



Verified Carbon Standard

INSTALLATION OF HIGH EFFICIENCY WOOD BURNING COOKSTOVES IN TANZANIA



Project title	Installation of high efficiency wood burning cookstoves in Tanzania
Project ID	VCS 2366 ¹
Monitoring period	01-April-2023 to 31-May-2026 (both days included)
Original date of issue	24-June-2026
Most recent date of issue	01-August-2026
Version	1.4
VCS Standard Version	4.7 ²
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¹ <https://registry.verra.org/verra/public/program/VCS/projects/2366>

² Project was registered under VCS Standard V4.1

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PROJECT DETAILS

1.1 Summary Description of the Implementation Status of the Project

The project distributes fuel-efficient Improved Cookstoves (ICS) in Tanzania. The ICS disseminated through this project replaces the baseline practice of burning wood in rudimentary cookstoves or three-stone fires.

Under this project, two Total Land Care (TLC) Rocket Stoves are deployed in each household. Other comparable ICS model(s) may be added based upon request of the end users. Technical details of the stoves installed have been provided in APPENDIX 2: <TECHNICAL DETAILS>

The project has been implemented in phases, with each household receiving two ICS. Till the end of the current monitoring period a total of 352,072 TLC-RS has been distributed in 176,036 households. During the current monitoring period 74,300 households received 148,600 improved cookstoves. The details of project ICS installed for each monitoring period is provided in the Table 1 below:

The relevant implementation dates (e.g., dates of construction, commissioning, and continued operation periods).

Monitoring Period No.	Monitoring Period	Number of ICS Installed
1 st Monitoring Period	23-September-2020 to 15-April-2021 (both dates included)	5,814
2 nd Monitoring period	16-April-2021 to 15-October-2021 (both days included)	8,518
3 rd Monitoring period	16-October-2021 to 28-February-2022 (both days included)	26,698
4 th Monitoring period	01-March-2022 to 15-September-2022 (both days included)	73,508
5 th Monitoring period	16-September-2022 to 31-March-2023 (both days included)	88,934
6 th Monitoring period	01-April-2023 to 31-May-2026 (both days included)	148,600
Date of first ICS distributed	23-September-2020	-
Date of last ICS installed in sixth Monitoring Period	31-December-2023	-
Total no. of ICS in database till end of sixth MP (31-May-2026)		352,072

Table 1: Details of Project ICS installed for each monitoring period

All the data recorded during stove registration and monitoring survey process was captured via handheld digital devices (smart phones and/or tablets). The information collected is then transferred to a centralized online project database.

The total GHG emission reductions or removals generated in this monitoring period.

The project results in a total emission reduction of 2,902,044 tCO₂e over the monitoring period of 01-April-2023 to 31-May-2026 (both days included).

1.2 Audit History

Audit type	Period	Program	Validation/verification body name	Number of years
Validation	12-December-2021	VCS	Carbon Check (India) Private Limited	N/A
verification	23-September-2020 - 15-April-2021 (both days included)	VCS	Carbon Check (India) Private Limited	0.56 years
Verification	16-April-2021 - 15-October-2021 (both days included)	VCS	Earthood Services Private Limited	0.50 years
Verification	16-October-2021 - 28-February-2022 (both days included)	VCS	Carbon Check (India) Private Limited	0.37 years
Verification	01-March-2022 - 15-September-2022 (both days included)	VCS	Carbon Check (India) Private Limited	0.55 years
Verification	16-September-2022 - 31-March-2023 (both days included)	VCS	Carbon Check (India) Private Limited	0.54 years
Verification	01-April-2023 - 31-May-2026 (both days included)	VCS	SustainCERT	3.17 years

1.3 Sectoral Scope and Project Type

Sectoral scope ³	03: Energy demand
Project activity type	Type: II – Energy efficiency improvement projects

1.4 Project Proponent

Organization name	Bridge Carbon Africa Stoves Development Private Limited
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³ Projects, activities, or methodologies may be developed under any of the 16 VCS sectoral scopes: <https://verra.org/programs/verified-carbon-standard/vcs-program-details/#sectoral-scopes>.

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1.5 Other Entities Involved in the Project

Bridge Carbon Africa Stoves Development Private Limited is the sole entity involved in the project and no other entity is part of the grouped project activity.

Organization name	NA
Role in the project	NA
Contact person	NA
Title	NA
Address	NA
Telephone	NA
Email	NA

1.6 Project Start Date

Project start date	23-September-2020
Justification	As per VCS Standard version 4.7 section 3.8 “the project start date of a non-AFOLU project is the date on which the project began generating GHG emission reductions or carbon dioxide removals”, Hence the date of commissioning of first ICS under the grouped project activity 23-September-2020 is the start date.

1.7 Project Crediting Period

Crediting period	☐ Seven years, twice renewable
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	☒ <i>Ten years, fixed</i> ☐ <i>Other (state the selected crediting period and justify how it conforms with the VCS Program requirements)</i>
Start and end date of first or fixed crediting period	23-September-2020 to 22-September-2030 (both days included)

1.8 Project Location

The project location is the geographical boundary of Republic of Tanzania with coordinates 6°22'8.5" S latitude and 34°53.329' E longitude³



Tanzania Map⁴



Map of project area

1.9 Title and Reference of Methodology

Type (methodology, tool or module).	Reference ID, if applicable	Title	Version
Methodology	VMR0006 ⁴	Methodology for Installation of High Efficiency Firewood Cookstoves,	1.1
Tool	Tool 30 ⁵	Calculation of the fraction of non-renewable biomass	3.0
Module	Sampling Standard ⁶	Sampling and Surveys for CDM project activities and programmes of activities	9.0

1.10 Double Counting and Participation under Other GHG Programs

1.10.1 No Double Issuance

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

⁴ <https://verra.org/methodologies/vmr0006-methodology-for-installation-of-high-efficiency-firewood-cookstoves/>

⁵ <https://cdm.unfccc.int/methodologies/PAmethodologies/tools/am-tool-30-v3.0.pdf>

⁶ https://cdm.unfccc.int/sunsetcms/storage/contents/stored-file-20210531160756223/Meth_Stan05.pdf

☐ Yes ☒ No

1.10.2 Registration in Other GHG Programs

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

☐ Yes ☒ No

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

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

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

☐ Yes ☒ No

1.11.2 No Double Claiming with Other Forms of Environmental Credit

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

☐ Yes ☒ No

1.11.3 Supply Chain (Scope 3) Emissions

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

☐ Yes ☒ No

If yes:

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

☐ Yes ☒ No

If yes:

Has the project proponent(s) or authorized representative posted a public statement on their website saying, "Carbon credits may be issued through the Verified Carbon Standard project [project ID] for the greenhouse gas emission reductions or removals associated with [project proponent or authorized representative organization name(s)] [name of product(s) whose emissions footprint is changed by the project activities]."

☐ Yes ☒ No

1.12 Sustainable Development Contributions

Before the implementation of the project, households in the project location used partially non-renewable biomass for cooking on rudimentary cookstoves or three-stone fires. The project distributes fuel-efficient ICS to replace baseline cookstoves in households in Tanzania, reducing firewood consumption and personal exposure to indoor air pollution. People, primarily women and children, spend less time collecting firewood, reducing drudgery. The implementation and construction of ICS have provided job opportunities to local people, increasing incomes. The project reduces forest degradation and GHG emissions as well. The description of how the project activity resulted in the SD contributions provided with the SDG indicator and its impact during the monitoring period in Table 2 below.

Table 2: Sustainable Development Contributions

Row number	SDG target	SDG indicator	Net impact on SDG indicator	Current project contributions	Contributions over project lifetime
1	7.1	7.1.2 Proportion of population with primary reliance on clean fuels and technology	Increase	Increase access to clean cooking technology with 148,600 ICS installations in 74,300 households during current monitoring period.	Increase access to clean cooking technology with 352,072 ICS installations in 176,036 households since first ICS distribution.
2	13.0	Tonnes of greenhouse gas emissions avoided	Implemented activities to increase	Contributing to GHG emission reduction of 2,902,044 tCO ₂ e being released into the atmosphere during the current monitoring period.	3,839,585 tCO ₂ e of GHG emissions reductions till end of monitoring period date (31-May-2026) since project start date.
3	15.2	15.2.1 Progress towards sustainable forest management by increasing above-ground biomass in forests.	Implemented activities to increase	For the current monitoring period, the project has saved 1,416,620 tonnes of non-renewable biomass.	Contribute to the reduction of forest degradation through reduced consumption of 1,686,221 (7,704 (MP1) + 11,286 (MP2) + 35,375 (MP3) + 97,398 (MP4) + 117,838 (MP5) + 1,416,620 (MP6)) tonnes of non-renewable biomass since the project start date.

