace, ICS manufacturer takes appropriate mitigating measures, such as providing the necessary tools, such as safety shoes, gloves, and eyewear, to protect the health and safety of the workers. When undertaking field activities, first aid and medical kits are also been provided.

2.2.7 Feedback and Grievance Redress Procedure

During the stakeholder meeting, all parties are informed of the contact information for the grievance redressal process. Additionally, this information is printed on each ICS's ID card that is given to end users.

Grievance Redressal Process

- **Beneficiary Card Distribution:** The distributor has provided a beneficiary card to each beneficiary which includes a toll-free number for grievance reporting.
- **Grievance Registration:** Beneficiaries can directly register any issues or grievances by calling the toll-free number printed on the card.
- **Resolution Timeline:** Once a grievance is registered, the EKI team will address and resolve the issue within 24 hours from the time the complaint is logged.

2.2.8 Stakeholder Access to Project Documentation

After the project's details were disclosed, stakeholders were questioned about any project-related concerns. Stakeholders have been informed that the project papers are hosted on the VERRA website.

During the stakeholder interaction, information about the project was also provided to them. At the time of local stakeholder consultation, a project summary was displayed on the panchayat notice boards in every village.

2.2.9 Information to Stakeholders on Assessment Process

Stakeholders in the area were fully informed of the registration procedure for the GHG programme during the stakeholder consultation. Additionally, when VVB evaluates them during validation and verification, they will learn more knowledge. Additionally, users were questioned as part of surveys designed to collect data for tracking cook stove usage and their benefits to provide the information for monitoring parameters.

To better their respiratory health, the family economy, and the environment, PP informs their beneficiaries and their families that they are taking part in an initiative that distributes the ICS at no cost.

2.3 Project Management

2.3.1 Avoidance of Corruption

The PP has policies in place to inform management and employees about the avoidance of corruption, code of conduct, and business ethics. These policies are applied by all project staff, including company management to ensure that the organization is run following all legal requirements and is held to the highest standards of operation.

2.3.2 Recognition of Property Rights

Since no property is required for the project activity, which is distributing better cook stoves to specific families, there is no impact on any property rights.

2.3.3 Free, Prior and Informed Consent

Since no property is required for the project activity, this is “Not Applicable”.

2.3.4 Restitution and/or Compensation for Affected Resources

The project activity entails distributing upgraded cook stoves to certain families; it will not affect access to any resources and won't have any negative effects.

2.3.5 Property Rights Removal/Relocation of Property Rights Holders

As the project activity does not involve any property right removal/relocation of property rights holders.

2.3.6 Identification of Illegal Activities

The project participant is continuously monitoring and keeping track of the ICS distribution, and no unlawful acts have been discovered throughout project implementation or operation so far. Though

there have been no instances of theft, still measures have been taken by PP to ensure secure storage and direct hand-off of stove parts have been implemented to avoid chances of theft.

2.3.7 Ongoing Conflicts or Disputes

There is no ongoing conflict related to the planned project activity.

2.3.8 National and Local Laws and Regulations

The project activity is designed to comply with national and local laws related to environmental and social impacts. Below is an overview of the relevant regulations and how the project aligns with them:

1. Air (Prevention and Control of Pollution) Act, 1981
Compliance: Project reduces indoor air pollution by minimizing emissions of particulate matter and carbon monoxide.
2. Environment (Protection) Act, 1986
Compliance: Promotes sustainable practices by reducing deforestation and greenhouse gas emissions.
3. National Clean Air Programme (NCAP)
Compliance: Contributes to reducing air pollution levels through improved cooking technologies.
4. State Renewable Energy Policies
Compliance: Aligns with state-level initiatives promoting energy-efficient technologies.
5. National Rural Livelihoods Mission (NRLM)
Compliance: Provides economic opportunities in rural communities through stove production and distribution.

