



VCS MONITORING REPORT YEAR 1&2

(15-MAY-2023 TO 14-MAY-2025)

PROJECT 4585



Project title	Better cooking for a better health in Rusizi District - Rwanda
Project ID	4585
Monitoring period	15-May-2023 (included) to 14-May-2025 (included)
Original date of issue	27-November-2025
Most recent date of issue	14-August-2026
Version	V4
VCS Standard Version	VCS Standard v4.7
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1 PROJECT DETAILS

1.1 Summary Description of the Implementation Status of the Project

During the monitoring period of the project (from 15-May-2023, to 14-May-2025, with both start and end dates included), Kiasi Energies made significant progress in its mission to improve access to clean cooking solutions in the Rusizi district, Rwanda. By the end of this period, the project successfully distributed 19,406 fixed improved cookstoves during year 1 of activities and 20,216 fixed improved cookstoves in year 2 of activities to eligible households, slightly below the initial yearly target of 25,000 stoves/year. However, a notable achievement is that over 90% of the distributed cookstoves are still actively in use, demonstrating high adoption rates and user satisfaction within the community.

The project was implemented in close partnership with the local district authorities of Rusizi and the Rwanda Environment Management Authority (REMA). This collaboration ensured that the deployment of stoves was well-coordinated and aligned with local environmental and developmental goals. Throughout the year, REMA provided oversight and conducted an audit to ensure the project's compliance with environmental standards and its contribution to reducing carbon emissions. The audit affirmed the project's effectiveness in delivering on its objectives.

Kiasi Energies worked closely with local communities, providing guidance on the proper use and maintenance of the stoves, which resulted in sustained usage and positive impacts on indoor air quality and fuel efficiency. The project continues to target the reduction of greenhouse gas (GHG) emissions by replacing inefficient and polluting three-stone fires with cleaner and more efficient cooking technologies.

The achievements of this first year set a strong precedent for the remaining years of the project, as Kiasi Energies works toward distributing a total of 100,000 cookstoves over four years, contributing to improved health, environmental sustainability, and socio-economic benefits for the population of Rusizi.

For the purposes of monitoring, Kiasi and its partners carried out several surveys:

- During the summer of 2024, Kiasi and RDIS organized the needed monitoring surveys (kitchen survey and usage survey) on a sample of households randomly selected to evaluate the values of the variables needed to calculate GHG ERs. This Usage survey will be used to establish the annual usage rate during year one.
- In September 2025, due to the methodology change from VMR0006 v1.2 to VM0050 v1.0, we conducted Kitchen Performance Tests (KPTs) for stoves age 1 and stove age 2 separately to evaluate the annual household's wood fuel consumption with baseline and project stoves. These values will be extrapolated to cover this first monitoring period, although they were carried out a few months later.
- In September 2025, Usage surveys were also conducted to evaluate the usage and adoption rate for both stoves distributed in year 1 and stoves distributed in year 2.

After calculation, the project avoided the following emissions during the first 2 years of the project:

Analysis	From	to	Amount of ER
Vintage 2023	15-May-2023	31-December-2023	9285
Vintage 2024	01-January-2024	31-December-2024	54330
Vintage 2025	01-January-2025	14-May-2025	32686

Total ER (Y1 monitoring)	15-May-2023	14-May-2025	96301
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1.2 Audit History

Audit type	Period	Program	Validation/verification body name	Number of years
Validation	Crediting period: 15-May-2023 to 14-May-2033	VCS	EPIC SUSTAINABILITY Services Private Limited	10 years
1 st Verification	15-May-2023 to 14-May-2025	VCS	Sustaincert	2 year
Methodology change from VM0006 to VM0050	Crediting period: 15-May-2023 to 14-May-2033	VCS	Sustaincert	Ongoing

1.3 Sectoral Scope and Project Type

Sectoral scope¹	03
Project activity type	Type II – Energy Efficiency Improvement Project

1.4 Project Proponent

Organization name	Kiasi Energies
Contact person	Guillaume Fouchères (Juliette Cosson)
Title	President (project manager)
Address	102 bis rue de Miromesnil, 75008 Paris
Telephone	+33 6 89 25 71 15

¹ 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>

Email	Guillaume.foucheres@canopy-energy.com
	Juliette.cosson@canopy-energy.com

1.5 Other Entities Involved in the Project

Kiasi Energies is the project proponent of the project. RDIS, whose information is detailed below, is the operating partner of the project. This organization, in collaboration with Kiasi, is distributing and constructing stoves locally.

Organization name	Rural Development Inter-diocesan Service (RDIS)
Role in the project	Operating partner
Contact person	Viateur Ntarindwa
Title	Director
Address	P.O.Box 142, Muhanga, Rwanda, Nyamabuye Sector, Gitarama Cell, Muhanga District
Telephone	(+250) 788760910 (WhatsApp Number)
Email	viateur.ntarindwa@rdis.org.rw

1.6 Project Start Date

Project start date	15-May-2023
Justification	The start date is the date of actual usage of the first stove distributed. The first stove distributed and installed as part of the project started being used on 15-May-2023, as shown on the date of the signature of the first Carbon Transfer Form. Therefore, the start date of the project will be the 15-May-2023.

1.7 Project Crediting Period

Crediting period	Ten years, fixed
Start and end date of first or fixed crediting period	15-May-2023 to 14-May-2033

1.8 Project Location

The project aims to distribute improved cookstoves in Rusizi District, circled in red on the map below. The Rusizi district is located in the Western Province of Rwanda.

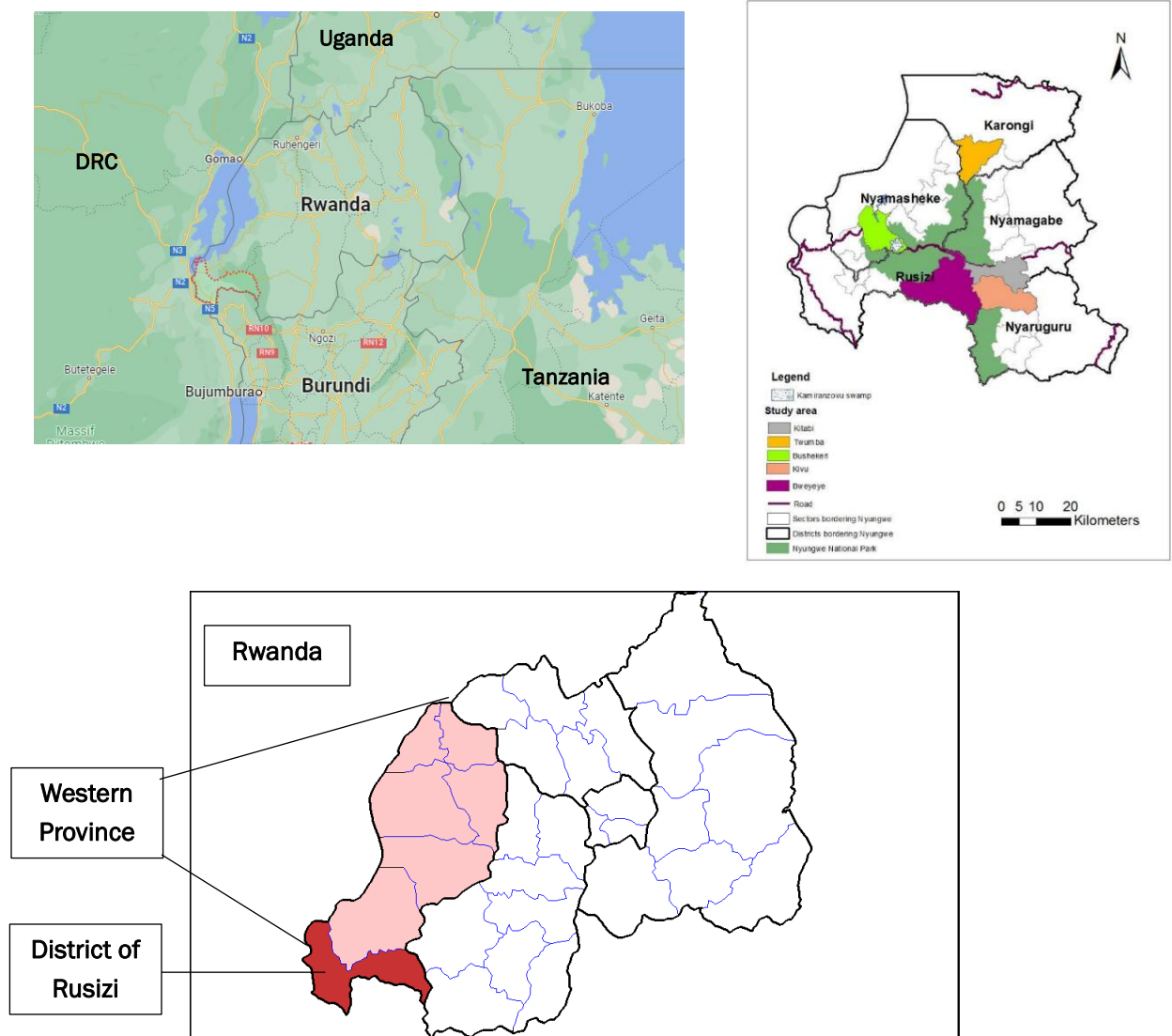


Figure 1 location and boundaries of the project

Rusizi is a district located in the Western Province of Rwanda. The district is located at GPS coordinates 2.4750° S, 28.8414° E. It is bordered by the Democratic Republic of Congo to the west, the district of Nyamasheke to the north, the district of Kamonyi to the east, and the district of Nyaruguru to the south. Rusizi is in the Great Lakes region of Africa, and its landscape is characterized by hills, valleys, and forests. Rusizi is also home to the Kamemba International Airport, which serves the region and provides an important link to other parts of Rwanda and neighboring countries.

1.9 Title and Reference of Methodology

Type (methodology, tool or module).	Reference ID, if applicable	Title	Version
Methodology	VM0050	ENERGY EFFICIENCY AND FUEL-SWITCH MEASURES IN COOKSTOVES ²	v1.0
TOOL	WTB	Water Boiling Test Protocol	v4.2.3
Standard	CDM Standard	Sampling and surveys of CDM project activities and programmes of activities	v9.0
Guidelines	CDM Guidelines	Sampling and surveys of CDM project activities and programmes of activities	v4.0
Tool	TOOL 30	Calculation of the Fraction of Non-Renewable Biomass	v4.0

Overall, a large variety of tools proposed by VCS and CDM were used to develop the projects in accordance with all the requirements.