1.13 Commercially Sensitive Information

1. No commercially sensitive information has been excluded from the public version of the Monitoring report.
2. End users' details are kept confidential⁷.

2 SAFEGUARDS AND STAKEHOLDER ENGAGEMENT

2.1 Stakeholder Engagement and Consultation

2.1.1 Stakeholder Identification

The Stakeholder makeup has not changed since validation. The PP conducted a comprehensive stakeholder consultation as described in section 2.2 of project VCS PD

Stakeholder Identification

The stakeholders who may be directly involved or affected, or who may influence or be influenced by the project activity, have been identified and duly listed. There has been no discrimination of any kind (whether based on gender, political beliefs, religion, or social status) in the selection of local stakeholders. All stakeholders were invited to participate in the LSC without any form of exclusion or bias, ensuring equal opportunity to freely express their concerns and provide feedback on the project.

Following stakeholders have been identified for project activity

1. Government
2. Probable beneficiaries' households / local villagers (both women and men)
2. Local NGOs
3. Stove manufacturers,
4. Project developers
5. Academia and
6. Private and public-sector entities

⁷ End users' details are kept confidential to protect their privacy and personal information. Access to such data is restricted to authorized personnel only and is used solely for project implementation, monitoring, verification, and auditing purposes, in accordance with applicable data protection requirements.

Legal or customary tenure/access rights	The implementation and construction of improved cookstoves does not require any kind of customary tenure/access rights since the project activity is based only on the dissemination of the cookstoves to local communities.
Stakeholder diversity and changes over time	Among the beneficiary households, no clear differences on social, economic, and cultural aspects have been detected, while the stakeholders indirectly involved in the project show different social and economic levels. There are no changes in the stakeholder's composition & diversity during current monitoring period.
Expected changes in well-being	The most relevant expected improvements for stakeholder well-being are: 1. reduced household air pollution, reducing the risk of disease, 2. decreased perceived risk of gender-based violence and decreased risk of injury from carrying heavy loads for household members who collect fuelwood, 3. increased savings on fuel cost (less fuel purchased), and 4. time saving (less fuel collected).
Location of stakeholders	All stakeholders are operating and living in the project area, which is in the geographical boundary of Tanzania. Further, this grouped project activity does not require relocation of any stakeholder, indigenous people, or local communities. The project does not lead to any negative impact outside the project boundary.
Location of resources	The project activity involves the implementation and construction of ICS to beneficiary households and resources owned by the stakeholders are not impacted by the project.

2.1.2 Stakeholder Consultation and Ongoing Communication

Ongoing consultation

The PP follows three methods for continuous feedback and ongoing communications with stakeholders during project implementation. These are:

Annual Stove Champion visits and Performance Check visits to households – Staff from Bridge Carbon’s in-country team visits each registered household (ICS user) at least once per year. Usually, the first stove champion visit is conducted within four months from the date of installation/registration. The objective of this visit is to ensure that project cookstoves are being properly used and to educate women on cookstoves maintenance, best practices, and benefits. The end user can use these visits to register complaints. In addition, the Bridge Carbon country team (leadership team, PSO, etc.) conducts performance check visits to registered households on a sample basis. One of the objectives of these visits is to ensure that the ground team is adequately addressing concerns from the beneficiaries and the end users are trained on the operation and maintenance of cookstoves and are aware of the benefits of the ICS. This performance check visit also addresses end user grievances and provides maintenance to cookstoves as needed.

Call over helpline number - End Users can report their grievances and complaints regarding maintenance and/or malfunctioning of their stove or any of its parts, or any other issues by calling the helpline number. Bridge Carbon’s ground team addresses grievances, failing which the Bridge Carbon country manager can pursue remedial action.

Through village chief/community leader/stove champion – In view of the cultural obligations and individual level inhibitions, a provision has been made for end users to approach Bridge Carbon team through their village chief/community leader/stove champion with whom they might be more comfortable. The village chief/community leader/stove champion then channels the concern/issue to Bridge Carbon staff for resolution. This is undertaken to protect traditional sentiments and value systems of the villages and ensure end users can express issues or concerns without hesitation.

	The available communication channels, including stove champions, project field staff, local community representatives, telephone contacts, and direct grievance reporting mechanisms, were communicated to project participants during LSC meeting, stove distribution, follow-up visits, repair and replacement activities and other routine project interactions, during which all stakeholders were informed that they are free to voice grievances regarding the project activity. Also, end users Stakeholders are free to connect with the Bridge Carbon team anytime through the e-mail or contact number provided by PP. Any relevant concern received during the operation of project activity is addressed according to its merit.
Date(s) of stakeholder consultation	26-October-2020 to 25-November-2020
Communication of monitored results	During the Stove Champion visits, the PP regularly communicated monitoring results and project updates to relevant local stakeholders. These communications were conducted through routine field interactions and ensuring that project implementation progress, monitoring outcomes, and key observations were shared in a timely manner with relevant local authorities. This demonstrates that stakeholder engagement remained ongoing, continuous, and well-integrated into project implementation throughout the monitoring period.
Consultation records	Stakeholders were invited to provide feedback via multiple methods including an announcement posted on PP website on 26-October-2020 with an electronic feedback form, Project Description Presentation, and Non-Technical Summary. Furthermore, an English and Swahili advert ran in Column East Africa News, a major national newspaper, on 10-November-2020; and e-mail invitations were sent by PP on 04-November-2020 to 45 people from organizations around the country including government, NGOs, stove manufacturers, project developers, academia and private and public-sector entities involved with cookstoves and/or sustainable energy. and/or sustainable energy. The email included a link to the organization website announcement and feedback form. (Please refer Appendix 1 of registered VCS PD, version 03 dated 11-October-2021).

Stakeholder input	The PP has taken account of all the inputs received from the stakeholders during the consultation period. 1. User feedback in addition to monitoring parameters included in our project design documents is collected during our monitoring processes. This is common practice for our projects, and 2. The project implementors include stove types/technologies that they have already tested in the market and stove/fuel benefits and performance characteristics are accurately presented to end-users. Comments received from stakeholders required no changes/updates to the project design.
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2.1.3 Free, Prior, and Informed Consent

Consent	The participation of households in the project is free and voluntary. During stakeholder meetings it is highlighted that there is no enforcement or obligation to participate. Before delivering an ICS to an interested household, an End User Agreement is signed by a family member declaring that he/she is voluntarily taking part in the project activity. The project does not interfere with Indigenous People and Local Communities' rights.
Outcome of FPIC	The outputs of the stakeholder meetings shared in the section above clearly demonstrate that participants fully understand that their participation in the project is voluntary and that they are free to either take part in the project or decline participation. Indeed, no clarifications were requested in the household engagement procedure.

2.1.4 Grievance Redress Procedure

Grievances received	Resolution and outcome
The beneficiary reported that she was unable to use the pot skirt because the clips were lost	The clips were replaced and the beneficiary was informed that the stove can still be used without the pot skirt when using larger pots
The beneficiary reported difficult using the stove because he believes it is too small for his family of twelve and is	The beneficiary was informed that the stove is designed to handle cooking for even a family of twelve. He was also advised that while cooking ugali may be challenging, the use of a potholder

concerned that it may break during cooking.	can provide additional support and make it possible to cook ugali safely and effective.
The beneficiary asked why the Stove Champions are teaching beneficiary how to build and repair stoves when the Implementing Partner was constructing the stoves for them.	The beneficiary was informed that the training is intended to beneficiaries with the skills and knowledge needed to repair and maintain the stove independently if it becomes damaged, without having to wait for a Stove Champion to visit. The purpose is to promote sustainability use of the stove so that beneficiaries can keep enjoying the benefits associated with its use.
The stoves had collapsed	The stove was repaired and the client trained on how to do repairs to the stove
Kitchen house collapsed and beneficiary removed the SSUM	Beneficiary promised to build another kitchen house and will communicate for reinstallation. Stove champion coordinator (SCC) removed Simple Stove Use Monitors (SSUM).
Kitchen house collapsed	Beneficiary promised to build another kitchen house and will communicate for reinstallation. SCC removed SSUM.
Kitchen house collapsed, beneficiary is not using our stoves anymore and the Simple sum removed	Coordinator collected the Simple sum, beneficiary promised to build another kitchen and she will communicate for our stoves reinstallation.
The stove developed cracks because the livestock were kept in the same kitchen house where our stoves were installed.	District Coordinator requested beneficiary to relocate the stoves, new places provided and the coordinator build another stoves in their new kitchen house.
Beneficiary complained it is difficult to start the fire.	Beneficiary trained to start fire and other fuel she can use in the stoves more than firewood's.

