MONITORING REPORT

PUBLICATION DATE of template **14.10.2020**

VERSION of template **v. 1.1**

RELATED SUPPORT **- TEMPLATE GUIDE Monitoring Report v. 1.1**

This document contains the following Sections

KEY PROJECT INFORMATION

This template has been revised to aid a consistent interpretation and to better support project developers submitting documentation for certification. Please read the accompanying guide to understand how to complete this template accurately. **TEMPLATE GUIDE Monitoring Report v. 1.1**

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Key Project Information

GS ID (s) of Project (s)	NONE
Title of the project (s) covered by monitoring report	Efficient & Healthy Cooking in Masaka Diocese
Version number of the PDD/VPA-DD (s) applicable to this monitoring report	8
Version number of the monitoring report	2.0
Completion date of the monitoring report	31/03/2025
Date of project design certification	28/09/2020
Date of Last Annual Report	NONE
Monitoring period number	4
Duration of this monitoring period	01/10/23 to 30/09/24
Project Representative	Fr. Peter Paul Ssemakula
Host Country	Uganda
Activity Requirements applied	☒ Community Services Activities ☐ Renewable Energy Activities ☐ Land Use and Forestry Activities/Risks & Capacities ☐ N/A
Methodology (ies) applied and version number	Gold Standard Simplified Methodology for Efficient Cookstoves (Version 1.1, April 2020)
Product Requirements applied	☒ GHG Emissions Reduction & Sequestration

	☐ Renewable Energy Label ☐ N/A

Table 1 - Sustainable Development Contributions Achieved

Sustainable Development Goals Targeted	SDG Impact	Amount Achieved	Units/ Products
1 – Goal 13 (Target 13.3.)	Emissions Reductions	8753	tCO2
2 – Goal 7 (Target 7.1)	Installation of ICS	1961	ICS
3 – Goal 3 (Target 3.9)	Improved air quality	1943	HH

Table 2 – Product Vintages

		Amount received
Start Dates	**End Dates**	**VERs**
01/10/2020	30/09/2021	2827
01/10/2021	30/09/2022	2721
01/10/2022	30/09/2023	2526
01/10/2023	30/09/2024	679

SECTION A. DESCRIPTION OF PROJECT

A.1. General description of project

The Caritas Masaka Diocesan Development Organization (Caritas MADDO) is implementing the project "Efficient and Healthy Cooking in rural Masaka" which aims to change traditional cooking stoves to energy-efficient wood cook stoves to rural and suburban households in 9 districts of the Masaka Dioceses (Masaka, Bukomansimbi, Kyotera, Rakai, Kalungu, Lyantonde, Ssembabule, Kalangala and Lwengo) in southwestern Uganda.

Description of the project stove:
The selected project stove was referred to as the brick rocket double pot stove; a continuous fed fixed firewood household stove, with two L-shaped combustion chambers out of fired clay, insulated with fragments of half facing bricks, and pot "skirt" (where the pot is sunken into the stove) reinforced with a metal ring, to improve heat transfer and combustion efficiency during cooking activities. These pot openings are adapted to the size of the pots mainly used in the household. The project stove is a in-situ double pot stove with an efficiency of 28.75% as tested by the regional testing center CREEC in Kampala.

The main baseline stove is a traditional 3 stone fire which is set to have an efficiency of 10% only. Conventional stoves are considered as baseline stoves as well if they are of the following types:

- Broken lorena stove
- Intact lorena stove without grate or chimney
- Conventional stove without grate or chimney
- Inefficient / simple brick stove without grate or chimney

The stove body is made of industrially but locally produced half facing bricks ("hollow bricks" with air pockets) and has a metal frame that protects the upper edges. The bricks are aligned in a systematic fashion to allow regulation of air during the functioning of the stove, while the sand mixed with cement ensures that there is a strong bond between the bricks and ensures the durability of the components. The chimney is made of galvanized sheet metal and is adapted to the respective kitchen design and the room height.