1.10 Double Counting and Participation under Other GHG Programs

1.10.1 No Double Issuance

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

☐ Yes ☒ No

1.10.2 Registration in Other GHG Programs

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

☐ Yes ☒ No

² VM0050 v1.0: <https://verra.org/wp-content/uploads/2024/10/VM0050-EE-and-Fuel-Switch-Measures-in-Cookstoves-v1.0.pdf>

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

No emission reductions have been traded so far. However, Kiasi has signed a Letter of Approval with the government of Rwanda to ensure compliance of the credits with the CORSIA requirements. If the credits are used for any other purposes than for mitigation outcomes, the government of Rwanda will discount them from its own NDCs. The process to obtain the appropriate authorization from the government of Rwanda is provided in Appendix 4 of the PD. The project has received a letter of approval, as per stated in step 2 of the described process. After the ongoing verification, Kiasi aims to request the formal letter of Authorization and associated corresponding adjustments.

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

1.12 Sustainable Development Contributions

This project has the potential to make significant sustainable development contributions environmentally, socially, and economically. These contributions to SDGs will be assessed thoroughly through the SD Vista standard.

SDG 1: No poverty

This project aims to distribute the stoves for free to try and equip populations who would not have the resources to buy the technology themselves. The stoves are fully financed and should reduce the amount of money needed by HH to buy fuelwood.

SDG 3: Good Health and Well-being

By reducing smoke emissions from traditional stoves, the project can improve the health outcomes of those who use them, particularly women and children.

SDG 5: Gender equality

Women and Children are particularly vulnerable to health issues due to Households Air Pollution (HAP), as they spend more time cooking. By reducing the HAP, women are less likely to develop conditions such as itchy eyes or pulmonary deficiency.

SDG 7: Affordable and Clean Energy

The project promotes the use of cleaner and more efficient cooking technologies that require less fuel, leading to increased energy access and affordability.

SDG 8: Decent Work and Economic Growth

The project creates employment opportunities for local communities through the production and distribution of improved cookstoves.

SDG 12: Responsible consumption and production

The project promotes responsible consumption and production by encouraging the use of more efficient and sustainable cooking technologies. The stove distributed to beneficiaries will save at least half of the HHs' wood consumption.

SDG 13: Climate Action

The project can mitigate greenhouse gas emissions by reducing the use of traditional stoves and reducing the demand for firewood.

Overall, the project's positive impact on health, energy access, economic growth, climate action, and land conservation aligns with several SDGs and contributes to the achievement of the United Nations' sustainable development agenda. Through the SD Vista program, we will have these impacts certified and VCUs will be labelled.

During this first monitoring period, RDIS and Kiasi distributed and installed improved cookstoves 39 622 (19 406 in year 1 and 20 216 in year 2). Thus, it contributed to an overall reduction of 84 474t of wood and avoided the emission of **96 301 tCO₂eq.**

These results are extracted from the monitoring surveys carried out in August 2024 and September 2025. The surveys cover the period 15-May-2023 to 14-May-2025. They correspond to the analysis of 120 Usage surveys per year and 120 KPTs (with both stove ages equally represented, 60 of each age).

Table 1: Sustainable Development Contributions³

Row number	SDG target	SDG indicator	Net impact on SDG indicator	Current project contributions	Contributions over project lifetime
1)	1.1 1.a	Average amount of money saved annually per household 1.1.1 Proportion of population below the international poverty line <i>1.a.1: Total official development assistance grants from all donors that focus on poverty reduction as a share of the recipient country's gross national income</i>	Increased by project activities <i>1.1.1 Decrease</i> <i>1.a.1 Increase</i>	Money saved on wood fuel: On average, HHs saved <u>64 151 RWF</u> during this first monitoring period. HHs that used the stove during the full year saved <u>123 760 RWF</u>. Money saved for stove's installation: Each of the 39 622 HHs that participated in the project activities were provided with the stove liner (~4 048 RWF/HH) and the distribution, installation maintenance for free (~7 000 RWF/HH), for a total of <u>11 048 RWF/HH</u>	This project aims to distribute the stoves for free to try and equip populations who would not have the resources to buy the technology themselves. The stoves are fully financed and reduce the amount of money needed by HH to buy fuelwood.

³ <https://unstats.un.org/sdgs/indicators/Global-Indicator-Framework-after-2024-refinement-English.pdf>

Row number	SDG target	SDG indicator	Net impact on SDG indicator	Current project contributions	Contributions over project lifetime
2)	3.2 3.9	Proportion of HHs affected by diseases related to HAP 3.2.1 Under 5 mortality rate 3.9.1: Mortality rate attributed to household and ambient air pollution	Decreased by project activities Decrease	In 2024 surveys, <u>100% of HHs said they noticed health improvement</u> since using their new stoves. Less eyes irritation (66%) and less coughing (57%) and better sleep (75%) were among the most cited benefits. In 2025 surveys, <u>91% of the HHs noticed health improvements</u>, among which 53% declared sleeping better. In both survey rounds, all participating households (100%) reported a <u>reduction in smoke levels</u>.	By reducing smoke emissions from traditional stoves (70% less smoke), the project will improve the health outcomes of those who use them, particularly women and children.

Row number	SDG target	SDG indicator	Net impact on SDG indicator	Current project contributions	Contributions over project lifetime
3)	5.4	Time saving for women on domestic chores. 5.4.1: Proportion of time spent on unpaid domestic and care work, by sex, age and location Other indicators monitored will also be specifically studied for women (SDG8 and SDG3 contributions).	Increased by project activities Decrease for women	Time saved: 100% of households indicated saving time thanks to the improved cookstove. Time saved on cooking chores: On average, main cooks spend 41% less time on cooking chores thanks to the ICS. <u>94% of main cooks are women</u>. All SDGs presented here are therefore mainly applicable to women. Wood collection: number of trips for firewood collection reduced by 60% (2024 surveys) to 62% (2025 surveys). This task is born by women and children in over 73% of HHs.	Women and Children are particularly vulnerable to health issues due to Households Air Pollution (HAP), as they spend more time cooking. By reducing the HAP, women are less likely to develop conditions such as hitchy eyes or pulmonary deficiency. They are usually in charge of collecting firewood, another time-consuming task that prevents them from having other activities. By sparing time on fuel collection, they are more likely to have other activities, such as going to schools for young girls.

Row number	SDG target	SDG indicator	Net impact on SDG indicator	Current project contributions	Contributions over project lifetime
4)	7.3	Fuelwood savings per stove 7.3.1: Energy intensity measured in terms of primary energy and GDP 7.1.2: Proportion of population with primary reliance on clean fuels and technology	Increased by project activities 7.3.1: Decrease 7.1.2: Increase	Fuelwood savings per stove: on average, <u>2.16 t/HH/year of wood saved per stove</u> for a full year usage. Overall fuel savings: <u>84 474 t of wood saved</u> thanks to project activity during first monitoring period (ie, first 2 years of activities).	The project promotes the use of cleaner and more efficient cooking technologies that require less fuel, leading to increased energy access and affordability.
5)	8.3 8.5	Number of jobs created through the project implementation. 8.3.1: Proportion of informal employment in total employment, by sector and sex 8.5.1: Average hourly earnings of employees, by sex, age, occupation and persons with disabilities	Increased by project activities 8.3.1: Increase 8.5.1: Increase	In Rwanda, RDIS operates project activities thanks to <u>a 15 members-team, of which 12 were hired</u> for the purpose of the project. The stove manufacturing company hires 31 staff members for its whole production chain (owners included).	The project creates employment opportunities for local communities through the production and distribution of improved cookstoves.

Row number	SDG target	SDG indicator	Net impact on SDG indicator	Current project contributions	Contributions over project lifetime
6)	10.1 10.b	Annual savings for beneficiaries. 10.1.1: Growth rates of household expenditure or income per capita among the bottom 40 per cent of the population and the total population 10.b.1: Total resource flows for development, by recipient and donor countries and type of flow	Increased by project activities 10.1.1: Increase 10.1.1: Increase	Money saved on fuel wood: On average, HHs saved <u>64 151 RWF</u> during this first monitoring period. HHs that used the stove during the full year saved <u>123 760 RWF</u> (2024 Usage survey). Money saved for stove's installation: Each of the 39 622 HHs that participated in the project activities were provided with the stove liner (~4 048 RWF/HH) and the distribution, installation maintenance for free (~7 000 RWF/HH), for a total of <u>11 048 RWF/HH</u>	The project specifically targets HHs who use 3-stones fires for cooking. These HHs are commonly the most vulnerable ones in Rwanda, as they do not have access to electricity, gas, and usually have limited resources. By cutting out the amount of money needed to provide wood for cooking for vulnerable HHs, the project aims to alleviate the financial burden and reduce inequalities. Additionally, time saved from collecting wood or cooking can be used toward other lucrative activities, school, or other chores.
	12.0	Fuel wood savings (in t per year for the entire project)	Increased by project activities	During the first monitoring period (15-May-2023 to 14-May-2025), the project activities prevented the consumption of <u>84 474 tons of wood fuel</u> , for an average of 2.1 t/stove over a 2-year period.	The project promotes responsible consumption and production by encouraging the use of more efficient and sustainable cooking technologies. The stove distributed to beneficiaries will save at least half of the HHs' wood consumption.

Row number	SDG target	SDG indicator	Net impact on SDG indicator	Current project contributions	Contributions over project lifetime
	13.0	Tonnes of greenhouse gas emissions avoided	Increase	96 301 tCO2eq avoided as follows:	The project can mitigate greenhouse gas emissions by reducing the use of traditional stoves and reducing the demand for firewood.
	13.2		Decrease	- Vintage 2023: <u>9 285 tCO2eq</u> avoided - Vintage 2024: <u>54 330 tCO2eq</u> avoided - Vintage 2025: <u>32 686 tCO2eq</u> avoided	
	13.3	13.3.1: Extent to which (i) global citizenship education and (ii) education for sustainable development are mainstreamed in (a) national education policies; (b) curricula; (c) teacher education; and (d) student assessment 13.2.1: Number of countries with nationally determined contributions, long-term strategies, national adaptation plans and adaptation communications, as reported to the secretariat of the United Nations Framework Convention on Climate Change			

1.13 Commercially Sensitive Information

Commercially sensitive information includes:

- End-users' information contained in the database
- Any financial information
- ER sheet

This information can be provided to VWBs and VCS on demand as supporting documents but are not meant to be published.