These grievances were resolved by following one of the grievance redressal methods mentioned below i.e., approach through village chief/call over helpline number/community leader.

Grievance redressal records, such as evidence of the complaint registration form, response summary form, and grievance register detailing the timely redressal of the grievances have been provided to the verifying VVB for assessment.

The grievance mechanism process is illustrated below:

The following figure presents a pictorial representation of the approach adopted to address any grievances and feedback provided by the end-users receiving the improved cookstoves (project stoves) under this grouped project in Tanzania:



Grievance type	Timeline for redress at the level of BC country staff / BC country manager	Timeline for redress at the level of Director of Operations (SSA)	Timeline for redress at the level of Head office
Maintenance related, inability to use the stove, missing/broken/damaged stove parts/stoves	5 days	3 days	NA
Complaints against BC; pre-distribution, distribution, and post distribution related or any other complex concerns	One week	One week	One week

2.1.5 Public Comments

The project was open for public comments period from 25-November-2020 to 25-December-2020. However, no comments were received during this period.

Summary of comments received	Actions taken
No comments were received during this period.	No action was taken as no comments were received during this period

2.2 Risks to Stakeholders and the Environment

2.2.1 Management Experience

Bridge Carbon (BC) is carbon project developer empowering vulnerable communities across sub-Saharan Africa and Southeast Asia to address climate change and drive sustainable development, through access to clean cooking, renewable energy, and ecosystem restoration solutions.

BC has a well-structured implementation team in place to conduct project activities. Bridge Carbon has numerous active projects under VERRA.

The management of BC are committed to developing high quality greenhouse gas emission reduction projects by providing fuel-efficient improved cookstoves to people in Tanzania through carbon finance. BC brings world-class expertise in carbon management, operations, legal, and finance, and is committed to delivering carbon projects that deliver exceptional quality, integrity, and transparency.

2.2.2 Risk assessment

	Risk identified	Mitigation or preventative measure(s) taken
Natural and human-induced risks to stakeholders' wellbeing	No risk identified	The project ICS has been designed to emit less smoke and significantly reduce fuelwood consumption, which reduces forest degradation. Additionally, the PP ensures that the end users receive adequate training in handling the ICS, mitigating risks to stakeholders' wellbeing.
Risks to stakeholder participation	No risk identified.	There are no exclusions, lack of communication, or barriers in the project activity that might prevent stakeholders from engaging or participating.

Working conditions	No risk identified.	The ICS provides a safer cooking alternative compared to traditional cookstoves. Additionally, comprehensive training sessions on ICS usage are conducted for stakeholders to minimize potential risks.
Safety of women and girls	No risk identified.	In rural Tanzania, women and girls are mainly responsible for fuelwood collection. The reduction in fuelwood consumption with ICS reduces the time spent on fuelwood collection and potentially reduces the risk of gender-based violence.
Safety of minority and marginalized groups, including children	No risk identified.	The project activity does not negatively affect the safety of minority and marginalized groups, including children.
Pollutants (air, noise, discharges to water, generation of waste, and release of hazardous materials and chemical pesticides and fertilizers)	No risk identified	Due to project activity, there is reduced risk from air pollutants and no risk of noise, discharges to water, generation of waste, or release of hazardous materials, chemical pesticides or fertilizers. The residual ash of burned firewood from cooking is eventually used to fertilize nearby soil.

2.3 Respect for Human Rights and Equity

2.3.1 Labor and Work

	Risks identified ⁸	Mitigation or preventative measure(s) taken
Discrimination	No risk identified	The PP firmly condemns every form of discrimination based on gender, religion, or cultural differences. PP has implemented comprehensive policies and provided training to prevent and promptly address such issues. PP follows the
Sexual harassment	No risk identified	The PP has an established grievance mechanism system for staff and a “speak up” hotline they can call or email. The staff have

⁸ The identified risks and commensurate mitigation or preventative measure(s) for forced labor, child labor, and human trafficking, must be inclusive of staff and contracted workers employed by third parties.

		been trained on harassment prevention and reporting.
Gender equity in labor and work	No risk identified	Bridge Carbon provides equal opportunities to people of all genders. Any kind of gender-based discrimination is strictly forbidden.
Forced labor	No risk identified	No forced labor is involved in the project activity.
Child labor	No risk identified	No child labor is involved in the project activity.
Human trafficking	No risk identified	No human trafficking is involved in the project activity.

2.3.2 Human Rights

Risks identified	Mitigation or preventative measure(s) taken
No risk identified	The project activity is implementing ICS to beneficiaries free of charge (i.e., zero cost). Beneficiaries who received project ICS sign an agreement for their voluntary participation in the project activity. The project continues to recognize, respect, and promote the protection of the rights of the local community. The dissemination of the improved cookstove does not require any kind of customary tenure/access rights since the project activity is based only on the dissemination of the cookstoves to local communities. The PP ensure the application of all applicable laws, regulation, and international standards, including the Universal Declaration of Human Rights⁹, United Nation Declaration on the Rights of Indigenous Peoples¹⁰ (UNDRIP) and the ILO Convention 169 on Indigenous and Tribal Peoples are adhered to. The project activity does not interfere in any case with Indigenous People and Local Communities' rights.

2.3.3 Indigenous Peoples and Cultural Heritage

Risks identified	Mitigation(s) or preventative measure taken
No risk identified	The project activity involves the implementation and construction of ICS to beneficiary's households; therefore, no

⁹ <https://www.ohchr.org/sites/default/files/Documents/Publications/fs9Rev.2.pdf>

¹⁰ https://www.un.org/development/desa/indigenouspeoples/wp-content/uploads/sites/19/2018/11/UNDRIP_E_web.pdf

	tangible cultural heritage has been hampered by the project activity. Also, there have been no negative impacts of the project activity on the non-tangible cultural heritage of the stakeholders. Hence, the project continues to preserve and protect cultural heritage.
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2.3.4 Property Rights

Risks identified	Mitigation or preventative measure(s) taken
No risk identified	This project involves the implementation and construction of ICS in beneficiary households and resources owned by stakeholders are not impacted by the project. Hence, no land/property of the stakeholders, IPs, LCs, and customary rights holders have been impacted by this project activity.

2.3.5 Benefit Sharing

Summary of the benefit sharing plan	The benefit sharing plan is not applicable as project activity does not incur any risk related to property rights as explained in the previous section. Additionally, the project activity is completely based on implementation and construction of two ICS to each household where ICS are free of cost. If an ICS breaks, the PP will fix or replace the ICS. The ownership rights of carbon credits generated from this project are with Bridge Carbon. Bridge Carbon has signed end-user agreements with beneficiaries mentioning all the criteria before implementation of the project devices for entire crediting period.
Benefit sharing during the monitoring period	Not Applicable.

2.4 Ecosystem Health

Risk identified	Mitigation or preventative measure(s) taken during the monitoring period
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Impacts on biodiversity and ecosystems	No risk identified	As the ICS consumes less firewood than baseline cooking technologies, it helps to reduce forest degradation. This reduction in demand for fuelwood allows forests to regenerate, protecting wildlife habitats and biodiversity.
Soil degradation and soil erosion	No risk identified	The ICS reduces the requirement for woody biomass, which means that less woody biomass is consumed for cooking. This decrease reduces forest degradation, raising the amount of above-ground biomass in project areas. Reduction in unsustainable harvesting of plant biomass could further reduce soil erosion associated with tree felling and improve biodiversity and species richness of the implementation area
Water consumption and stress	No risk identified	This grouped project activity involves implementation and construction of ICS and does not have any negative impacts on water consumption and does not lead to water stress in any way. Hence, this is not applicable.