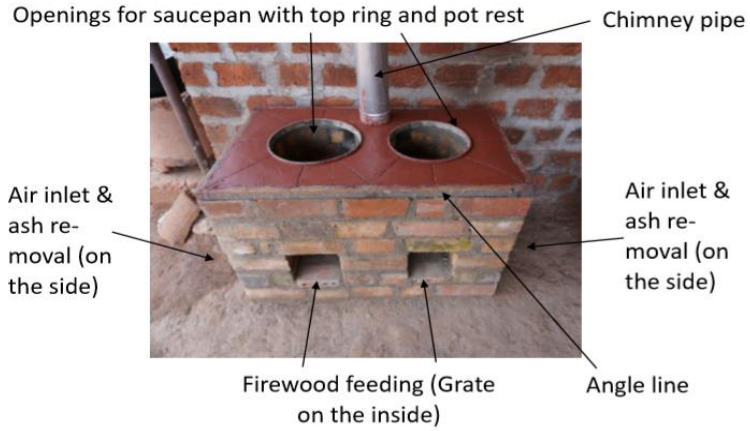


Fig. 1: Components of the project stove

The lifespan of the stove cannot be determined because no data are available yet. But it should last over the crediting period (see A.4.) with proper maintenance. Theoretically, the stove may last forever as all parts can be exchanged or renewed. It is the question of the associated cost when it will be better to abandon the stove and construct a new one.

Operation of the stove: The stove has two combustion chambers, on average, one for a 7 litre pot (considered as the primary cooking chamber) and 4 litre pot (secondary cooking chamber). The combustion chambers consist of horizontal fuel magazines and vertical internal chimney. Wood is fed horizontally into the fuel magazine to ensure even combustion from one end and a more easily regulated feeding rate. The internal chimney creates a draft to accelerate combustion gases from the fire. These gases are then forced through the skirt that surrounds the cook pot and then find their way to the external chimney thus ensuring hygiene within the cooking environment.

The reduction of use of non-renewable firewood contributes to SDG 13 to combat climate change as less GHG will be emitted by the use of the improved cook stoves (ICS).

Furthermore, less smoke in the kitchen supports SDG 3 to ensure healthy lives and promote well-being.

Last but not least, the saving from buying less firewood or less effort to collect firewood brings the families closer to access to affordable, reliable, sustainable and modern energy (SDG 7). The future will however bring up other technologies for cooking in the sense of modern energy supply. The project is open to such developments.

Fig. 2: Map of Masaka Dioceses (Source: C. Maddo)

A.2. Location of project

The Project is located in Central region of Uganda in the Districts of Greater Masaka which include; Masaka, Bukomansimbi, Kyotera, Rakai, Kalungu, Lyantonde, Ssembabule, Kalangala and Lwengo.

The villages where the ICS are installed are recorded in the database.

The project management of Caritas MADDO is located in Masaka with the coordinates -0.328891, 31.762126.

Address: Ddungu Wing Kitovu, P.O.Box 14 Masaka-Uganda.

A.3. Reference of applied methodology

Gold Standard Simplified Methodology for Efficient Cookstoves[1] (Version 1.1, April 2020)

A.4. Crediting period of project

- Duration of crediting period of micro-scale projects under the Klima-Kollekte is generally 5 years with a prolongation of 2 years, Starting 01/10/2020´-30/09/2027.

- A prolongation of 2 years was considered reasonable and approved by the management of Klima-Kollekte in September 2020 with the approval of the PDD and confirmed in September 2022 because of delays related to the COVID19 Pandemic in order to be able to make use of the emission reductions of these long living stoves.

[1] https://globalgoals.goldstandard.org/standards/408_V1.1_EE_ICS_Simplified-Methodology-for-Efficient-Cookstoves.pdf

SECTION B. IMPLEMENTATION OF PROJECT

B.1. Description of implemented project

The list gives an overview of work associated with the project including some figures to demonstrate the scale of the activities. Those figures are not relevant for the emission reduction calculation and do not include the installations of stoves.

Commissioning and start of operation is 7 days after construction. The design phase started in May 2019 where 23 stoves were constructed and actual implementation started in July 2020 among 6 Districts. The first phase was in 4 districts and the second phase Lwengo and Kalungu were added. By 2024, 1961 stoves were installed.