The project also indirectly supports:

- ⇒ Pradhan Mantri Ujjwala Yojana (PMUY) by offering complementary solutions in areas with limited LPG access.
- ⇒ Local health and environmental regulations by improving indoor air quality.
- ⇒ Gender equality initiatives by reducing health risks for women and creating economic opportunities.

In summary, this improved cookstove project complies with national and local laws and regulations, contributing to environmental sustainability and social well-being in India.

2.4 Grouped Projects

The project is a grouped project.

No.	Criterion	How the new project activity instances to comply	How each new project activity instance meets the eligibility criteria

1	Meet the applicability conditions set out in the methodology applied to the project	New project activity instances (Energy-efficient Cook stoves) will meet the applicability conditions set out in Section 3.2 of the VCS PD where the target of the end-user is household and the ICS deployed is at least 25% of thermal efficiency.	The project activity instances (Energy-efficient Cook stoves) implemented during the current monitoring period are meeting the applicability conditions set out in Section 3.2 of the VCS PD where the target of the end-user is household and the ICS deployed is having thermal efficiency of 36.42%.
2	Use the technologies or measures specified in the project description.	The technology used for the project activity is energy-efficient cook stoves. Only energy-efficient cook stoves are to be adopted in the project by replacing traditional cook stoves in households.	The technology used for the project activity instances under consideration for the current monitoring period is energy-efficient cook stoves, which are replacing the traditional cook stoves in households.
3	Apply the technologies or measures in the same manner as specified in the project description.	Only energy-efficient cook stoves are to be adopted in the project by replacing traditional cook stoves in households.	Only energy-efficient cook stoves have been adopted in the project during the current monitoring period by replacing traditional cook stoves in the household.
4	Are subject to the baseline scenario determined in the project description for the specified project activity and geographic area.	The new project activity instances will be installed within India subject to the same baseline scenario determined in Section 3.4 of the VCS PD as “continued use of non-renewable wood fuel (firewood/charcoal) or fossil fuel (coal/kerosene) by the target population to meet similar thermal	In the current monitoring period, the project activity instances which have been installed within India are having same baseline scenario determined in Section 3.4 of the VCS PD as “continued use of non-renewable wood fuel by the target population to meet similar thermal energy needs as provided by the project cook stoves in absence of the project activity.”

		energy needs as provided by the project cook stoves in absence of the project activity.”	
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 the host country of this project ensuring the distribution of new energy-efficient cook stoves for each project activity instance. Step 2: Positive List The inclusion of new project activity instances will comply with the positive list as it satisfies criterion 1 where it meets all the applicability conditions of the methodology.	All new project activity instances use the activity method for demonstration of additionality. Step 1: Regulatory Surplus There is no mandated government programme or policy in the host country of this project ensuring the distribution of new energy-efficient cook stoves for each project activity instance. Step 2: Positive List The inclusion of new project activity instances will comply with the positive list as it satisfies criterion 1 where it meets all the applicability conditions of the methodology.
6	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 project activity instances shall exceed the capacity	No project activity instance shall exceed the applicable limit, which is 180 GWh_{th}/y. Since the project activity instances have the same model, hence expected annual energy saving for each	No project activity instance exceeded the applicable limit, which is 180 GWh_{th}/y. Since the project activity instances have the same model, hence annual energy saving for each instance is 0.0134 GWh_{th}/y which is 0.008% of the threshold limit.

	limit, determined as follows: Each project activity instance that exceeds one percent of the capacity limit shall be identified. Such instances shall be divided into clusters, whereby each cluster is comprised of any system of instances such that each instance is within one kilometer of at least one other instance in the cluster. Instances that are not within one kilometer of any other instance shall not be assigned to clusters. 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.	instance is 0.0160 GWh_{th}/y which is 0.02% of the threshold limit. As the annual energy saving is below 1% of the limit, therefore no project activity instance is identified and divided into clusters.	As the annual energy saving is below 1% of the limit, therefore no project activity instance is identified and divided into clusters.
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3 BENEFITS FOR PEOPLE AND PROSPERITY