2.4.1 Rare, Threatened, and Endangered species

Species or habitat	Since the project activity involves the implementation and construction of ICS, which is not located in or adjacent to habitats for rare, threatened, or endangered species; hence, this is not applicable
Areas needed for habitat connectivity	Since the project activity involves the implementation and construction of ICS, which is not located in or adjacent to habitats for rare, threatened, or endangered species; hence, this is not applicable

	Risks identified	Mitigation or preventative measure(s) taken
Habitats for rare, threatened, and endangered species	No risk identified	The project activity involves the implementation and construction of ICS to people in rural areas of Tanzania, which is not located in or adjacent to the areas needed for habitats for rare, threatened,

		and endangered species. Therefore, there are no risks associated with habitats for rare, threatened, and endangered species.
Areas for habitat connectivity	No risk identified	The project activity involves the implementation and construction of ICS to people in rural areas of Tanzania, which is not located in or adjacent to the areas needed for habitats for rare, threatened, and endangered species connectivity. Hence, this is not applicable.

2.4.2 Introduction of species

Species introduced	Classification	Justification for use	Adverse effects and mitigation
We are not introducing any live species.	N/A	N/A	N/A

Existing invasive species	Mitigation measures to prevent the spread or continued existence of invasive species
Not applicable, the project activity is not related to planting or species introduction	N/A

	Risks identified	Mitigation or preventative measure(s) taken
Invasive species	No risk identified	No mitigation actions or preventative measures are required as there are no risks related to invasive species with the project activity.

2.4.3 Ecosystem conversion

	Risks identified	Mitigation or preventative measure(s) taken
Ecosystem conversion	No risk identified	The project activity is neither ARR, ALM, WRC nor ACoGS; therefore, no risks associated with ecosystem conversion are identified with the project activity.

3 IMPLEMENTATION STATUS

3.1 Implementation Status of the Project Activity

Under this project, two Total Land Care (TLC) Rocket Stoves are deployed in each household. During the current monitoring period 74,300 households received 148,600 improved cookstoves and till the end of current monitoring period (31-May-2026)¹¹ 352,072 stoves have been installed in 176,036 households in Tanzania.

During the current monitoring period, no incident or event occurred, that could affect GHG emissions reduction and the approved monitoring plan. There is a correction for name change from C-Quest Capital Stoves Asia Limited to Bridge Carbon Africa Stoves Development Private Limited.

3.2 Deviations

3.2.1 Methodology Deviations

Not applicable.

3.2.2 Project Description Deviations

PP has sought the following deviation during current monitoring period 01-April-2023 to 31-May-2026:

- Deviation 1: As per registered VCS PD and the applies methodology VMR0006, v1.1, the MRV survey for determining parameter $N_{y,i,j}$ is required to be conducted at least once every two years. During the current monitoring period, the interval between MRV surveys exceeded this frequency requirement and extended to approximately three years. The previous MRV survey was conducted from 08-May-2023 to 12-May-2023, while the current MRV survey was conducted from 31-May-2026 to 24-June-2026. This delay resulted from organizational and project management changes within the project proponent and constitutes a temporary deviation limited solely to the monitoring procedure. The nature of this deviation is temporary and is limited to the monitoring procedure.

The Project Participant has assessed the deviation and confirms that it does not affect the applicability of the applied methodology, the demonstration of project additionality, or the appropriateness of the baseline scenario. The project continues to meet all applicability conditions of VMR0006 v1.1, the additionality demonstration remains unchanged, and the baseline scenario remains valid. The monitoring data remains representative of the project population and has been conservatively applied in the emission reduction calculations. Accordingly, the Monitoring Report has been revised to reflect this temporary deviation.

- Deviation 2; The following corrections have been made in the revised MR and VCS PD.

Description	Section 1.5 as per registered VCS PD	Section 1.4 and 1.5 updated in Revised MR and VCS PD respectively

¹¹ The last stove deployed during current monitoring period on 31-December-2023.

Organization name	C-Quest Capital Stoves Asia Limited	Bridge Carbon Africa Stoves Development Private Limited
Contact person	Ken Newcombe	Dr. Donee Alexander
Title	Director	Chief Carbon Officer
Address	Brumby Centre, Lot 42, Jalan Muhibbah, 87000 Labuan, Malaysia.	6 Raffles Boulevard, Marina Square #03-308, Singapore 039594
Telephone	+6 087 423828	+65 6808 1600
Email	cqc-operations@cquestcapital.com	Carbon@bridgecarbon.com

The nature of deviation is permanent.

- Deviation 3: PP has updated the TLC Rocket stove diagram in this MR for better clarity about the stove parts in Appendix 2: Technical Details of VCS MR. There is no change in the registered project stove design, project technology, project boundary, or project activity

This deviation is editorial in nature and is limited to improving the presentation of the technical information in the Monitoring Report. It does not affect the applicability of the applied methodology, as the project activity continues to meet all applicability conditions of VMR0006 v1.1. It does not affect the demonstration of project additionality, which remains valid as established under Step 1: Regulatory Surplus and Step 2: Positive List of the applied methodology. It also does not affect the appropriateness of the baseline scenario, which remains unchanged. Therefore, the outcome of this deviation is limited to improved clarity of the technical documentation and has no impact on the project's design, monitoring approach, or the emission reductions claimed. The nature of deviation is permanent.

PP has demonstrated the additionality of the project activity as per VMR0006 Version 01.1, Step 1: Regulatory surplus and Step 2: Positive list. Thus, there is no impact on additionality of the project activity by the project description deviation.

There are no project design changes due to the jurisdictional regulation set by the Government of Tanzania on improved cookstove operators.

These deviations do not affect design of the project activity.

3.3 Grouped Projects

For the inclusion of new project activity instances, i.e., ICS, the Project Proponent (PP) meets the eligibility criteria stated below.

No.	Criterion	Compliance Requirement
1	Meet the applicability conditions set out in the methodology applied to the project	New project activity instances (TLC Rocket Stoves) meet the applicability conditions set out in Section 3.2 of VCS PD where the target of the end user is household and the ICS deployed is at least 25% of thermal efficiency.

2	Use the technologies or measures specified in the project description.	Only TLC Rocket stoves are adopted in the project.
3	Apply the technologies or measures in the same manner as specified in the project description.	Only TLC Rocket stoves are adopted in the project. They are 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.	The new project activity instances are installed within Tanzania only and subject to the same baseline scenario determined in Section 3.4 of VCS PD.
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 to demonstrate 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 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 project activity instances shall exceed the capacity limit determined as follows: 1. Each project activity instance that exceeds one percent of the capacity limit shall be identified. 2. Such instances shall be divided into clusters, whereby each cluster is comprised of any system of instances such that each instance is within one kilometer of at least one other instance in the cluster. Instances that are not within one	No project activity instance exceeds the applicable limit, which is 180 GWhth/y. The expected annual energy saving for each project activity instance is approximately 0.02 GWhth/y or 0.01% of the limit. As the annual energy saving is below 1% of the limit, therefore no project activity instance is identified and divided into clusters.

	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.	
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During the current monitoring period, 148,600 new improved cookstoves (ICS) were added and included within the project boundary as new project activity instances in accordance with the applicable project eligibility criteria.

3.4 Baseline Reassessment

Did the project undergo baseline reassessment during the monitoring period?

☐ Yes ☒ No¹²

4 DATA AND PARAMETERS

4.1 Data and Parameters Available at Validation

Data / Parameter	$f_{NRB,y}$
Data unit	Fraction
Description	Fraction of woody biomass saved by the project activity during year y that can be established as non-renewable biomass
Source of data	IPCC 2019 refinement, UN Data & FAO reports
Value applied	0.89
Justification of choice of data or description of measurement methods and procedures applied	This parameter determined ex-ante. C4 EcoSolutions (Pty) Ltd was appointed as third party to study and derive the f_{NRB} value for Tanzania. The value has been calculated in accordance with Tool 30 version 3; using latest available versions of Food and Agriculture Organization (FAO) report, UN Data and other publicly available data that have been published by reliable sources.

¹² PP confirms that, under VMR0006 v1.1, a full baseline reassessment is not required during each monitoring period. The baseline parameters determined at validation remain applicable throughout the crediting period unless an update is required by the methodology, a methodology revision, or a project change. Therefore, no baseline reassessment was undertaken for the monitoring period.

Purpose of data	Calculation of emission reductions.
Comments	f _{NRB} report has already been accepted at validation.