Activities implemented

1.1. **Marketing and sales**	
1.1.1. Production & Dissemination of marketing materials (Print and Audiovisual)	1000 flyers were procured and distributed to clients during mobilization. One Radio talk show was conducted on Centenary Radio FM.
1.1.2. Marketing Events (Church Events, Farmer Meetings, Cooking Shows, etc.)	More villages were mobilised especially in the 3 new districts.
1.1.3. Sign stove user contracts with clients and providing user Education for clients	Clients whose stoves were constructed were trained on how to use the stoves thereafter asked to sign user contracts with the project.
1.1.4. Confirm payments of clients	Payments for stoves were made to the Project Coordinator. In total, 2173 payments were confirmed and entered into the database by end of 2024
1.2. Procurement and Logistics	
1.2.1. Local procurement of materials	Materials for stoves were procured i.e (sand, liners, half bricks, rings, angle lines, chimney pipes, cement, red oxide, and terrazzo) following the procurement process
1.2.2. Store Management	The Procurement officer received and confirmed materials in the store through submission of goods received note. He also fills the inventory.
1.2.3. Distribution of materials to the field	The procurement officer distributed material to the clients and ensured that each client got the necessary material required to get our quality stove.

1.3. Construction of Stoves	
1.3.1. Preparations for construction	Field officers measured sauce pans and the kitchen size of the clients who paid for the stove and later materials were delivered for stove construction accordingly.
1.3.2. Construction of Stoves	After delivery of material, the stove constructors construct the stoves according to the construction manual.
1.3.3. Quality Control	The technical officer and the field officers have always endeavoured to check every stove that was constructed was up to our standard.
1.3.5. Commissioning of Stoves	The stove constructors give preliminary instructions during installing the stove and advise clients to light the stove after a week of installation.
2.1. Data Processing and Documentation	
2.1.1. Updating Sales Database	The database has been regularly filled by the team.
2.2. Customer Relation and Repair Service	
2.2.1. Follow up and Maintenance visits	Clients were visited and called to check on how the stoves were working, by the field officers. Repairs that were realised during these visits and calls were reported to the technical officer who then conducted the repairs for these stoves.
2.2.2. Repairs	Repairs that were realised during the visits and calls were reported to the technical officer who then conducted the repairs for these stoves and the repairs included sauce pan fittings, grates, cracks, chimney leaks.
2.3. Monitoring ongoing	
2.3.1. Local Monitoring visits by C. MADDO	1 monitoring visit was conducted by the Project team in Lwengo district and all stoves were in use.
2.3.5. Quarterly Fund Requests by C. MADDO to H3 Vienna	4 Quarterly Fund Requests were submitted to HORIZONT 3000.
2.3.6. Yearly Financial Audits by ROEA	1 financial audit was done for 2023.
2.4. Carbon Monitoring Survey	
2.4.1. Local Carbon Monitoring Survey	A fourth monitoring survey was conducted in October, 2024.
3.1. Improving organizational Capacities	

3.1.1. Training and coaching Carbon Team (External and TA)	This has been regularly done by the TA and the Project supervisor. The M&E officer has mentored the team during the monitoring survey and in filling the database. The main issues discussed include improvement of sales to meet the target, sourcing of clients and quality material, and quality control. Clemens supported in cleaning the databases and dashboard in order to generate the right information for reporting.
3.1.2. Networking and Exchange	The Project has collaborated with UNBOUND as well as Kyamulibwa Project and Tripple C project under Caritas MADDO to boost the sales.
3.1.3. Strengthening understanding of requirements of Gold Standard/Klima-Kollekte[1]	The team regularly reviews the business plan during implementation. The fourth carbon monitoring survey was done and Carbon credits are yet to be paid by Klima-kollekte. Currently the TA is training the M&E officer and one two Field officers (Carol and Cissy) in calculating carbon credits.

B.1.1 Forward Action Requests

None

B.2. Post-Design Certification changes

B.2.1. Temporary deviations from the approved Monitoring & Reporting Plan, methodology or standardized baseline

None

B.2.2. Corrections

None

B.2.3. Changes to start date of crediting period

None

B.2.4. Permanent changes from the Design Certified monitoring plan, applied methodology or applied standardized baseline

None

B.2.5. Changes to project design of approved project

None

SECTION C. DESCRIPTION OF MONITORING SYSTEM APPLIED BY THE PROJECT

1. SDG target	13. TAKE URGENT ACTION TO COMBAT CLIMATE CHANGE AND ITS IMPACTS.
Selected Indicator	Amount of CO2 emissions reduced by the project
Description of target value	38,202 t CO2e reduced over the project period (about 5500 annually)
Source of data	As per the approved PDD.
Monitoring frequency	Annual

2. SDG target	7.1. By 2030, ensure universal access to affordable, reliable and modern energy services.
Selected Indicator	Number of installed improved cookstoves
Description of target value	1900 improved cookstoves disseminated installed As per the approved PDD.
Source of data	As per the approved PDD.
Monitoring frequency	Continuous

3. SDG target	3.9. By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination
Selected Indicator	Number of households reporting improved indoor air quality due to smoke reduction through the improved cookstove.
Description of target value	1560 households reporting improved air quality
Source of data	As per the approved PDD.