3.1 Impacts on Stakeholders

The impacts of the project activities on each stakeholder group for the current monitoring period are as given below:

Impact #1	No. of households receiving the improved cook stoves as an access to clean fuels and technology.
Type of Impact	Positive actual direct impact on ICS user household. The impact has been monitored as a “reduction in fuel required for cooking in households”.
Affected Stakeholder Group(s)	ICS users.
Resulting Change in Well-being	Distributed 571,460 number of high-efficiency, clean-burning ICSs which benefited over 2.2 million individuals (considering 4 heads on average/household) by reducing woody biomass consumption to the tune of ~3.97 tons/stove in the current monitoring period.

Impact #2	Reduced exposure to smoke, HAP and other dangers.
Type of Impact	Positive actual direct impact on ICS user household. The impact will be monitored as a “Reduction in Smoke emissions”. The project monitoring survey results shows 100% of the sampled respondents reported to have experienced comparatively good indoor air quality with multiple positive outcomes (e.g. Reduce eye problems and other respiratory illness), particularly in terms of improving overall health and reducing the burdens of disease.
Affected Stakeholder Group(s)	ICS users.

Resulting Change in Well-being	Lowered risk of developing COPD or worsening COPD - 100% of the household reported lowered number of acute lower respiratory illnesses and a reduction of burn injuries due to contained flames.
Impact #3	Training imparted on climate change, project implementation, and monitoring procedures.
Type of Impact	Positive actual direct impact on ICS. The impact will be monitored as "Number of individuals who received any informal training".
Affected Stakeholder Group(s)	Distributing unit Staff
Resulting Change in Well-being	Training and skill development related to community engagement, survey conduction, and technical training has been provided to stakeholder groups which are envisaged to empower their lives by not only providing long-term employability but also through increased awareness levels regarding issues related to climate change, social equity.
Impact #4	Reduce average time saving associated with cooking and fuel collection
Type of Impact	Positive actual direct impact on ICS user women. The impact will be monitored through a survey of "Average time spent on cooking and fuel collection"
Affected Stakeholder Group(s)	Beneficiaries (most notably, females, elderly, and children, primarily girls).
Resulting Change in Well-being	Females now have to spend less time on cooking using ICS which they are redirecting to income-generating activities or for relaxation. Contributing to enhanced conditions for gender equity.
Impact #5	Reducing PM 2.5 and CO emissions by using ICSs

Type of Impact	Positive actual direct impact on ICS user household. Impact has been proved with lab reports which shows a “Reduction in PM 2.5 and CO emission”.
Affected Stakeholder Group(s)	ICS users.
Resulting Change in Well-being	• Lowered risk after reduced developing of PM 2.5 and CO emission. • Improved overall respiratory health • Increased ability to consume safe drinking water by reducing boiling water time.
Impact #6	Enhancing job opportunities in the monitoring of the project activity
Type of Impact	Positive actual direct impact on the staff of the monitoring of the project activity. The impact will be monitored as “Informal employment generation”.
Affected Stakeholder Group(s)	Local Citizens (Men & Women) – Staff of monitoring of the project activity.
Resulting Change in Well-being	Helped in economic growth by creating 26 job opportunities in the current monitoring period by implementing the project activity. It has helped families to come above BPL.
Impact #7	Enhancing job opportunities in the manufacturing sector
Type of Impact	Positive actual direct impact on the staff of the manufacturing unit. Impact will be monitored as “Number of man-hours of permanent & temporary employees of the manufacturing unit involved in ICS manufacturing of this project activity”.
Affected Stakeholder Group(s)	Local Citizens (Men’s & Women’s) – Staffs of Manufacturing unit.