2 SAFEGUARDS AND STAKEHOLDER ENGAGEMENT

2.1 Stakeholder Engagement and Consultation

2.1.1 Stakeholder Identification

Stakeholder Identification	- Beneficiaries - Women and marginalized beneficiaries - Workers (project proponent, mainly) - Institutions and local leaders - Other interested parties (local NGOs, ...)
Legal or customary tenure/access rights	N/A. The project does not rely on land tenure or resource access.
Stakeholder diversity and changes over time	There is considerable diversity in household sizes, economic status, and education levels.
Expected changes in well-being	Expected impacts for beneficiaries and marginalized beneficiaries: - Improved health - Time saving on fuelwood collection, better social inclusion for women - Money savings - Decreased fuelwood consumption

	Expected impacts for workers and institutions: - Employment opportunities - Knowledge and skills development
Location of stakeholders	Rusizi district
Location of resources	N/A. The project does not rely on land tenure or resource access. Resources are provided by PP.

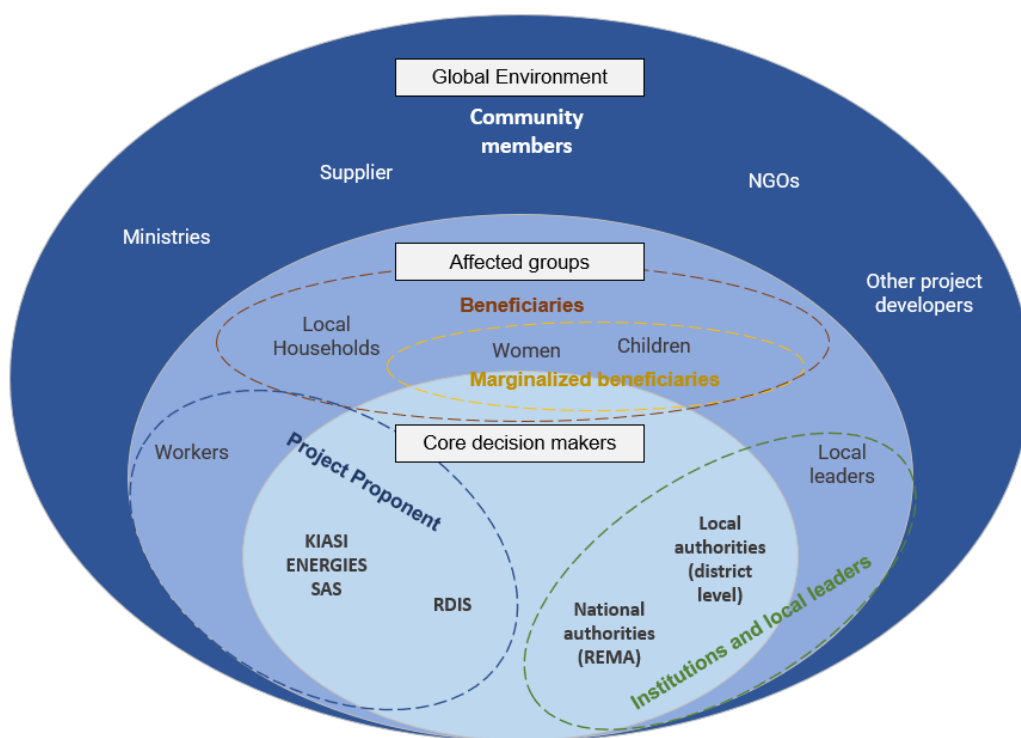


Figure 2: Stakeholders groups

2.1.2 Stakeholder Consultation and Ongoing Communication

Ongoing consultation	All beneficiaries (local households, women, children & marginalized beneficiaries) are consulted before entering project activities. They are all offered the possibility to participate, and risks and opportunities are presented to them. Beneficiaries are given the contact information of RDIS (phone number mainly). Grievance can also be
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	transferred during yearly awareness campaigns or at RDIS office. A grievance book is available in the municipality office. No grievance have been recorded this year.
Date(s) of stakeholder consultation	21-December-2022 Consultations with district officials, REMA (Rwanda's DNA) and other entities are regularly organized.
Communication of monitored results	Annually, RDIS organizes Awareness campaigns to promote stove usage and to highlight the health and economic benefices among beneficiaries. Results of project activities are discussed with beneficiaries at that time. Additionally, Kiasi's employees are in constant communication with the district officials. RDIS and Kiasi keep them aware of our ongoing activities and accomplishments on a monthly basis, at the very least. The organization of the stoves' distribution is orchestrated with district guidance. Kiasi has a grievance book in the district office, for everyone to access.
Consultation records	Official consultations are subject to a report which is then stored by Kiasi Energies. These reports keep track of: - Official stakeholder consultation (initial process) - Awareness campaigns.
Stakeholder input	In early project design, the number of stoves to be distributed rose concerns: a stakeholder underlined the need to increase the initial stove number of 50 000 stoves to 100 000 stoves, to offer every HHs in Rusizi the possibility to participate. Kiasi and RDIS agreed to that design change, which was included in the PD.

2.1.3 Free, Prior, and Informed Consent

Consent	• Free: stakeholders were given the freedom to participate or withdraw from the project without facing any negative repercussions. The participation to the project activities is never an obligation.
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	• Prior: our team works in collaboration with village/cell leaders. By warning them and introducing the project, our team informs the leaders and scrutes interest from eligible households living in this cell. The stoves are then delivered to the cell office and distributed a few days later. The stoves are installed in the following weeks, and the CTFs are meant to be signed one week after installation, when the stoves start being used. We make sure to grant beneficiaries sufficient time to consider their participation. • Informed: stakeholders received comprehensive information about the project's impacts, benefits, and risks in a language and format they understand, enabling them to make informed decisions.
Outcome of FPIC	The CTFs signed by the households represent free, prior and informed consent. The project does not relocate people, does not rely on land tenure.

2.1.4 Grievance Redress Procedure

Grievances received	Resolution and outcome
No grievances were received regarding the project activities during this monitoring period.	A grievance book is available in the municipality office.

2.1.5 Public Comments

Summary of comments received	Actions taken
After the LSC, the number of stoves Kiasi and RDIS planned on installing was considered to not be enough by several participants.	Kiasi committed to double the number of stoves to be distributed and installed within Rusizi from 50 000 (initial design of the project) to 100 000 (approximate number of HH in Rusizi)

No other comments have been received since the LSC and the public comment period.

2.2 Risks to Stakeholders and the Environment

2.2.1 Management Experience

RDIS has significant experience in carbon project operations, notably with the CCER 1 project in 2017, where they successfully distributed 10,000 stoves to rural households. They are supported by Anchor Eco, a consulting firm with extensive expertise in project development, auditing, and serving as objective observers in carbon projects. Anchor Eco helps with data management. Additionally, Kiasi, a specialist in carbon project development and operations, plays a key role in ensuring the successful execution, certification and sustainability of the projects. Together, these organizations collaborate to drive impactful carbon reduction initiatives.

2.2.2 Risk assessment

	Risks identified	Mitigation or preventative measure(s) taken
Natural and human-induced risks to stakeholders' wellbeing	No risk identified. All HHs have the choice to take part in the project activities or not.	NA
Risks to stakeholder participation Natural threats: Climate Variability and Extreme Weather Events	Changes in weather patterns, including extreme events such as floods or droughts, could impact the distribution and construction of improved cookstoves.	- Build resilient supply chains to ensure continuous distribution even during adverse weather: during the rainy season, HHs struggle to find the adequate materials to produce the bricks for them to provide for the stove's installation (drying the mud becomes challenging). During that time, RDIS helps with the bricks production, financed by Kiasi. Photos supporting this statement have been provided to the VVB. - Design and distribute cookstoves that are durable and can withstand extreme weather conditions: our stoves are meant to be installed and fixed inside of a kitchen. In addition to local materials,

		everything is then fixed with cement.
Human-induced Threats: Non-Adoption or Misuse of Improved Cookstoves	Households may not adopt the new technology or may use it improperly, reducing the anticipated health and environmental benefits.	- Conduct comprehensive training and education programs on the proper use of cookstoves: this happens in 3 different ways: - During the distribution process, first information on impacts and usage is given to HHs. - During the installation, the installers, who came to construct the stove show the HHs how to properly use the stove. - RDIS organizes yearly awareness campaigns, regrouping HH from the all district. All these participants are then asked to teach good practices to other beneficiaries from their villages. A list of awareness campaigns invitees shows RDIS and Kiasi ensure proper geographical representation. All village leaders are also invited to help promote good practices. - Provide ongoing support and follow-up visits to address any issues or concerns: Enumerators visit HHs randomly on a daily basis. When a problem with the stoves occur, they can plan a specific visit to assist the HH.

		Involve community leaders and influencers to promote the benefits and correct usage of cookstoves. This happens mainly during the awareness campaigns, where RDIS and during the distribution process, as they help identify HH wishing to participate to project activities.
Human-induced Threats: Economic Barriers	Households may face economic challenges that prevent them from entering the project, such as the inability to provide time for materials gathering for stoves' construction	- Ensure the cookstoves are distributed for free. HH are only asked to collect the necessary materials and construct a few bricks with mud. - Provide bricks and materials for households who struggle in collecting the materials, especially during the rainy season.
Human-induced Threats: Cultural Resistance	Cultural preferences for traditional cooking methods may lead to resistance against adopting improved cookstoves	- Involve local community leaders and respected figures in advocacy efforts, during distribution, to help identify HHs wishing to participate, and during the awareness campaigns, to help promote good practices. - Customize the design of the cookstoves to align with traditional cooking practices as much as possible: this has been validated by the Rwandan Board of Standard, a national entity.
Human-induced Threats: Supply Chain Disruptions	Disruptions in the supply chain could delay the distribution of cookstoves and spare parts, impacting project implementation.	- Maintain a buffer stock of cookstoves to manage short-term disruptions at cell level: the stoves are stored in cells offices before distribution. So are extra bricks for HH in need. - All stoves are manufactured in Rwanda from a local supplier.