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 Guidelines for National Greenhouse Gas Inventories; Volume 2 Energy, Chapter 1 Introduction
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 emission reductions.
Comments	-

Data / Parameter	EF _{wf,CO2}
Data unit	t CO ₂ /TJ
Description	CO ₂ emission factor for the use of wood fuel in baseline scenario
Source of data	2006 IPCC Guidelines for National Greenhouse Gas Inventories; Volume 2 Energy, Chapter 2 Stationary Combustion
Value applied	112
Justification of choice of data or description of measurement methods and procedures applied	IPCC default value
Purpose of data	Calculation of emission reductions
Comments	-

Data / Parameter	EF _{wf,non CO2}
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 Guidelines for National Greenhouse Gas Inventories; Volume 2 Energy, Chapter 2 Stationary Combustion
Value applied	26.23

Justification of choice of data or description of measurement methods and procedures applied	IPCC default value
Purpose of data	Calculation of emission reductions
Comments	-

Data / Parameter	η_{old}
Data unit	Fraction
Description	Efficiency of baseline cookstove
Source of data	Methodological default value
Value applied	0.1
Justification of choice of data or description of measurement methods and procedures applied	A default value of 0.1 is used as baseline device is a three-stone fire using firewood (not charcoal), or a conventional device with no improved combustion air supply or flue gas ventilation, that is without a grate or a chimney
Purpose of data	Calculation of emission reductions
Comments	-

Data / Parameter	η_p
Data unit	Fraction
Description	Efficiency of project stove at the start of project activity.
Source of data	Manufacturer's specification/Thermal efficiency test report
Value applied	0.345
Justification of choice of data or description of measurement methods and procedures applied	This parameter determined ex-ante
Purpose of data	Calculation of $\eta_{new,y,i,j}$
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 Survey
Description of measurement methods and procedures to be applied	Measured based on a representative sample.
Frequency of monitoring/recording	At least once every two years (For the current MP period, it is more than three years)
Value monitored	214,729
Monitoring equipment	No equipment was used to monitor this parameter
QA/QC procedures to be applied	Sampling standard “sampling and surveys for CDM project activities and programme of activities” version 9 was used for determining the sample size to achieve 90/10 confidence precision.
Purpose of the data	Calculation of emission reductions
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: 60.99% $N_{y,i,j} = 60.99\% * 352,072 = 214,729$
Comments	-

Data / Parameter	$n_{new,y,i,j}$												
Data unit	Fraction												
Description	Efficiency of the device of each type i and batch j implemented as part of the project activity.												
Source of data	Calculation												
Description of measurement methods and procedures to be applied	To adopt Option V given in the methodology: “Efficiency of the improved cookstoves to be estimated using equation 5 of the methodology where loss in efficiency per year is calculated, and therefore this parameter does not need to be monitored”												
Frequency of monitoring/recording	Once at the time of project stove installation												
Value monitored	<table border="1"> <thead> <tr> <th>Year (y)</th><th>$n_{new,y,i,j}$</th></tr> </thead> <tbody> <tr> <td>1</td><td>32.43%</td></tr> <tr> <td>2</td><td>32.11%</td></tr> <tr> <td>3</td><td>31.78%</td></tr> <tr> <td>4</td><td>31.47%</td></tr> <tr> <td>5</td><td>31.15%</td></tr> </tbody> </table>	Year (y)	$n_{new,y,i,j}$	1	32.43%	2	32.11%	3	31.78%	4	31.47%	5	31.15%
Year (y)	$n_{new,y,i,j}$												
1	32.43%												
2	32.11%												
3	31.78%												
4	31.47%												
5	31.15%												

	6	30.84%
	7	30.53%
	8	30.23%
	9	29.92%
	10	29.63%
Monitoring equipment	N/A	
QA/QC procedures to be applied	-	
Purpose of the data	Calculation of emission reductions	
Calculation method	Determined values in PD are considered.	
Comments	-	

Data / Parameter	By=1,new,i,j,survey	
Data unit	Tonnes	
Description	Annual quantity of woody biomass used by improved cookstoves in tonnes per device of type i and batch j	
Source of data	Monitoring survey	
Description of measurement methods and procedures to be applied	Sampling standard "sampling and surveys for CDM project activities and programme of activities" version 9 was used for determining the sample size.	
Frequency of monitoring/recording	Determined in the first year of project implementation.	
Value monitored	Quantity of woody biomass used by project devices in tonnes per device	1.3250 tonnes/device/year
	Considering the actual usage rate of ICS i.e. 6 day/week being captured during the 5 th monitoring period	1.1357 tonnes/device/year
Monitoring equipment	Weighing scales	
QA/QC procedures to be applied	Calibration of weighing scales used for measuring the fuel wood was done in house before start using on site.	
Purpose of the data	Calculation of emission reductions	
Calculation method	This is calculated value	
Comments	-	

Data / Parameter	Life Span
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Data unit	Number of years
Description	The operating lifetime of the project device.
Source of data	Manufacturer's specification
Description of measurement methods and procedures to be applied	TLC cookstoves are manufactured to match the fixed design specification. This is achieved using brick molds of specified dimensions to make bricks to be used for stove construction locally. This ensures that each stove that is built at individual end user household measures exactly same as the dimensions specified by the manufacturer. Post construction, training provided to end users on use, care, and upkeep of these stoves. PP conducts periodic audits and surveillance of the stoves distributed under the project activity to ensure their proper functioning throughout the project lifetime. This along with spot audits and after installation maintenance services, ensure that the project stoves continue to work at efficiencies as specified by the manufacturer.
Frequency of monitoring/recording	Once at the time of project stove installation
Value monitored	10
Monitoring equipment	No equipment was used to monitor this parameter
QA/QC procedures to be applied	This parameter is referred from the Manufacturer's specification
Purpose of the data	Calculation of emission reductions
Calculation method	No calculation used for this parameter
Comments	No comments

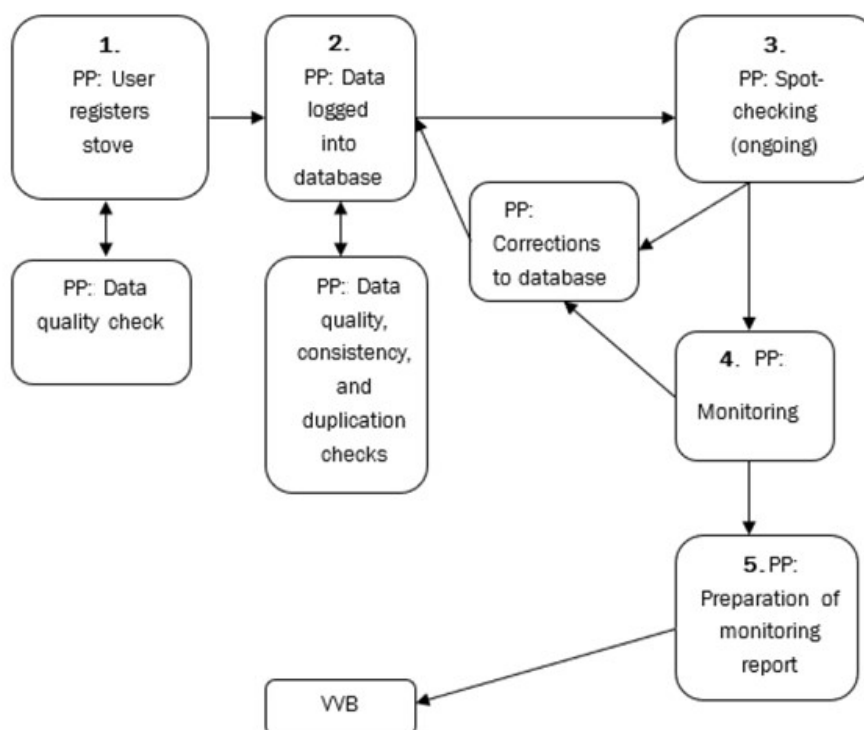
4.3 Monitoring Plan

The project's monitoring system follows the monitoring plan described in section 5.3 of the VCS-PD.

The Monitoring Plan applied in this project involves several key elements that ensure that the PP has high-quality, unbiased, and reliable information regarding the performance of the project in terms of implementation and outcomes, and for the purposes of calculating Verified Carbon Units (VCUs) following VMR0006 version 1.1 on the basis of the amount of non-renewable biomass saved by the ICS in the project activity.

Roles and Responsibilities

The flow-chart below illustrates the roles and responsibilities of the parties during the implementation of the monitoring plan for the project.



Below is the description of the above steps on the flow-chart.