Monitoring frequency	Annual

Monitoring procedure

A. Sales Record:

A sales record is maintained and updated continuously. The record is backed up electronically. The relevant data are copied from the sales contracts, where users confirm their correctness and accuracy by their signature.

The sales database includes for each stove:

1. Construction date of improved cookstove (commissioning is recorded one week later)
2. Geographic area of sale
3. Details of type of project cookstove sold
4. Name and telephone number, address
5. Responsible field officer
6. Type of baseline stove

B. Ongoing Monitoring Studies:

i. Monitoring will consist of checking of a representative sample, once every year (annually) to ensure that project cookstoves are still operating by carrying out the usage survey as per the guidelines below.

> A usage survey must be conducted to estimate the drop off rates as project cookstove may not be adopted or may be disposed of and potentially replaced by a baseline stove again. Prior to the verification, a usage survey for each cookstove age-group is required. For example, if only cookstoves in the first year of use (age0-1) are being credited, a usage parameter must be established for age-group 0-1, through a usage survey for cookstove age0-1.
> If cookstoves of age 0-1 and age 1-2 are being credited (as part of first request for issuance), usage parameter must be established for age-group 0 -1 and 1-2, respectively through usage survey.
> If cookstoves of age-group 0-1 and age-group 1-2 are being credited (as part of second request for issuance), usage parameter must be established for age-group 1-2 only through usage survey as the usage rate for cookstoves of age group 0-1 can be applied from the previous issuance.

ii. Where replacements are made, monitoring will also ensure that the efficiency of the new cookstove is similar to the appliances being replaced.

iii. The project will also monitor the use of baseline stoves in the project activity.

iv. The project will also monitor physical conditions of the cookstoves.

Monitoring consists in both continuous monitoring and annual monitoring campaigns.

The M&E officer bears the main responsibility. He manages the database, receives data from field officers, conducts quality control, inserts data into database and manages monitoring campaigns. He is supported by field officers, who gather data from stove users.

SECTION D. DATA AND PARAMETERS

D.1. Data and parameters fixed ex ante or at renewal of crediting period

$f_{NRB:}$ Fraction of biomass used in the baseline scenario which can be established as nonrenewable. Value: 88%

Data/Parameter	f_{NRB}
Unit	Fraction
Description	Fraction of biomass used in the baseline scenario which can be established as non-renewable
Source of data	Fixed as per the approved PDD
Value(s) applied	88%
Choice of data or Measurement methods and procedures	
Purpose of data	Calculation of Baseline scenario
Additional comment	

$EF_{b,fuel,CO2}$: CO_2 emission factor of firewood that is reduced. Default value according to the GS simplified methodology: 1.747 t CO_2/ton of wood

Data/Parameter	$EF_{b,fuel,CO2}$
Unit	ton of wood
Description	CO_2 emission factor of firewood that is reduced. Default value according to the GS simplified methodology
Source of data	Default value according to the GS simplified methodology
Value(s) applied	1.747 t CO_2/ton of wood

Choice of data or Measurement methods and procedures	
Purpose of data	Calculation of firewood reduced for CO_2 emissions.
Additional comment	

$EF_{b,fuel,non\text{-}CO2}$: Non-$CO_2$ emission factor of firewood that is reduced. Default value according to the GS simplified methodology: 0.53 t CO_2/ton of wood

Data/Parameter	$EF_{b,fuel,non\text{-}CO2}$
Unit	ton of wood
Description	CO_2 emission factor of firewood that is reduced. Default value according to the GS simplified methodology
Source of data	Default value according to the GS simplified methodology
Value(s) applied	0.53 t CO_2/ton of wood
Choice of data or Measurement methods and procedures	
Purpose of data	Calculation of firewood that is reduced for Non-CO_2 emissions.
Additional comment	

D.2 Data and parameters monitored

PARAMETERS MONITORED FOR THE FOUR AGE GROUPS.