		Set up a monthly visit to supplier to evaluate conformity.
Human-induced Threats: Policy and Regulatory Changes	Changes in government policies or regulations could affect the project's implementation or sustainability.	- Maintain regular communication with relevant government agencies (in our case, mainly REMA, the Rwandan DNA) to stay informed about policy changes. - Aligning the project's objectives with national and regional development plans to ensure policy support.
Working conditions Human-induced Threats: Monitoring and Evaluation Challenges	Ineffective monitoring and evaluation could lead to difficulties in assessing the project's impact and making necessary adjustments.	- Implement a robust monitoring and evaluation framework with clear indicators and regular data collection. - Train local staff and partners in monitoring techniques and data management.
Safety of women and girls	No risk identified – The project activities aim to improving their safety conditions (burns, health, ...)	NA
Safety of minority and marginalized groups, including children	No risk identified – The project activities aim to improving their safety conditions (burns, health, ...)	NA
Pollutants (air, noise, discharges to water, generation of waste, and release of hazardous materials and chemical pesticides and fertilizers)	No risk identified. The project will provide fair wages and working conditions that meet or exceed national legal standards.	NA

2.3 Respect for Human Rights and Equity

2.3.1 Labor and Work

Risks identified ⁴		Mitigation or preventative measure(s) taken
Discrimination	No major risks identified. To ensure that no entities involved in the project design and implementation engage in or are complicit in any form of discrimination or sexual harassment, the project will implement strict measures to promote equality, respect, and inclusivity.	- Appropriate disciplinary actions will be taken against individuals found to have engaged in discriminatory or harassing behavior. No such problems have been detected to date. - Encouraging a diverse and inclusive project team by promoting equal opportunities in hiring and advancement, specifically in Rusizi district. All enumerators have been hired locally and trained.
Sexual harassment	“No risk identified”	To ensure that no entities involved in the project design and implementation engage in or are complicit in any form of discrimination or sexual harassment, the project will implement strict measures to promote equality, respect, and inclusivity.
Gender equity in labor and work	Kiasi and RDIS are committed to equity during the recruitment processes and between all staff members. Equal pay for equal work is a pillar of this. So is gender equity. Kiasi and RDIS are committed to equity during the recruitment	Training for unskilled positions: for positions that do not require specific skills, the project will provide on-the-job training to local community members. This ensures that even those without prior experience can gain employment and develop new

⁴ 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.

	processes and between all staff members. Equal pay for equal work is a pillar of this. So is gender equity.	skills. Among the employees of RDIS and of the stoves manufacturer, 2/3 were new staff hired for the project purpose, in Rusizi district. Enumerators have been hired locally and trained (as seen on the training photos provided during the audit). Before each survey, RDIS and Kiasi organize a training for surveyors as well. 5 out of 10 new recruit for the purpose of the project are women, as shown in the supporting document.
Forced labor	Kiasi and RDIS have a tolerance 0 for forced labor, child labor and human trafficking. No risk identified.	NA
Child labor	Kiasi and RDIS have a tolerance 0 for forced labor, child labor and human trafficking. No risk identified.	NA
Human trafficking	Kiasi and RDIS have a tolerance 0 for forced labor, child labor and human trafficking. No risk identified.	NA

2.3.2 Human Rights

Risks identified	Mitigation or preventative measure(s) taken
No risk identified	- No obligation to participate in the project - Free, prior and informed consent from all beneficiaries involved in the project - No negative impacts identified

2.3.3 Indigenous Peoples and Cultural Heritage

Risks identified	Mitigation(s) or preventative measure taken
No risk identified	Project activities are designed to fit cultural habits (no fuel switch, stoves produced locally and trying to fit cooking habits)

2.3.4 Property Rights

Risks identified	Mitigation or preventative measure(s) taken
No risk identified	The project activities do not include any change in property rights, nor utilization of participants or other stakeholders' property rights. The stoves are provided for beneficiaries. The stove is their property. They cede the carbon rights to Kiasi in exchange for financing the activities.

2.3.5 Benefit Sharing

Summary of the benefit sharing plan	The project does not impact on property rights. The stoves are provided and installed for free to beneficiaries in exchange for carbon rights to finance ex-post the project activities. Other positive impacts will benefit the community.
Benefit sharing during the monitoring period	No changes in benefit sharing plan within this monitoring period.

2.4 Ecosystem Health

	Risk identified	Mitigation or preventative measure(s) taken during the monitoring period
Impacts on biodiversity and ecosystems	No risk identified	Project only distributes and installs improved cooking solutions.

Soil degradation and soil erosion	No risk identified	Project only distributes and installs improved cooking solutions.
Water consumption and stress	No risk identified	Project only distributes and installs improved cooking solutions.

2.4.1 Rare, Threatened, and Endangered species

Species or habitat	The project only distributes and installs improved cooking solutions.
Areas needed for habitat connectivity	The project only distributes and installs improved cooking solutions.

	Risks identified	Mitigation or preventative measure(s) taken
Habitats for rare, threatened, and endangered species	No risk identified	No risk identified
Areas for habitat connectivity	No risk identified	No risk identified

2.4.2 Introduction of species

N/A.

2.4.3 Ecosystem conversion

N/A.

3 IMPLEMENTATION STATUS

3.1 Implementation Status of the Project Activity

For the RDIS cookstove distribution project, the implementation status of the project activities during the monitoring period is progressing as planned. The project has distributed 39,622 **improved cookstoves to rural households**, with ongoing monitoring to ensure their continued use and proper functioning. Despite the delay in operating the project (the objective for Year 1 and year 2 was to install 25 000 stoves/year), no significant events have occurred that would negatively impact the GHG emissions reductions during this period. The project's performance remains in line with expected carbon dioxide removals, and the monitoring systems are fully operational.

Monitoring surveys, as well as audit from the Rwandan DNA showed a great adoption of the new stoves provided to households. All households equipped are using and are satisfied with the improved cooking solutions and the benefits they provide in terms of economics, health and other SDGs' contributions. There have been no changes to the project proponent or other key entities involved. RDIS continues to operate the project, with support from Anchor Eco as a consulting firm. Kiasi, the specialist in carbon project development, remains actively engaged in ensuring the project's operations align with carbon credit generation and sustainability goals.

3.2 Deviations

3.2.1 Methodology Deviations

PP did not request any deviations from the new VM0050 v1.0. methodology described in the PD (see section 3.2.2 for explanation on the methodology change.

3.2.2 Project Description Deviations

Methodology change

During the current monitoring period, the project activity has undergone a post-registration change consisting of a transition from: VM0006 – Methodology for Improved Cookstoves and Kitchen Regimes v1.2, to VM0050 – Energy Efficiency and Fuel-Switch Measures for Cookstoves v1.0.

This transition has been initiated to ensure alignment with the most recent approved methodology applicable to improved cookstove activities under the VCS Program and ensures the eligibility of the credits issued to the most demanding international scheme (CORSIA, compliance markets, ...).

The applicability of the new methodology has been added to the PD, which has also been reviewed to incorporate new requirements (such as dynamic baseline, for example).

The project activity has been assessed against all applicability conditions of VM0050 v1.0 and fully complies with all the requirements. The transition from VM0006 v1.2 to VM0050 v1.0 does not modify:

- The project boundary;
- The target population;
- The physical technology distributed;
- The fundamental baseline scenario (though PP has now establish a);
- The monitoring structure already implemented.

Emission reduction calculations for this monitoring period have been performed fully in accordance with VM0050 v1.0. As it is the first monitoring report submitted to VCSGS, no quantification ex-post was needed. All the following monitoring periods will use VM0050 v1.0 methodology.

SDG 12 addition

In addition to the methodology change described above, the Project Description has also been updated to include SDG 12 – Responsible Consumption and Production, reflecting the project’s contribution to improved biomass efficiency, reduced fuel consumption, and more sustainable household resource use. To date, the SDG12 was not considered as an SDG improved by the project activities. It has now been included and will be monitored, specifically by the amount of woodfuel saved yearly by the HHs. The process is described in the latest version of the PD.

Other minor changes to PD

In addition to the methodological change and inclusion of SDG indicators, the Project Document has undergone limited non-material revisions for clarity, completeness, and alignment with updated standard requirements. These revisions include: (i) editorial improvements and formatting corrections to enhance consistency across sections; (ii) refinement of the Stakeholder Consultation and Safeguards Assessment sections to provide clearer documentation of stakeholder engagement processes, grievance redress mechanisms, and environmental and social risk management measures; and (iii) incorporation of additional requirements introduced under the latest applicable version of the standard, including updated references, definitions, and cross-referencing to monitoring procedures.

These revisions are strictly clarificatory and administrative in nature. They do not alter the project boundary, baseline scenario, additionality demonstration, monitoring methodology, emission reduction calculations, ownership structure, or crediting period. No changes have been made to the quantification of GHG emission reductions or removals. Therefore, the environmental integrity and conservativeness of the project remain unaffected.

3.3 Grouped Projects

N/A. This is not a grouped project.

3.4 Baseline Reassessment

Did the project undergo baseline reassessment during the monitoring period?

☐ Yes

☒ No

4 DATA AND PARAMETERS

4.1 Data and Parameters Available at Validation

Parameters fixed ex ante and used to calculate baseline emissions:

Data / Parameter	EF _{b,i,CO2} EF _{p,i,CO2}
Data unit	tCO ₂ /TJ
Description	CO ₂ emission factor for non-renewable woody biomass (both baseline and project scenario)
Source of data	2006 IPCC Guidelines for National Greenhouse Gas Inventories; Volume 2 Energy, Chapter 2 Stationary Combustion
Value applied	112 tCO ₂ /TJ
Justification of choice of data or description of measurement methods and procedures applied	IPCC default for wood fuel as per applied approved methodology VM0050, v1.0
Purpose of data	Calculation of baseline emissions, calculation of project emissions
Comments	The value is fixed ex-ante

Data / Parameter	EF _{b,i,nonCO2} EF _{p,i,nonCO2}
Data unit	tCO _{2e} /TJ
Description	Non-CO ₂ emission factor for non-renewable woody biomass
Source of data	IPCC Default emissions factor
Value applied	9.46 tCO ₂ /TJ
Justification of choice of data or description of measurement methods and procedures applied	Default from IPCC for woodfuel
Purpose of data	Calculation of baseline and project emissions.