1. **User registers stove:** Project proponent collected/received the necessary information required for the Registration process from the user. Means of collecting this information were through the use of mobile phones. Project Proponent staff double check the accuracy of information provided, and engage field staff when additional clarifications if needed;
2. **Data logged into database:** Project proponent trained staff will input the data in the database either manually (if data collected from physical Registration Card) or this will be automatically input if data was collected using mobile phones. PP double checks the information included on the database and check for duplications. Any duplicate information is investigated and checked for the errors. Information is corrected or excluded from the database if it is a true duplicate entry.
3. **PP: Spot- checking (ongoing):** PP has a procedure for internal auditing called spot-checking, where field staff randomly select households to ensure proper functioning of the project stoves throughout the project lifetime and to ensure that the project stoves continue to work as efficiently as specified by the manufacturer. PP or field staff randomly select units included in the database and visit or contact the stove users to cross-check the information on the database with the factual evidence in the field. Any inconsistencies found (e.g., change of address of a user) is updated in the database, and in the case that ICS are found to be no longer in use, they are marked as such and excluded from emission reductions calculations.
4. **Monitoring:** Project proponent follows the requirements as per VCS-PD to collect the necessary information for a monitoring report.
5. **PP: Preparation of monitoring report:** The project proponent prepares the final monitoring report to be provided to the VVB for verification of emission reductions.

Data to be collected:

Field measurement:

The table below summarizes field measurement data requirements:

Parameter	Frequency as per methodology	Methods to be applied	Comments on seasonal fluctuation
$n_{y,i,j}$	At least once in two years.	Visits to the premises, visual inspection and interview with ICS end-user	Unlikely to be due to any Seasonal fluctuation.
$B_{y=1,new,i,survey}$	Once. The value is fixed for entire crediting period	Visits to the premises, visual inspection, measurement of consumed quantity and interview with ICS end-user.	unlikely

Data archiving:

All data is captured through a mobile application using a digital survey system, which incorporates multiple validation checks to ensure data integrity. Information collected from the registration or other means of acceptance by the users will be stored on a server. All data monitored and required for verification and issuance will be kept for two years after the end of the crediting period or the last issuance of credits for the project activity, whichever is later.

Project Database

The project database will be derived from the Installation Record. All data collected in relation to the project will be held in the central office / Data management System of the PP and maintained for the entire life cycle of the project and an additional two years thereafter. The end users of the cookstoves are identified and included in the cookstove user list for the duration of the project and updated when required.

Data and Information for Carbon Operations (DISCO): The PP manages data in proprietary software (DISCO), which provides end-to-end data management and reduces errors, miscalculations from incorrect data entry.

The data collection process is supported by a modular system architecture designed to ensure data integrity, operational flexibility, and strong access control. Key components include FOPS (Field Operations), MOPS (Mobile Operations), CPIM (Carbon Portfolio and Inventory Management), and UMAP (User Management, Access & Permissions), each playing a specific role in the data lifecycle.

This multilayered approach ensures only complete and logically sound data are approved in the system.

The system follows industry-standard data protection practices:

- Encryption: All data is encrypted in transit and at rest.
- Access control: Role-based access minimizes data exposure.
- Device security: MOPS supports device-level encryption and corporate enrolled devices enable secure data wipe features.
- Compliance:
 - The platform is designed toward supporting applicable data privacy frameworks.
 - The platform's geographically distributed backend supports compliance with data sovereignty requirements with the capability to domicile physical storage of protected information such as names, phone numbers, and address information within specific countries where required by law

Sampling Plan

As per Standard for Sampling and Surveys for CDM Project Activities and Programme of Activities; version 09.0, the sampling plan is the following:

Sampling design

Due to the large number of ICS envisioned to be distributed under the project, it is not economically feasible to monitor each individual ICS unit distributed. Therefore, representative sampling is undertaken for each batch of ICS.

Samples are drawn from ICS recorded in the project database administered by the project proponent.

(i) Objectives and Reliability Requirements

The objective is to obtain an unbiased and reliable estimate of the proportion or mean value of the following key variables over the course of the crediting period.

Monitored Parameters:

The project involves introduction of improved cook stoves as energy efficiency measure.

No.	Monitoring parameters	Sampling parameters	Parameter type	Monitoring frequency
1	Number of project devices of type i and batch j operating during year y	Proportion of ICS still in operation	Proportion	At least once every two years (For the current MP period, it is more than three years)
2	Quantity of woody biomass used by project devices in tonnes per device of type i. and batch j	Daily consumption of woody biomass per ICS	Mean value	Determined in the first year of project implementation.

(ii) Target Population:

The target population is the complete set of appliances (ICS) deployed under the project.

(iii) Sampling Frame

Overall, all ICS have the same group of end users, households. It is expected that end users can be assumed to be highly homogeneous for each ICS model. To formulate sample frame, all ICS operating are combined together. The number of project devices operating may vary with ICS

type, fuel used and project area where they are located & efficiency of the ICS depends on the ICS type and ICS age group. However, since efficiency for the stoves are determined using default loss rate, the main sub-groups of ICS are based on ICS type, fuel use and project area where they are located. The geographical locations do not have influence on the parameters of interest that is $N_{y,i,j}$ & $B_{y=1,new,i,survey}$. Therefore, these parameters are assumed to be highly homogeneous regardless of how the end user group and distribution/installation location is defined since the end users are always be households and geographical location is restricted to the project boundary. The Sampling Frame for individual parameters are defined in the following paragraphs:

The sample frame refers to all the information sources on the Database. The DISCO system is the primary mechanism for data collection for newly distributed ICS and the Monitoring Survey (which includes a household questionnaire and visual inspection of ICSs) that are used throughout the lifetime of the project. The DISCO data is used to populate the stoves Database and the Monitoring Survey follows the “Standard for Sampling and Surveys for CDM Project Activities and Programme of Activities”; version 09.

All the TLC rocket stoves distributed under this project are grouped together to create a Primary Sampling Unit which is homogenous. The procedure to determine the sample of households ensures that they adequately represent the broader project population, minimizing sampling error. Using, a 90 percent confidence level, and a 10 percent margin of error, a random sample is selected from the target population.

1. Sampling frame for proportion of ICS still in operation ($N_{y,i}$)

The first step is to identify the Primary Sampling Units.

Factors such as model of the ICS do not effect parameter $N_{y,j}$. Therefore, Primary sampling unit in case of parameters $N_{y,j}$ is independent of model of stove.

2. Quantity of woody biomass used by project devices in tonnes per device ($B_{y=1,new,i,survey}$)

The Parameter $B_{y=1,new,i,survey}$ varies according to the ICS model. Hence for this parameter, the Primary Sampling Unit is defined as the group of ICSs of the same model. If two different ICS models being implemented in the same project – this is form two Primary Sampling Units.

The value is determined in the first year of the introduction of the devices through the monitoring survey.

(iv) Sampling Method

The sampling method for the monitored parameters $N_{y,i,j}$ and $B_{y=1,new,i,survey}$ is simple random sampling. Samples are randomly selected from the primary sampling units as illustrated above. To ensure a random selection of ICS, random number generators are applied. Each ICS in the target population is uniquely identifiable by its unique ID number. Each ICS can thus be allocated a Sample Selection Number in each monitoring period, starting at 1 and increasing up to the total number of ICS in the Database for that pre-defined sampling frame. Applying the random number generators, the ICS can then be randomly chosen from the defined population up to the required sample size as calculated by the project proponent.

To determine the parameters, sampling will involve the following approaches (outcome in brackets):

$N_{y,i,j}$		Visual inspection of the premises to see if ICS is operational and in use. Interview with end user if required to verify that ICS is still in use (Yes/No)
$B_{y=1,new,i,survey}$		Quantity of woody biomass used by project devices in tonnes per device (First year of installation).

(v) Sample Size

The procedure to determine the sample of households are ensure that they adequately represent the broader project population, minimizing sampling error. Using a 90 percent confidence level, and a 10 percent margin of error, a random sample is selected.

The parameter number of stoves still in operation during the monitoring period as determined by the monitoring survey ($N_{y,i,j}$) is estimated through sampling annually/biennially and the parameter Quantity of woody biomass used by project devices in tonnes per device

$B_{y=1,new,i,survey}$ is being estimated through sampling within the first year of project installation.

$B_{y=1,new,i,survey}$ can be coupled with $N_{y,j,j}$ for the first year. Of the two parameters to be monitored,

$N_{y,i,j}$ is proportion/percentage parameter and $B_{y=1,new,i,survey}$ is a mean value parameter.