Resulting Change in Well-being	Help in economic growth in SME (manufacturing) sector by generation of employment opportunities. The project activity necessitates 250 peoples for completion, benefiting both the upstream and downstream supply chain.
Impact #8	Reduced fire incidents in households
Type of Impact	Positive actual direct impact on ICS user household. Impact has been monitored as “households reporting no fire incident”.
Affected Stakeholder Group(s)	ICS users.
Resulting Change in Well-being	A considerable decrease in fire incident compared to the baseline cook stoves has made the human settlements inclusive, safe, resilient and sustainable.

3.2 Stakeholder Impact Monitoring

This project is using the installation of improved cook stoves as an opportunity to create a net positive impact on the overall well-being of the people on the project site. Monitoring mechanisms are employed to ascertain the project’s impact on all major stakeholders. During the current monitoring period, the project has collected data through interviews, surveys, direct observations, group discussions, and other employment, financial, and health records. Village resource personnel and women monitors collected primary information through regular visits and interviews with the households. They are tasked with monitoring the changes after the installation of improved cook stoves. Field executive officers conducted group discussions and other interviews regarding the same. The data from these interactions were then compiled into reports and forwarded to the senior analysts of EKIESL.

Also, as a part of ongoing communication with local stakeholders, end users are being provided with an ID card which is having a helpline number for registering grievances. The field survey team has the responsibility to take grievances regarding the project activity during the field survey and the same is being conveyed to PP during the operation of the project activity. If any concerns are received during the operation of the project activity, the same is being addressed if relevant to the project activity.

The stakeholder monitoring plan for the variables linked to the identified project impacts and the claims for the current monitoring period are described as follows:

SDG Targeted	1.4
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Type of Impact	No. of households receiving the improved cook stoves as an access to clean fuels and technology
Affected Stakeholder Group(s)	End User Households
Measurement methods and procedures	Monitoring Survey is conducted for measuring this impact. Measured directly or based on a representative sample. As per methodology, minimum sample size determines in which case compliance with 90/10 confidence precision is not obligatory. 100 Sample size is selected being target population is above 1000.
Value(s) monitored	571,460 households
Monitoring frequency	Once in every 2 years

SDG Targeted	3.9
Type of Impact	Percentage of end user households reporting a reduction in smoke while cooking which indicates improved health of end users.
Affected Stakeholder Group(s)	End User Households (primary cooks)
Measurement methods and procedures	Monitoring Survey is conducted for measuring this impact. Measured directly or based on a representative sample. As per methodology, minimum sample size determines in which case compliance with 90/10 confidence precision is not obligatory. 100 Sample size is selected being target population is above 1000.
Value(s) monitored	100%
Monitoring frequency	Once in every 2 years

SDG Targeted	4.3
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Type of Impact	Number of individuals who received any informal training to enable their employment in project activity or elsewhere.
Affected Stakeholder Group(s)	End users employed under monitoring of project activity unit.
Measurement methods and procedures	The impact is monitored through the training records furnished by the monitoring of project activity unit.
Value(s) monitored	22 employees
Monitoring frequency	To be monitored for the duration of monitoring period at the time of each verification

SDG Targeted	5.4
Type of Impact	Percentage of end users reporting reduction in their time spent on unpaid domestic and care work, by sex, age, and location.
Affected Stakeholder Group(s)	Women and children (especially girls)
Measurement methods and procedures	Monitoring Survey is conducted for measuring this impact. Measured directly or based on a representative sample. As per methodology, minimum sample size determines in which case compliance with 90/10 confidence precision is not obligatory. 100 Sample size is selected being target population is above 1000.
Value(s) monitored	100%
Monitoring frequency	Once in every 2 years

SDG Targeted	7.1
Type of Impact	Proportion of population with primary reliance on clean fuels and technology

Affected Stakeholder Group(s)	End user households
Measurement methods and procedures	Monitoring Survey is conducted for measuring this impact. Measured directly or based on a representative sample. As per methodology, minimum sample size determines in which case compliance with 90/10 confidence precision is not obligatory. 100 Sample size is selected being target population is above 1000.
Value(s) monitored	571,460 households
Monitoring frequency	Once in every 2 years