Comments	The value is fixed ex-ante
Data / Parameter	$NCV_{b,i}$ $NCV_{p,j}$
Data unit	TJ/ton
Description	Net calorific value of the non-renewable woody biomass that is substituted or reduced
Source of data	Default value from IPCC
Value applied	0.0156 TJ/t
Justification of choice of data or description of measurement methods and procedures applied	Default value from IPCC is used in methodology VM0050 v1.0.
Purpose of data	Calculation of baseline and project emissions.
Comments	The value is fixed ex-ante
Data / Parameter	Lifespan
Data unit	Number
Description	Expected life duration of the stoves.
Source of data	Manufacturer's specifications
Value applied	8 years
Justification of choice of data or description of measurement methods and procedures applied	Manufacturer provided documents certifying the expected life duration of the stoves liner they offer. Additionally, the Rwandan Board of Standards certified that this stoves model has a high durability (best score).
Purpose of data	Emission Reduction calculation
Comments	We have a monthly visit to the stove manufacture to evaluate proper manufacturing conditions. Fixed ex-ante.
Data / Parameter	$f_{NRB,y}$

Data unit	Fraction
Description	Fraction of woody biomass that can be established as non-renewable biomass
Source of data	Calculated with CDM TOOL 30 v 4.0. Calculation sheet will be provided on demand.
Value applied	91.7%
Justification of choice of data or description of measurement methods and procedures applied	Calculated with CDM TOOL 30 v 4.0. Calculation sheet will be provided on demand. Appendix 2 provides comparison and analysis of calculated value as required by TOOL30 v4.0.
Purpose of data	Calculation of project and baseline emissions
Comments	This value is fixed ex ante.

Data / Parameter	BC _{exante,b,i}
Data unit	Tons/year
Description	Ex-ante quantity of woody biomass used per baseline device type i
Source of data	Extracted from the baseline KPTs carried out before the project activities in the Rusizi district. As per option 1 proposed by the methodology for the estimation of this parameter.
Value applied	3.67 t/HH/year 10.07kg/HH/day
Justification of choice of data or description of measurement methods and procedures applied	This value was determined during the baseline survey through a Kitchen Performance Test5 (KPT v4.0 as defined by Clean Cooking Alliance) carried on 120 households of the Rusizi district. Data can be provided on demand. For 3 days, HHs wood consumption was carefully assessed (by weighing a predefined pile of wood) to estimate an average of the daily and yearly HHs fuelwood consumption.

⁵ <https://cleancooking.org/binary-data/DOCUMENT/file/000/000/604-1.pdf>

	These tests were carried out in accordance with the requirements from the latest version of “sampling and surveys for CDM project activities and programme of activities”: The conditions for cooking are homogeneous, as the method used by all HHs that will integrate the project are the 3 stones fire method. Therefore, only 1 sampling group is needed. For methodology purposes, the minimal number of surveys to be carried out was 100. To be conservative, we decided to survey 120 HHs. These surveys were carried out in various locations to be as representative as possible. Additionally, the monitoring period being longer than 1 year, the result may be extrapolated for the monitoring period, as stated in methodology. The value estimated through our KPTs do meet the 90/10 confidence criteria. We decided to refer to POA GS5047 African Improved Cookstoves and Clean Water Program for confirmation of the results. This Project is located in Nyungwe district, which is one of Rusizi’s neighboring districts. Both districts are part of the western region of Rwanda. The close location and similar type of Project made it appropriate. In this project, KPTs were carried out to evaluate Pby, the specific fuel consumption for an individual technology in baseline scenario b during year y. Pby is therefore the GS equivalent for Bold,HH. KPTs were audited by a VVb and the Project is certified. The value used in the PD is of 0.011 t/day of fuelwood for 1 HH. The value has been reviewed every 2 years for good practice. The latest value used and referred to in monitoring report is 0.01031 t/day (from a 2019 survey). However, $0.01031 \times 365 = 3.76$ t of fuelwood/HH/year. We kept the most conservative of both values, therefore 3.67 t/HHs/year.
Purpose of data	Calculation of baseline emissions
Comments	This value is fixed ex-ante for the entire crediting period but shall be confirmed with KPTs at least every 2 years.
Data / Parameter	Hhi Hhj,k
Data unit	Equivalent standard male adults

Description	Average HH size of the target population using device type i Average HH size of the target population using device type j from batch k
Source of data	Baseline Kitchen surveys, baseline KPTs, project KPTs
Value applied	3.9
Justification of choice or description of measurement methods and procedures applied	Regarding the surveys: - VCS requires a minimum of 100HHs sample, we plan to run 120 HHs surveys to ensure conformity. We also plan to ensure that HHs from various locations and different stoves' ages will be part of the sample. - 90/10 precision compared to estimated value.
Purpose of data	Cross checking fuel and energy consumption values
Comments	This value is fixed ex-ante but will be regularly measured to during surveys and annual KPTs.

Data / Parameter	u_d
Data unit	%
Description	Uncertainty deduction for $f_{NRB,y}$
Value applied	26%
Source of data	Estimated based on uncertainty requirements : The following uncertainty deduction must be applied, depending on the procedure for $f_{NRB,y}$ used from VM0050v1.0: 1) If the default value for $f_{NRB,y}$ from TOOL33 is applied: $ud = 0$ 2) If $f_{NRB,y}$ is calculated as per TOOL30: $ud = 26\%$ 3) If $f_{NRB,y}$ from an approved standardized baseline is applied: $ud = 26\%$
Justification of choice of data or description of measurement methods and procedures applied	$f_{NRB,y}$ was calculated with TOOL 30, therefore this uncertainty shall be applied.
Purpose of data	Calculation of ERs
Comments	This value is fixed ex ante

Data / Parameter	Adj_{LE}
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Data unit	-
Description	Discount factor to account for leakage related to the non-renewable woody biomass saved by the project activity
Source of data	as described in the methodology VM0050 v1.0 section 8.3
Value applied	0.95
Justification of choice of data or description of measurement methods and procedures applied	Default value
Purpose of data	Calculation of project and baseline emissions
Comments	This value is fixed ex ante.

4.2 Data and Parameters Monitored

Data / Parameter	$N_{j,k,y}$
Data unit	Number
Description	Number of project devices of type I and batch j commissioned
Source of data	Project Database
Description of measurement methods and procedures to be applied	TDR: carbon transfer form will give the date of commissioning for each stove. These dates and CTFs are stored within the project database.
Frequency of monitoring/recording	Yearly
Value monitored	Over the first 2 years of activities, Kiasi and RDIS distributed 39 622 fixed improved cookstoves: - 19 406 stoves distributed in year 1 (15-May-2023 to 14-May-2024) - 20 216 stoves in year 2 (15-May-2024 to 14-May-2025)
Monitoring equipment	Excel database. CTFs. KoboToolbox

QA/QC procedures to be applied	-
Purpose of the data	Calculation of Emission Reductions
Calculation method	Extracted from the database.
Comments	-

Data / Parameter	Date of commissioning of batch j
Data unit	Date
Description	Date on which each stove is distributed and installed in a batch. Each individual stoves distributed are considered as separate batches.
Source of data	Project Database
Description of measurement methods and procedures to be applied	TDR: carbon transfer form will give the date of commissioning for each stove. These dates and CTFs are stored within the project database.
Frequency of monitoring/recording	Yearly
Value monitored	See ER calculation sheet. Each stove has its date.
Monitoring equipment	Excel database. CTFs. KoboToolbox
QA/QC procedures to be applied	-
Purpose of the data	Calculation of Emission Reductions
Calculation method	Extracted from the database.
Comments	-

Data / Parameter	Date of commissioning of project device i
Data unit	Date
Description	Date on which each stove was distributed and installed was commissioned.

Source of data	Project Database
Description of measurement methods and procedures to be applied	CTFs are dated from the date of installation of the ICS. Kiasi and RDIS hold a database that includes: Each device distributed. Indication to identify the stove: unique ID number, GPS coordinates. The information of the beneficiaries: name, address, phone number when available This database will be referred to for evaluation of the precise number of devices commissioned. Additionally, please note CTFs are signed only when the stove is commissioned (1 week after installation to allow for the material to dry)
Frequency of monitoring/recording	Yearly
Value monitored	See ER calculation sheet. Each stoves has its date.
Monitoring equipment	Excel database. CTFs. KoboToolbox
QA/QC procedures to be applied	-
Purpose of the data	Calculation of Emission Reductions
Calculation method	Extracted from the database.
Comments	-

Data / Parameter	$BC_{b,i,y}$
Data unit	Tons/year
Description	Fuel used per baseline device type I in year y
Source of data	Extracted from the baseline follow up KPTs carried out every 5 years in the Rusizi district. As per option 1 proposed by the methodology for the estimation of this parameter.
Description of measurement methods and procedures to be applied	This value will be determined during the baseline survey through a Kitchen Performance Test6 (KPT v4.0 as defined by Clean Cooking The value estimated through our KPTs shall meet the 90/10 confidence-precision criteria. A difference

⁶ <https://cleancooking.org/binary-data/DOCUMENT/file/000/000/604-1.pdf>

	representing over 30% from the fixed values would need justifications.
Frequency of monitoring/recording	Every 5 years
Value monitored	Baseline stoves consumption
Monitoring equipment	Pot, appropriate amount of wood, thermometer, 3-stones fires, Water, scale
QA/QC procedures to be applied	-
Purpose of the data	Calculation of Baseline Emissions and Emission Reductions
Calculation method	Baseline KPTs on a pool of 120 HHs not equipped with improved cookstoves that will be followed throughout the project lifespan.
Comments	-