In order to calculate the required sample size estimates, values for the proportions and the mean values are required. Furthermore, the standard deviation needs to be assumed in case of sampling for a mean value. As per Guideline for Sampling and surveys for CDM project activities and programmes of activities, version 04.0, there are different ways available to obtain the estimates of the parameter of interest:

- Refer to the result of previous studies and use these results.
- 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;
- Use best guesses based on the researcher's own experiences.

For the registration purpose of project, option (c) as stated above is applied. For the following monitoring periods, the estimates can be adjusted taken the results of the previous monitoring period(s) into account or the result from recent pilot study which is conducted after the previous monitoring periods.

Calculation approach for sampling size are as follows:

Parameter $N_{y,i,j}$:

To estimate the sample size for the parameter $N_{y,i,j}$ the following equation is used:

$$n \geq \frac{1.645^2 N \times p(1-p)}{(N-1) \times 0.1^2 \times p^2 + 1.645^2 \times p(1-p)}$$

Where,

n	=	Sample size
N	=	Population size (Total number of households/ICS)
p	=	Expected proportion
1.645	=	Represents the 90% confidence required
0.1	=	Represents the 10% relative precision

The calculation of the required sample size for $N_{y,i,j}$ parameter in this monitoring period is illustrated below. In all cases a conservative approach is taken.

Description	Value	Justification
The population size N is	176,036	Number of HH registered in database
The expected proportion p for $N_{y,i,j}$ is	0.60	A conservative assumption of 60% is applied for sample size calculation.
Confidence	90%	-
Precision	10%	-
Calculated minimum household Sample Size	181 Households	Calculated
Selected Household Sample size	210 Households	-
Actual responded Households	191 Households	For Monitoring survey PP has chosen to do 210 HH samples but in actual 191 HH samples were received as responded samples and PP has chosen to stop the survey as the required level of confidence/precision has been reached which is as per provisions of section 8.4(b) of methodology (simplified option).
Survey period	31-May-2026 to 24-June-2026	-
Operational rate	60.99% ¹³	MRV survey results

Note: PP confirms that the sample size calculation, achieved precision, confidence level, and supporting sampling details have been prepared and submitted separately to the VVB for review. These documents contain detailed project data and sampling information that are considered confidential and therefore have not been included in the publicly available Monitoring Report.

Quality assurance/Quality control:

The PP applies measures to ensure the required confidence/precision for each sampled parameter is met, allowing for non-response and the possible removal of outliers from the sample, as part of a Quality Control/Quality Assurance system. The choice of measure applied to

¹³ The operational rate of 60.99% was calculated based on 382 stove-level observations collected during the monitoring survey, and the associated reliability and precision assessment was performed using the same dataset. While 191 households successfully completed the survey, each household had two project cookstoves, resulting in a total of 382 stove observations ($191 \times 2 = 382$).

each parameter depend on the cost of each data collection approach and logistics required. The project proponent determines the most effective measure for each parameter from the following list:

- Oversampling: Randomly draw a sample more than the calculated number (say 20%) and collect data from each
- Buffer Group: Randomly draw additional samples (say 20%) and collect data from only for minimum numbers of ICS as per sample size calculation. If this does not result in the required sample size, additional data is collected from households that were selected in the sample.
- If precision required is not achieved by reliability check, use the lower bound or upper bound of estimates of the parameters.

The sampling plan has the following procedures in place to ensure good quality data. The PP has ensured that field personnel have reviewed, understand and have agreed to follow the monitoring plan procedures, including provisions for maximizing response rates, documenting out-of-population cases, refusals, and other sources of non-response. A quality control and assurance strategy has been documented. Quality control and assurance strategies include addressing non-sampling errors, such as non-response or bias from interviewer. The project proponent or a competent third party designated by the project proponent with the proper skills is train the monitoring personnel on how to properly survey households to prevent bias from interviewer. When a household refuses to participate, another household is chosen at random. To reduce interviewer bias, good questionnaire design and well-tested questionnaires are used. Instruments used during monitoring surveys are calibrated in accordance with their manufacturer's specification or as per standard industry procedures. Evidence of same submitted to VVB at the time of verification.

The sample data for mean value parameter is continuous and therefore the presence of outliers is possible. In accordance with the BC SOP "Kitchen Performance Test – Standard Operating Procedure, v1.1 dated 15-March-2025" all data points identified as outliers are examined. The outliers are retained / removed based on their merit.

- Retain the outlier: The values are above outlier threshold, but they are business as usual scenario representing real world behaviors then they are retained.
- Remove the outlier: If the values are outside the business as-usual scenario, for example gathering at home or fuel measurement values exceeding practical limits (e.g. 15 kg per capita per day).

Procedure to be followed in case of stove replacement:

In cases where a replacement stove is issued to a customer already registered in the project database due to damage or malfunction of the original stove, a new customer registration is not required.

The replacement stove is recorded in the project database in a manner that clearly indicates that the original stove has ceased to be included under Project Activity. The replacement stove is

linked to the existing customer details and identified as the replacement for the original Improved Cookstove (ICS).

Accordingly, the replacement stove is assume the status of the original stove and continue to monitored and considered under the project as usual.

Analysis

The project proponent is manage a project database that includes the following data that can be directly attributable to each ICS within the project, thereby allowing unambiguous determination of the emission reductions attributable to each project:

- A list of households participating in each project, including name, location, distribution/installation date and unique serial numbers
- Where replacements are made, assurance that the efficiency of the new ICS is similar to the specified in the PD.

Data obtained from the samples are used to estimate proportions and mean values for the parameters described above. The values are then be factored into the emissions reduction calculations and result in the request for issuance of VCUs. The stoves that are not in use is excluded from emissions reductions calculations and not counted towards the total number of ICS in operation during the monitoring period.

Implementation

Sampling for the purpose of emission reduction calculation and elaboration of the monitoring report is occur at the end of each monitoring period. This sampling are conducted by trained personnel from project proponent.

The credentials and/or training materials for the sampling personnel are provided to the VVB at verification. The project implementer is responsible for managing household data collection and entry into the project database. Field personnel receives training on surveying techniques and reducing errors as well as sign a document certifying that there is no conflict of interest of those involved in data collection and analysis. If there is conflict of interest, the personnel is not allowed to participate in data collection and analysis. The project database is record the start and end dates of each monitoring period and record the emission reductions attributable to each monitoring period.

Appropriate record-keeping procedures are implemented to ensure that each monitoring period data set can be transparently attributed to its corresponding project, preventing any occurrences of double counting. An internal review of the project database are able to determine the current status of each project: the duration of previous monitoring periods, the households delivering monitoring data, and current verification activities.

Avoidance of Double Counting

The PP has signed a contract with ICS manufacturer and ICS distributor that they are not claim any GHG emission reduction for the ICS manufactured and distributed.

The PP has signed an end user agreement with the households taking the benefit of ICS that they are the owner of the ICS but they are not claim any emission reduction and Bridge Carbon are the sole entity claiming the GHG reductions.

5 QUANTIFICATION OF GHG EMISSION REDUCTIONS AND REMOVALS

5.1 Baseline Emissions

This methodology does not determine baseline emissions. It directly quantifies emission reductions based on the reduced consumption of non-renewable biomass or fossil fuels. The approach is the same as under AMS-II.G.

5.2 Project Emissions

The methodology (VMR0006 Methodology for Installation of High Efficiency Firewood Cookstoves, Version 1.1) does not account for project emissions separately, but instead quantifies net emission reductions achieved by the project.

5.3 Leakage Emissions

Leakage considered as default 0.95 in accordance with methodology (VMR0006 Methodology for Installation of High Efficiency Firewood Cookstoves, Version 1.1).

5.4 GHG Emission Reductions and Carbon Dioxide Removals

As per VMR0006, baseline emissions are calculated as follows:

PP has calculated the emission reduction for each household with cookstove installed under the grouped project separately. In this section an example for ER Calculation of "Age 1¹⁴" is being provided.