SDG Targeted	8.5
Type of Impact	Number of jobs created.
Affected Stakeholder Group(s)	Employees under the Continuous monitoring unit.
Measurement methods and procedures	The impact is monitored through the employment records furnished by the monitoring unit, consisting of male to female count.
Value(s) monitored	Monitoring: 26, with a male: female ratio of 23:03
Monitoring frequency	To be monitored for the duration of monitoring period at the time of each verification

SDG Targeted	11.1
Type of Impact	Percentage of end users reporting a decrease in fire incident compared to the baseline cook stoves.
Affected Stakeholder Group(s)	End User Households (primary cooks)

Measurement methods and procedures	Monitoring Survey is conducted for measuring this impact. Measured directly or based on a representative sample. As per methodology, minimum sample size determines in which case compliance with 90/10 confidence precision is not obligatory. 100 Sample size is selected being target population is above 1000.
Value(s) monitored	100%
Monitoring frequency	Once in every 2 years

3.3 Net Positive Stakeholder Well-being Impacts

All of the impacts identified generate a positive impact of the following combined, long-term sustainable development benefits for the project's stakeholders:

Those who formerly lived in homes without access to basic services now mainly depend on technology and clean fuels to prepare food. In the homes that got ICS, open cooking fires have been eliminated.

Beneficiaries who were below the national poverty line now have a greater capacity to save time that would otherwise be spent collecting wood. Additionally, women who use ICS now spend less time cooking and instead use that time for leisure or activities that could potentially generate money.

As fewer people are now at risk of developing cardiovascular diseases, cancers, or chronic respiratory illnesses that are brought on by exposure to HAP, fewer people are now at risk of dying from exposure to household and ambient air pollution.

Fewer pregnancies are now in danger of terminating early due to complications brought on by HAP exposure.

The danger of young children under five falling into open cooking fires and house fire has decreased.

Female beneficiaries now devote a smaller percentage of their time to unpaid caregiving and domestic labour.

SME sector got more boost from the monitoring activity of ICSs and ensured engagement of monitoring activity staff in terms of man-hours.

As a result of improved training and vocational abilities, residents are now more employable in the long run, which affects their general social and economic well-being.

4 BENEFITS FOR THE PLANET

4.1 Impacts on Natural Capital and Ecosystem Services

Impact #1	Progress towards sustainable consumption and production of renewable woody biomass
Type of Impact	Positive, Actual, direct. Monitored through survey of renewable woody biomass consumption per ICS user household per month.
Affected Natural Capital and/or Ecosystem Service(s)	Biodiversity and species richness, soil and water conservation.
Resulting Change in Condition	The project has contributed to a reduction in the removal of 166,230 tons of renewable woody biomass (firewood) in the current monitoring period, from forests surrounding the communities thereby contributing towards sustainable consumption and production of renewable woody biomass in the project area.

Impact #2	Progress towards sustainable forest management by increasing above-ground biomass in forests due to lesser demand for non-renewable woody biomass
Type of Impact	Positive, Actual, direct. Monitored through a survey of non-renewable woody biomass consumption per ICS user household per month.
Affected Natural Capital and/or Ecosystem Service(s)	Biodiversity and species richness, soil and water conservation.
Resulting Change in Condition	The project activity has lowered the use of wood fuel as a source of non-renewable biomass for cooking by 1,251,258 tons in the current monitoring period. Deforestation has been slowed by the ensuing drop in demand, increasing the share of renewable energy in the project area's total final energy usage.

Impact #3	Avoided emission of GHGs made possible by using ICS
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Type of Impact	Positive, predicted, direct. Emission reduction has been calculated through monitoring of parameters as mentioned in section 5.2 of the published VCS PD on the VEERA website.
Affected Natural Capital and/or Ecosystem Service(s)	Biodiversity and Species Richness, Soil and Water Conservation.
Resulting Change in Condition	The project stoves require less firewood for producing the same amount of thermal energy, therefore, resulting in lesser CO ₂ emission (2,563,288 tCO ₂ e) into the atmosphere. As CO ₂ is a greenhouse gas, its reduced emission has a positive impact on climate change.