Data / Parameter	$BC_{p,j,k,y}$
Data unit	Tons/year
Description	Average quantity of fuel used by project device type j from batch k during year y
Source of data	Extracted from the project follow up KPTs carried out every 1 to 2 years in the Rusizi district, as per option 1 proposed by the methodology for the estimation of this parameter. Project KPTs were run in September 2025 on 60 stoves from year 1 and 60 stoves from year 2, totaling 120 KPTs run.
Description of measurement methods and procedures applied	This value will be determined during the baseline survey through a Kitchen Performance Test (KPT v4.0 as defined by Clean Cooking, see footnote 6). The value estimated through our KPTs shall meet the 90/10 confidence-precision criteria. Additional information about this criterion is given further in this document (refer to the monitoring section).
Frequency of the monitoring	Annual or biennale
Value monitored	We obtained 2 different values for the stoves: - Stove under 1-year old: 4.58kg/HH/day=1.67t/HH/y - Stove with age from 1 to 2 years-old: 3.7kg/HH/day=1.35t/HH/y

Monitoring equipment	Scales, forms, ...
QA/QC procedures to be applied	-
Purpose of data	Calculation of project emissions
Calculation method	Project KPTs on a pool of 120 HHs equipped with improved cookstoves randomly selected within the database. Among the 120 HHs, 60 were from year 1 and 60 from Year 2
Comments	-

Data / Parameter	$n_{y,i,j}$
Data unit	Number
Description	Proportion of commissioned project devices of type i and batch j ($N_{j,k,y}$) that remain operating in year y
Source of data	Project surveys (usage surveys)
Description of measurement methods and procedures to be applied	Based on a representative sample. A simplified approach proposed in option (b) under Section 8.4 of the VM0050 v1.0 methodology will be used for determining the minimum sample size.
Frequency of monitoring/recording	At least once every two years
Value monitored	Usage rate
Monitoring equipment	Surveyors may need transportation and office equipment during the surveys.
QA/QC procedures to be applied	Regarding the surveys: - VCS requires a minimum of 100HHs sample, we plan to run 120 HHs surveys to ensure conformity. We also plan to ensure that HHs from various locations and different stoves' ages will be part of the sample. 90/10 precision compared to estimated value. This criterion is more precisely explained further in that document, under the monitoring section. For this monitoring period, 2 usage surveys were conducted: - First Usage survey was conducted in August 2024 for the batch of stoves distributed in year 1. - Second Usage survey was conducted in September 2025 for both stoves Age 1 and stoves Age 2

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
Comments	For calculation purposes, the value used is 90%, as the values measured are above 90% cap. Additional information is available further in the document under monitoring section.

4.3 Monitoring Plan

The Monitoring Plan applied in this project involves several key elements that ensure that the PP and/or project implementer have 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 methodology VM0050 version 1.0.

Role and Responsibilities

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

Data monitored

The table below provides a summary of the data requirements for field measurements:

Table 2: Parameters to be monitored and values obtained

Parameter to be Monitored	Description	Method of Data Collection
$N_{j,k,y}$	Number of project devices of type I and batch j commissioned	Project database: our database collects all information on the stoves distributed: date of commissioning, HHs information (name, address, phone number if available), GPS coordinates, ID number, ...
$n_{y,i,j}$	Proportion of commissioned project devices of type i and batch j ($N_{0,i,j}$) that remain operating in year y	Usage surveys of 120 HHs of ICS users randomly selected from the database following 90/10 precision requirement. In this 120 HHs, 60 were from year 1 distribution list and 60

		were from year 2 distribution list.
$BC_{p,j,k,y}$	Average quantity of woodfuel used per project device type j from batch k during year y	KPTs or direct measurement with a required precision of 90/10 to be fulfilled. Biennale or annual
$BC_{b,j,y}$	Average quantity of woodfuel used per baseline device type j during year y	Follow up baseline surveys (KPTs) to be performed every 5 years. Must follow a 90/10 precision criteria. If the difference between fixed ex-ante values and follow up values is over 30%, the value used may have to be updated in the calculation. This value was not measured this year but will be updated in one of the following MP.

Project surveys include:

- Usage surveys will be run annually and used to gather information on stove usage patterns and to explore changes in project scenario over time, in terms of cooking as well as in terms of SDGs contribution (health indicators, gender indicators, ...). The proportion of commissioned devices that remain operated will be extracted from the results of these surveys:
 - a. First Usage survey was conducted in August 2024 for the batch of stoves distributed in year 1.
 - b. Second Usage survey was conducted in September 2025 for both stoves Age 1 and stoves Age 2
- Project KPTs will be run annually to evaluate the average annual quantity of wood fuel used per project device per year. Different stove age categories will be represented in project surveys:
 - a. Project KPTs were run in September 2025 on 60 stoves from year 1 and 60 stoves from year 2, totaling 120 KPTs run.

The forms used while carrying out the annual project surveys can be provided on demand.

The sampling for this MP was carried out in July 2025, therefore after the end of the monitoring period, ensuring it covers all stoves distributed before the end of MP1.

Baseline surveys included:

- Kitchen surveys collect data on stove usage patterns and monitor the project's evolving impact on cooking practices and SDG contributions (including health and gender indicators) over time. This baseline survey was added this year and will be periodically reassessed.
- Baseline KPTs will be conducted every 5 years. This was not conducted as part of this monitoring period.

A specific cohort of 120 households (HHs) cooking with wood fuel and 3-stone fires was established (surveyed) in S2 2025 and will be monitored at least every 5 years. Crucially, these HHs will not receive an improved cookstove. The follow-up Kitchen Performance Tests (KPTs) and usage surveys for this cohort will begin in 2027.

The parameters to be monitored by project surveys include the parameters listed above in table 2. Monitoring more than one parameter within the same sample (households) can reduce travel needs and associated costs while ensuring random selection of samples for every parameter. The individual users will be randomly selected from the project database. Geographical locations are assumed to have no influence on the parameters; however, we will ensure that the sampling plan always include HHs spread within the whole district to account for unexpected discrepancies. The random sample will be reselected for each monitoring period to ensure it remains random, except for baseline data which will use the same pool of unequipped HHs, and trained personnel from the project Implementor or PP team conducts the surveys within the end date of the project monitoring periods.

Data collection and storage

The sampling plan incorporates various measures to ensure high-quality data. The PP ensures that the field personnel comprehend the monitoring plan and achieve the minimum sample size during each monitoring session and document any refusals or non-responses. The project implementer and/or field team is trained appropriately before each survey to minimize bias while surveying households. To ensure random selection of replacement households, an additional number of households will be selected in addition to the minimum sampling requirements. The use of well-designed questionnaires and rigorous testing will be employed to minimize interviewer bias. Hard copies of surveys will be stored in-country, while mobile monitoring data collection tool surveys will be backed up online by the PP and project database. All monitored data required for verification and issuance will be kept for two years beyond the end of the crediting period or the final issuance of VCU for the project activity.

Assessment for Leakage:

According to methodology VM0050, version 1.0, section 8.3: Leakage shall be considered as default 0.95. Therefore, a default value of 0.95 will be applied to account for leakage.

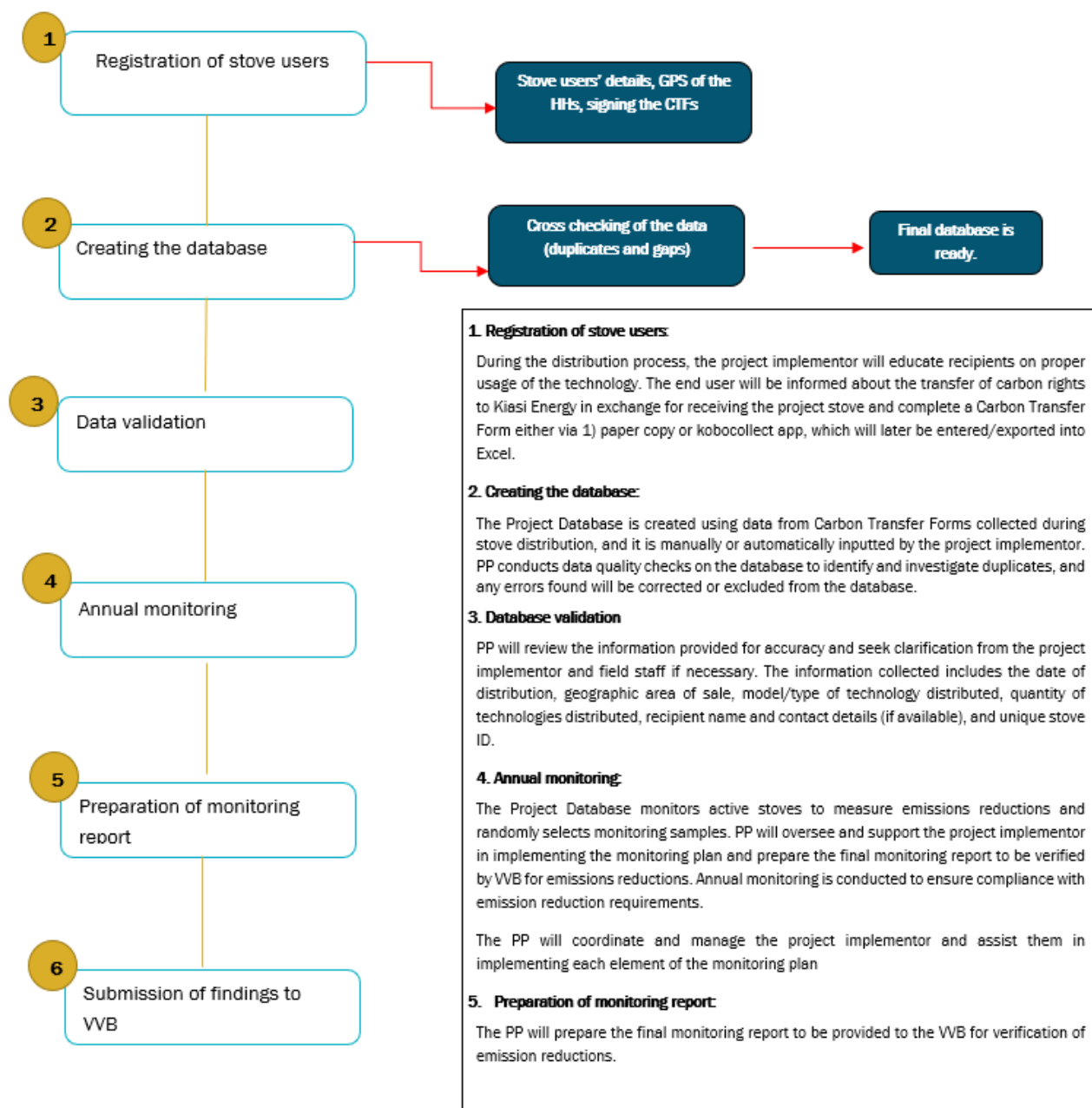


Figure 3 Continuous follow-up of activities - Roles and responsibilities

Continuous monitoring activities

Continuous monitoring: Kiasi and RDIS ensure continuous updates of the database all year long, cleaning mistakes when identified to provide a precise, detailed and accurate overview of activities in the database.