Sample calculation is performed for one project ICS to illustrate the emission reduction per ICS basis:

Distribution date of Age 1	01-January-2023
Start date of monitoring days for year 2023 for Age 1	01-April-2023
End date of monitoring days for year 2023 for Age 1	31-December-2023
Number of operational days of stove from 01-April-2023 to 31-December-2023	275

¹⁴ Age-1 example is illustrative of the calculation mechanics only, and that current-MP reductions were computed per stove using the applicable age band (per the ER calculation sheet)

Year Fraction		=275/365 = 0.753
No. of ICS distributed from distribution date (01-January-2023 to 31-December-2023 ($N_{y,i,j}$))		22
Parameter	Description	Value
ER_y	Emission reductions by improved cook stove of type i and batch j during year y	ER per ICS in year y ($ER_{y,i,j}$) * ICS number * year fraction
	for one ICS ($N_{y,i,j} = 1$)	=2.833 * 1 * 0.753 =2.133 t CO _{2e}
	For 22 ICS ($N_{y,i,j} = 22$)	=2.133 *22 = 47 ¹⁵ t CO _{2e}

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

Parameter	Description	Value (Age 1)	Unit
$ER_{y,i,j}$	Emission reductions by improved cook stove of type i and batch j during year y	2.833	t CO _{2e}
$B_{y,savings,i,j}$	Total biomass that is saved in tonnes during the period	2.547	Tonnes
$NCV_{wood\ fuel}$	Net calorific value of the non-renewable woody biomass that is reduced	0.0156	TJ/tonne
$f_{NRB,y}$	Fraction of woody biomass that is established to be non-renewable used by baseline device type i in year y in the baseline scenario (fraction); this variable is not considered for fossil fuels	0.89	fraction
EF_{wf,CO_2}	CO ₂ emission factor for the use of wood fuel in baseline scenario	112	tCO _{2e} /TJ
$EF_{wf,non\ CO_2}$	Non-CO ₂ emission factor for the use of wood fuel in baseline scenario	26.23	tCO _{2e} /TJ
$N_{y,i,j}$	Number of stoves still in operation during period (No. of ICS * proportion of operation stoves)	=1 * 0.6099 =0.6099	Number of ICS
	Number of households	1	Number
	proportion of operation stoves	0.6099	fraction
0.95	Leakage adjustment factor	0.95	fraction

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

Parameter	Description	Value (Age 1)	Unit
$B_{y,savings,i,j}$	Total biomass that is saved in tonnes during the period	2.547	Tonnes
$B_{y=1,new,i,survey}$	Quantity of woody biomass used by project	1.1357	tonnes
$\eta_{new,i,j}$	Efficiency of the system being deployed as part of the project activity	0.3243	Fraction

¹⁵ Refer row "F654" of tab "Yr2023" of ER calculation sheet

η_{old}	Efficiency of baseline cookstove	0.10	Fraction
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Therefore, in this manner the emission reduction for all project instances involved in the project activity during the current monitoring period has been calculated. Please refer ER calculation sheet for more details.

Vintage period	Baseline emissions (tCO _{2e})	Project emissions (tCO _{2e})	Leakage emissions (tCO _{2e})	Reduction VCU (tCO _{2e})	Removal VCU (tCO _{2e})	Total VCUs (tCO _{2e})
01-Apr-2023 to 31-Dec-2023	570,230	0	0	570,230	0	570,230
01-Jan-2024 to 31-Dec-2024	975,152	0	0	975,152	0	975,152
01-Jan-2025 to 31-Dec-2025	960,954	0	0	960,954	0	960,954
01-Jan-2026 to 31-May-2026	395,708	0	0	395,708	0	395,708
Total	2,902,044	0	0	2,902,044	0	2,902,044

The estimated ex-ante GHG emission reductions and carbon dioxide removals and the achieved reductions and removals for the monitoring period are as below.

Vintage period	Ex-ante estimated reductions/removals	Achieved reductions/removals	Percent difference	Explanation for the difference
01-Apr-2023 to 31-Dec-2023	998,580	570,230	-42.90%	Please refer explanation below from total row.
01-Jan-2024 to 31-Dec-2024	1,329,020	975,152	-26.63%	Please refer explanation below from total row.
01-Jan-2025 to 31-Dec-2025	1,325,389	960,954	-27.50%	Please refer explanation below from total row.
01-Jan-2026 to 31-May-2026	548,311	395,708	-27.83%	Please refer explanation below from total row.

Total	4,201,300	2,902,044	-30.93%	The emission reductions generated in the current monitoring period are 30.93% lower than the estimated in the registered PDD. This is due to the lower proportion of operational stoves compared to Ex-ante estimation.
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APPENDIX 1: COMMERCIALLY SENSITIVE INFORMATION

No commercially sensitive information has been excluded from the public version of the project description.

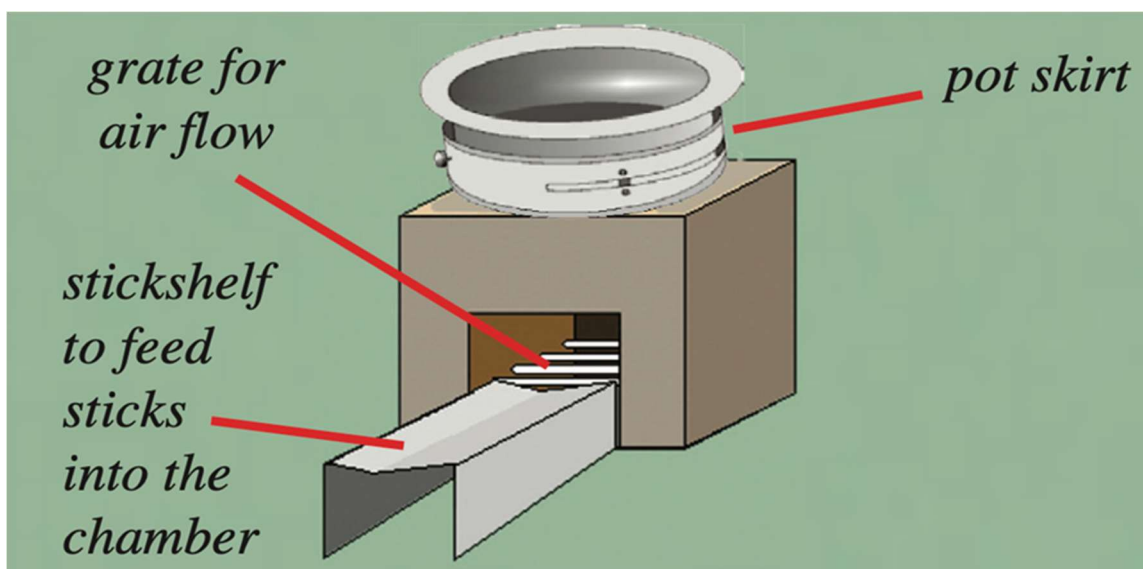
Section	Information	Justification
1.13	End users' details are kept confidential.	End users' details are kept confidential to protect their privacy and personal information. Access to such data is restricted to authorized personnel only and is used solely for project implementation, monitoring, verification, and auditing purposes, in accordance with applicable data protection requirements.

APPENDIX 2: TECHNICAL DETAILS

The ICS's design leads to greater combustion efficiency and thermal transfer to the pot compared with a traditional cooking technology by incorporating a 'rocket elbow'; a highly insulated combustion chamber which provides a conducive environment for more complete combustion of wood. It substantially reduces fuel wood consumption compared to baseline.

Technology/Measure

TLC- Rocket Stove uses a total of 15 bricks that are made by using locally available clay (mixture of anthill soil, cow dung and sand). The average size of the brick is 22.5 cm x 11cm x 6.5cm. The bricks are made from a mixture of five liters clay, five liters sand, five liters manure/cow dung and five liters of water. This mixture creates insulating bricks, reducing heat loss. Metal components have been added to the design to optimize combustion and heat transfer.



TLC Rocket Stove

Stove components

The stove has a metal top that allows the pot to sit higher improving airflow into the combustion chamber and out through the top of the stove.

An adjustable metal pot skirt ensures more effective transfer of heat from the fire to the pot, improving efficiency and also helping block wind.

TLC- Rocket Stoves come with a metal stick support placed in front of and slightly into the opening of the stove. It acts as a firewood feeding platform. This ensures adequate airflow while feeding the fuel into the combustion chamber, resulting in more complete combustion of fuel wood.

According to independent stove efficiency tests performed by Aprovecho Research Center on the TLC Rocket Stove, the WBT results yielded an average thermal efficiency of 34.5%.

Technical Specifications	
Stove Size	Depth: 35 cm
	Width: 35 cm
	Height: 28 cm
Combustion Chamber Size	Depth: 12 cm
	Width: 12 cm
	Height: 28 cm
Efficiency	34.50%

APPENDIX 3: SDG DETAILS

SDG details are provided as follows: (For details please refer Table 2: Sustainable Development Contributions in section 1.12)

1. SDG 7: Project database provided separately
2. SDG 13: ER calculation sheet
3. SDG 15: Calculation is provided in ER calculation sheet