4.2 Natural Capital and Ecosystem Services Impact Monitoring

To determine the net ecological impact of the project, the project proponent has conducted regular monitoring in the project area. The following data is being recorded from the monitoring activities - Survey the amount of natural firewood required by the project device in preparation of meals in a month and compare it against the amount of firewood required by the baseline device. This will enable an understanding of the positive impacts of the project device in meeting the thermal energy requirements of the project area. Data from the above monitoring activity multiplied by (1) the f_{NRB} value for the state will reflect the annual net forest area change rate and (2) the $(1 - f_{NRB})$ value for the state will reflect the efficient utilization of renewable biomass resources while achieving sustainable energy practices. Consequently, the forest area is being conserved indirectly due to the reduction in removal of woody biomass and will continue to provide essential ecosystem services such as biodiversity habitat, soil and water conservation, and carbon sequestration.

Moreover, in the current monitoring period, spanning from 01-January-2024 to 30-September-2024 total 571,460 instances of the project activity were commissioned and closely monitored to ensure its ongoing operation. The project activity has resulted in an estimated reduction of 2,563,288 tCO₂e in greenhouse gas emissions over the course of the monitoring period.

The natural capital and ecosystem services monitoring plan for the variables linked to the identified project impacts and the claims are described as follows:

SDG Targeted	12.0
Type of Impact	Tons of renewable woody biomass (firewood) saved.

Measurement methods and procedures	Total renewable biomass(tons) saved by the project activity= Total Woody Biomass saved (tons)- Total Non-renewable Woody Biomass saved (tons) The calculation of the same can be traced from the Emission Reduction Sheet of the project activity, and shall be verified by the VVB.
Value(s) monitored	166,229 tons
Monitoring frequency	At every verification cycle

SDG Targeted	13.0
Type of Impact	Tonnes of greenhouse gas emissions avoided
Measurement methods and procedures	The GHG emission reductions achieved will be calculated based on the applied methodology: VMR0006: Methodology for Installation of High Efficiency Firewood Cook stoves, Version 1.1, and shall be verified by VVB.
Value(s) monitored	2,563,286 tCO _{2e} .
Monitoring frequency	At every verification cycle

SDG Targeted	15.2
Type of Impact	Tons of non-renewable woody biomass (firewood) saved.
Measurement methods and procedures	Total non-renewable biomass (tons) saved by the project activity= Total Woody Biomass saved (tons)* Fraction of woody biomass that can be established as non-renewable biomass (%) The calculation of the same can be traced from the Emission Reduction Sheet of the project activity, and shall be verified by the VVB.
Value(s) monitored	1,251,257 tons
Monitoring frequency	At every verification cycle

4.3 Net Positive Natural Capital and Ecosystem Services Impacts

The project activity demonstrates net positive impacts on natural capital and ecosystem services:

1. Quantitative Reduction in Woody Biomass Consumption: The project reduced renewable woody biomass consumption by 166,229 tons and non-renewable woody biomass consumption by 1,251,257 tons during the current monitoring period.
2. GHG Emission Reductions: Net GHG reductions: 2,563,286 tCO_{2e}.
3. Positive Impacts on Natural Capital and Ecosystem Services:

- a. Forest Conservation: Reduced deforestation pressure preserves habitat for biodiversity.
- b. Soil Conservation: Decreased wood harvesting reduces soil erosion and maintains soil fertility.
- c. Water Cycle Regulation: Preserved forests contribute to improved local water cycles.
- d. Air Quality Improvement: Reduced emissions contribute to better local air quality.

Thus, the project's positive impacts on natural capital and ecosystem services resulted in a clear net positive impact.