Awareness campaigns are also organized for beneficiaries to be involved, informed and trained on stove usage.

Trainings: several trainings were organized as needed for enumerators, surveyors or other employees to ensure proper usage of the tools provided by Kiasi, including surveys and kobo toolbox usage.

Figure 3 shows the overall process established for monitoring the project activities and impacts.

Internal audits consisted of a continuous data cleaning process. The database was updated weekly, and errors or missing information identified during reviews were corrected in the following week. This iterative process ensured data accuracy and reliability. Several trainings were organized to improve enumerators abilities during the year.

Photo below shows one of the sessions of enumerators training carried out this year.



Figure 4 Enumerators' training

Our database collects information:

- on the stoves distributed: date of commissioning, GPS coordinates, ID number,...
- on HHs' information: name, address, phone number if available.

The database also contains all CTFs signed by the beneficiaries.

Sampling and preparation of the monitoring surveys

Since a single stove type was distributed, the population is homogeneous in terms of technology and performance characteristics. However, stratified random sampling was applied to account for differences in stove age. Two strata were defined based on the year of distribution: stoves distributed in Year 1 (Y1, between one and two years old) and stoves distributed in Year 2 (Y2, less than one year old). Through this year's surveys, we are evaluating two different parameters, as per the monitoring plan described in the PD:

$n_{y,i,j}$	Proportion of commissioned project devices of type i and batch j ($N_{0,i,j}$) that remain operating in year y	Usage surveys of 120 HHs of ICS users randomly selected from the database following 90/10 precision requirement
$BC_{p,j,k,y}$	Average quantity of woodfuel used per project device type j from batch k during year y	KPTs or direct measurement with a required precision of 90/10 to be fulfilled. Biennale or annual

To evaluate the total sample size for each stove's age, Kiasi followed the guidance of the **CDM methodology** for both the proportion parameters and mean parameters (as both are needed) and selected the highest size to stay conservative. Both equations are given by the CDM methodology:

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

For proportion parameter and mean parameters, the variance calculation differs slightly. The full calculation is available in the excel sheet *General database J072025_SAMPLING*, shared to VVB and standard as a supporting document.

After calculation, we obtained :

- For the **proportion** of commissioned project devices that remain operating :

$$n_1 \geq 31 \text{ and } n_2 \geq 38$$

- For the **average** quantity of woodfuel used per project device:

$$n \geq 5$$

Therefore, to ensure conservativeness, we chose to survey 60 HHs of each age groups. The final sample sized chosen is the following :

$$n_1 = 60 \text{ and } n_2 = 60$$

Random Sampling description

Random sampling was implemented within each stratum by assigning every stove in the project database a random number between 0 and 1 using Microsoft Excel. For each stratum, the 60 stoves with the smallest random numbers were selected for the primary sampling list, while the 60 stoves with the highest random numbers were designated as a backup list. Both lists were archived and can be provided upon request.

The random numbers obtained for each HH, as they are automatically updated by the excel sheet regularly, have been copied and pasted for reference in the excel document. Both selected list (Y1 and Y2) are available in the supporting file *General database J072025_SAMPLING*.

Precision check requirements

Once the suveys were realized in September 2025, the methodology also required from Kiasi and RDIS to confirm the precision of the data obtained. This is presented in the table below and calculations are available in the supporting documents.

Value	Precision criteria	Expected value	Measured value	Precision satisfied?
$n_{y,i,j}$	90/10	100%	95%	Yes: Precision check was calculated for proportion obtained and satisfies the required criteria (see 20251127_US_Rusizi 2025_MP1)
$BC_{p,j,k,y}$	90/10	~4kh/HH/day	Stove under 1-year old: 4.58kg/HH/day=1.67t/HH/y Stove with age from 1 to 2 years-old: 3.7kg/HH/day=1.35t/HH/y	Yes: Precision check was carried out on both values, as well as on HH size obtained through the surveys. All values satisfy the required criteria. (see 202510_Rusizi_KPT_RW_MP1)

Organizational structure, responsibilities, and competencies of personnel

Monitoring activities on the database are carried out by Kiasi Energies, Anchor Eco (Kiasi's partner) and RDIS all year long.

Monitoring surveys were implemented by RDIS staff under the supervision of Anchor Eco and Kiasi consulting firms. These teams ensured proper training and maintained the necessary competencies to carry out all monitoring-related tasks effectively. A few professional surveyors from Kigali were added to the team for the purpose of monitoring. All surveyors took part in a training session on 12-August-2024 and 13-August-2024 for the first's year surveys and in September 2025 for the second year's surveys.

The usage surveys relied on surveys rather than calibrated equipment. Data entry was carried out digitally via Kobo toolbox with restrictive survey formats to minimize entry errors, which also facilitated real-time

recording and ensured consistent data storage. Aggregation and collation were performed in an Excel document. Data were collecting using smartphones, including GPS coordinates and stove pictures.

Data extracted for carbon quantification

The table below provides a summary of the data requirements for field measurements:

Table 3: Parameters monitored

Parameter monitored	Description	Method of Data Collection	Value for 1 st monitoring period
$N_{j,k,y}$	Number of project devices of type I and batch j commissioned	Project database: our database collects all information on the stoves distributed: date of commissioning, HHs information (name, address, phone number if available), GPS coordinates, ID number, ...	19 406 stoves distributed and installed during the 1 st year of activities 20 216 stoves distributed and installed during the 2 nd year of activities
$n_{y,i,j}$	Proportion of commissioned project devices of type i and batch j ($N_{0,i,j}$) that remain operating in year y	Usage surveys of 120 HHs of ICS users randomly selected from the database following 90/10 precision requirement. In these 120 HHs, 60 were from year 1 distribution list and 60 were from year 2 distribution list.	Usage rate obtained in year 1: 95% Usage rate obtained in year 2: 95% As this value is capped, the value for calculation will be 90%.
$BC_{p,j,k,y}$	Average quantity of wood fuel used per project device type j	KPTs or direct measurement with a required precision of 90/10 to be fulfilled. Biennale or annual	We obtained 2 different values for the stoves: - Stove under 1-year old: 4.58kg/HH/day=1.67t/HH/y

	from batch k during year y		- Stove with age from 1 to 2 years-old: 3.7kg/HH/day=1.35t/HH/y
$BC_{b,j,y}$	Average quantity of wood fuel used per baseline device type j during year y	Follow up baseline surveys (KPTs) to be performed every 5 years. Must follow a 90/10 precision criteria. If the difference between fixed ex-ante values and follow up values is over 30%, the value used may have to be updated in the calculation.	This value was not measured this year but will be updated in one of the following MP.

Many other social indicators were extracted from these surveys. They are detailed in the SDG section, and in the SD Vista monitoring report.

5 QUANTIFICATION OF GHG EMISSION REDUCTIONS AND REMOVALS

5.1 Baseline Emissions

Baseline emissions are calculated as follows:

$$BE_y = \sum_{i,j,k} EC_{i,y} * N_{j,k,y} * n_{j,k,y} * (EF_{b,i,CO2} * f_{NRB,y} * (1 - u_d) + EF_{b,i,nonCO2})$$

(Equation 1)

Where:

Variable	Meaning	Project value
BE_y	Baseline emissions during year y (t CO2e)	Calculated from equation 1

$EC_{i,y}$	Average energy consumption of baseline device type i in year y (TJ)	Calculated from equation 2 (below)
$N_{j,k,y}$	Number of commissioned project devices of type j from batch k in year y	1 Calculation provided here will account for 1 operating stove. Overall, the project aims to distribute 100 000 stoves.
$n_{j,k,y}$	Proportion of commissioned project devices of type j from batch k that remain operating in year y (fraction)	1 Calculation provided here will account for 1 operating stove. During monitoring, usage rate will be surveyed and accounted for in calculation.
EF_{b,i,CO_2}	CO2 emission factor for fuel used by baseline device type i in the baseline scenario (t CO2/TJ)	112 tCO ₂ /TJ <i>(IPCC default for wood fuel)</i>
$f_{NRB,y}$	Fraction of woody biomass that is established to be non-renewable used by baseline device in year y; this variable is not considered for fossil fuels (fraction)	0.917 <i>(calculated with TOOL 30)</i>
u_d	Uncertainty associated to the calculation of $f_{NRB,y}$ and to be removed, as required by tool 30.	0.26
$EF_{b,i,nonCO_2}$	Non-CO2 emission factor for fuel used by baseline device type i in the baseline scenario (t CO2e/TJ)	9.46 tCO _{2eq} /TJ <i>(IPCC default for wood fuel)</i>
i	Baseline device type and its respective fuel type	i=1 <i>All beneficiaries were initially cooking with three stones fires (firewood)</i>
j	Project device type and its respective fuel type	j=1 as the project activities only provides 1 type of stoves which uses firewood.

Average Energy Consumption of Baseline Device ($EC_{i,y}$)

The average energy consumption of baseline device is calculated as follows:

$$EC_{i,y} = BC_{b,i,y} * NCV_{b,i}$$

(Equation 2)

Table 4: Parameters used to calculate Average energy Consumption of Baseline Devices

Variable	Meaning	Project value
$EC_{i,y}$	Average energy consumption of baseline device type i in year y (TJ)	Calculated from equation 2
$BC_{b,i,y}$	Fuel used per baseline device type i during year y	3.67 t/stove/year <i>Extracted from baseline surveys previously audited.</i>
$NCV_{b,i}$	Net calorific value of baseline fuel for baseline device type i	0,0156 TJ/tonne <i>(IPCC default for woodfuel)</i>

From equation 1 and 2, detailed above, and from the values detailed in the tables above for each variable, we obtain a baseline emissions value of:

$$BE_y = 3.67 \frac{t}{y} / stove = \frac{10.07kg}{day} / stove$$

5.2 Project Emissions

Project emissions will be calculated as follows:

$$PE_y = PE_{energy,y} + PE_{others,y}$$

(Equation 3)

Variable	Meaning	Project value
PE_y	Project emissions during year y (t CO2e)	Calculated yearly from equation 3
$PE_{energy,y}$	Project emissions from energy consumption of project devices in year y (t CO2e)	Calculated from equation 4 (below)

$PE_{others,y}$	Project emissions from other sources in year y (t CO2e)	Calculated from equation 5 (below)
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Project emissions from energy consumption (woodfuel) of project devices in year y will be calculates as follows:

$$PE_{energy,y} = \sum_j \sum_k BC_{p,i,k,y} * N_{j,k,y} * NCV_{p,j} * n_{j,k,y} * (EF_{p,i,CO2} * f_{NRB,y} * (1 - u_d) + EF_{p,i,nonCO2})$$

(Equation 4)

Variable	Meaning	Project value
$PE_{energy,y}$	Project emissions from energy consumption of project devices in year y (t CO2e)	Calculated from equation 4
$BC_{p,i,k,y}$	Average quantity of woodfuel used per project device type j from batch k during year y	First year: 1.67t/HH/year Second year: 1.35t/HH/year
$N_{j,k,y}$	Number of stoves of type j from batch k installed in year y.	1 (1 batch =1 stove) Distributed year 1: 19 406 Distributed year 2: 20 216
$NCV_{p,j}$	Net calorific value of baseline fuel for baseline device type i	0,0156 TJ/tonne (IPCC default for woodfuel)
$n_{j,k,y}$	Proportion of commissioned project devices of type j from batch k that remain operating in year y	90% (We obtained a value of 95% but this parameter is capped at 90%) Approximation for 1 stove still operating
$EF_{p,i,CO2}$	CO2 emission factor for fuel used by baseline device type i in the baseline scenario	112 tCO2e/TJ Default for woodfuel in the most recent version of the IPCC
$f_{NRB,y}$	Fraction of woody biomass that is established to be non-renewable used by	91.7%

	baseline device in year y; this variable is not considered for fossil fuels	<i>Calculated from TOOL30 and applying a deduction of 26%</i>
u_d	Uncertainty associated to the calculation of $f_{NRB,y}$ and to be removed, as required by tool 30.	0.26
$EF_{p,i,nonCO2}$	Non-CO2 emission factor for fuel used by baseline device type i in the baseline scenario	9,46 tCO2e/TJ <i>Default for wood fuel in the latest version of IPCC</i>

Number of Improved cookstoves $N_{0,i,j}$

Each batch is represented by 1 stove. The number of stoves distributed is stored in the database describing project activities. In year 1, Kiasi distributed 19 406 stoves. In Year 2, Kiasi distributed 20 126 stoves.

Each broken stove will be replaced. To account for the evolution of stoves still in use, we have estimated the following usage rates from the Usage surveys.

Year	Usage Rate measured through Usage surveys	Capped at
Year 1 (15-May-2023 to 14-May-2024)	95%	90%
Year 2 (15-May-2024 to 14-May-2025)	95%	90%

Across both the 2024 and 2025 household surveys, all respondents reported using the improved cookstove (ICS) on a daily basis (Source: Usage Survey 2024; Usage Survey 2025). In the 2025 survey, however, 9% of households indicated that they continued to use the traditional three-stone fire in addition to the ICS.

To reflect this partial adoption, we assumed that households using both systems split their cooking activities equally between the ICS and the baseline stove. Accordingly, these households were counted as contributing 50% ICS usage and 50% baseline stove usage in the calculations. From this, we obtained a Usage rate of 95%.

And all other non-energy consumption emissions related to the project will be accounted for with the following equation:

$$PE_{others,y} = PE_{transp,y} + PE_{prod,y} + PE_{fugitive,y} + PE_{backup,y}$$

(Equation 5)

Variable	Meaning	Project value
$PE_{others,y}$	Project emissions from other sources in year y (t CO ₂ e)	0 tCO ₂ e/y <i>Calculated from equation 5</i>
$PE_{transp,y}$	Project emissions due to fuel transportation in year y (t CO ₂ e)	0 tCO ₂ e/y <i>To be estimated where the average transportation distance is greater than 200 km. This is not the case as wood is collected or purchased within the rusizi district (75km wide).</i>
$PE_{prod,y}$	Project emissions due to fuel production in year y (t CO ₂ e)	0 tCO ₂ e/y <i>Determined with CDM TOOL16 Project and Leakage Emissions from Biomass; Project do not cultivate biomass, nor uses wood waste as biomass. Therefore, this factor is set to 0.</i>
$PE_{fugitive,y}$	Fugitive emissions in year y (t CO ₂ e)	0 tCO ₂ e/y <i>NA: we only distribute firewood stoves, not charcoal</i>
$PE_{backup,y}$	Project emissions from backup generators in year y (t CO ₂ e)	0 tCO ₂ e/y <i>NA: The project stoves do not use electricity</i>

5.3 Leakage Emissions

Leakage emissions associated with reduced or avoided use of non-renewable biomass will be accounted for by introducing a 0.95 factor applied to GHG ER calculation equation (see equation 6 below)

5.4 GHG Emission Reductions and Carbon Dioxide Removals

Yearly emission reductions will be calculated from the previously obtained values using the following equation:

$$ER_y = (BE_y + PE_y) * 0.95 - LE_{RB,y}$$

(Equation 6)

Variable	Meaning	Project value
ER_y	Emission reductions during year y (t CO ₂ e)	Calculated from equation 6
BE_y	Baseline emissions during year y (t CO ₂ e)	Calculated from equation 1
PE_y	Project emissions during year y (t CO ₂ e)	Calculated from equation 3, 4, 5
$LE_{RB,y}$	Leakage emissions associated with use of renewable biomass during year y (t CO ₂ e)	0 Accounted for in equation 1 and 2 by retrieving 26% to the calculated fNRB.

Emission Reductions

Those equations 1 to 6 give us the net GHG emission reductions in tCO_2eq , available in Table 5.

Table 2: Emission reductions and VCUs by vintage for first monitoring period

Vintage period	Baseline emissions (tCO ₂ e)	Project emissions (tCO ₂ e)	Leakage emissions (tCO ₂ e)	Reduction VCU (tCO ₂ e)	Removal VCU (tCO ₂ e)	Total VCU (tCO ₂ e)
15-May-2023 to 31-December-2023	17,927	8,153	489	9,285	0	9,285
01-January-2024 to 31-December-2024	96,179	38,990	2,859	54,330	0	54,330
01-January-2025 to 14-May-2025	58,111	23,704	1,720	32,686	0	32,686
Total	172,217	70,848	5,068	96,301	0	96,301

ER comparison with ex ante values vintage-wise

STEP 1: Extract Y1 and Y2 ex ante calculation from the PD (which is the period covered by MP1)

Year	Vintage period	Active stoves	Estimated baseline emissions (tCO2e)	Estimated project emissions (tCO2e)	Estimated leakage emissions (tCO2e)	Estimated reduction VCU (tCO2e)	Estimated removal VCU (tCO2e)	Estimated total VCU (tCO2e)
Year 1	15-05-2023 to 14-05-2024	22500	110255	45438	3241	61576	NA	61576
Year 2	15-05-2024 to 14-05-2025	45000	220509	90875	6482	123152	NA	123152

STEP 2: Split total estimated VCU by vintages rather than year of activity.

Assumptions:

- Y1 covers both vintage 2023 (for 6,5 months) and vintage 2024 (for 5,5 months). It has been decided to account for half of the Y1 ER for each vintage.
- Y2 covers both vintage 2024 (for 6,5 months) and vintage 2025 (for 5,5 months). It has been decided to account for half of the Y1 ER for each vintage.

Which gives the following table:

Table 6: Repartition of ex ante ERs by vintage

Vintage	Vintage period	Ex-ante estimated reductions/
Vintage 2023	15-05-2023 to 31-12-2023	30788
Vintage 2024	01-01-2024 to 31-12-2024	92364
Vintage 2025	01-01-2025 to 14-05-2025	61576
Total		184729

STEP 3: proceed with the comparison

Tableau 7 Comparison between ex ante values by vintage and achieved reductions by vintage

Vintage period	Ex-ante estimated reductions/	Achieved reductions/	Percent difference	Explanation for the difference
15-05-2023 to 31-12-2023	30788	9285	70%	Several reasons explain those discrepancies: - Distribution rate of the stoves smaller than expected during Y1 of the project. - Ex-ante ER are not calculated by vintage, therefore assumptions were made to make this comparison (step 2 just above) - Ex-ante ER accounts for each stoves as having performed during 365 days, though the achieved reduction takes into account the precise number of days of operation (ie: a stoves distributed on 12/12/2023 only accounts for 19 days of ER for vintage 2023, not 365).
01-01-2024 to 31-12-2024	92364	54330	41%	
01-01-2025 to 14-05-2025	61576	32686	47%	
Total	184729	96301	48%	

APPENDIX 1: COMMERCIALLY SENSITIVE INFORMATION

Section	Information	Justification
-	End users' information	The geographic coordinates, phone numbers, and other personal information related to end-users are not to be disclosed. This information is not shared within this monitoring report but is part of the database shared as a supporting document.
-	Financial information & ER sheet calculation	ER sheet calculation and financial information are meant to remain confidential.

Among the supporting documents, 2 have been reviewed to remove information on the end users, the one related to sampling, and the one related to ER calculation.

APPENDIX 2: PHOTOS OF THE AWARENESS CAMPAIGN



Campaign in Nyakabuye Sector (left) and in Mururu Sector (right)



Campaign in Muganza Sector (left) and in Rwimbogo Sector (right)



Campaign in Gashonga Sector (left and right)



Campaign in Gihundwe Sector (left and right)



Campaign in Bweyeye Sector (left and right)



Campaign in Bugarama sector (left and right)



Households visit to witness current situation of cookstove