Description Parameter	Units in the project database through year y

Parameter Shortcut	N_y
Unit	Number of project cookstoves
Source of data	Project Sales Database
Value(s) of monitored parameter	593 (2019-2021 Age 3-4) 558 (2021-2022 Age 2-3) 585 (2022-2023 Age 1-2) 137 (2023-2024 Age 0-1)
Measurement methods and procedures	Insertion of sales data in sales database
Monitoring frequency	Continuous
Purpose of data	Calculation of emission reductions
Additional comment	Fraction of the year of stoves installed for age group 4 converted into full year stove use.

Description Parameter	Usage rate of improved cookstoves in project during year y
Parameter Shortcut	U_y
Unit	Fraction
Source of data	Monitoring Survey by Caritas MADDO
Value(s) of monitored parameter	0.95 (2019-2021 Age 3-4) 0.97 (2021-2022 Age 2-3) 0.85 (2022-2023 Age 1-2) 0.97 (2023-2024 Age 0-1)

Measurement methods and procedures	Caritas MADDO conducted the usage surveys as required by the selected methodology.
Monitoring frequency	Annual and the survey was conducted in October2024 - January 2025.
Purpose of data	Calculation of stove usage
Additional comment	A usage parameter is derived for each age group of project cookstoves being credited. The results of the survey are valid and are above the minimum sample size required.

Description Parameter	Discount factor to account for efficiency loss of project cookstoves
Parameter Shortcut	***DFη***
Unit	Fraction
Source of data	Monitoring Survey by C. MADDO
Value(s) of monitored parameter	0.96 (2019-2021 Age 3-4) 0.97 (2021-2022 Age 2-3) 0.98 (2022-2023 Age 1-2) 0.99 (2023-2024 Age 0-1)
Measurement methods and procedures	Stoves are checked, the default value of 0.99 is only applied where they are found to be in good condition. Otherwise, higher efficiency losses are estimated. All ICS in use were in good condition.
Monitoring frequency	Annual and the survey was conducted in October 2024 – January 2025.
Purpose of data	Calculation of emission reductions
Additional comment	Applied to the efficiency value measured and fixed at beginning of project.

Description Parameter	Discount factor to account for the baseline stove use during year y
Parameter Shortcut	**DFb,Stove,y**
Unit	Fraction
Source of data	Monitoring survey by C.MADDO (ER calculation "Data sheet" based on Kobo Tool used for the survey).

Value(s) of monitored parameter	0.01 (2019-2021 Age 3-4) 0.02 (2021-2022 Age 2-3) 0.01 (2022-2023 Age 1-2) 0.06 (2023-2024 Age 0-1)
Measurement methods and procedures	Users are asked for the number of meals cooked using the baseline stove or another stove.
Monitoring frequency	Annual and the survey was conducted in October 2024 – January 2025.
Purpose of data	Calculation of emission reduction
Additional comment	Not only the use of the baseline stove but the use of any other stove was monitored to be conservative.

D.3. Comparison of monitored parameters with last monitoring period

Data/ Parameter		Value obtained in this monitoring period					Value obtained last monitoring period		
		2019-30/09/2021	1/10/2021-30/09/2022	1/10/2022-30/09/2023	1/10/2023-30/09/2024		2019-30/09/2021	1/10/2021-30/09/2022	1/10/2022-30/09/2023
	Data/ Parameter	age 3-4	age 2-3	age 1-2	age 0-1		age 3-4	age 2-3	age 1-2
Number of project cookstoves of each age group operational in the year y	Ny	**593**	**558**	**585**	137		**593**	**558**	**298**
Usage rate for project cookstoves	Uy	**95%**	**97%**	**85%**	**97%**		**89%**	**100%**	**97%**

in year y, based on adoption rate and drop off rate revealed by usage surveys (fraction)									
Usage of baseline cookstove during the year y (fraction) in project scenario	DFb,Stove,y	**0.01**	**0.02**	**0.01**	**0.06**		**0.08**	**0.04**	**0.06**
Discount factor to account for efficiency loss of project cookstove per year of operation (Fraction). The default value for this parameter is 0.99 i.e., 1% efficiency loss/year.	DFη	**0.96**	**0.97**	**0.98**	**0.99**		**0.97**	**0.98**	**0.99**

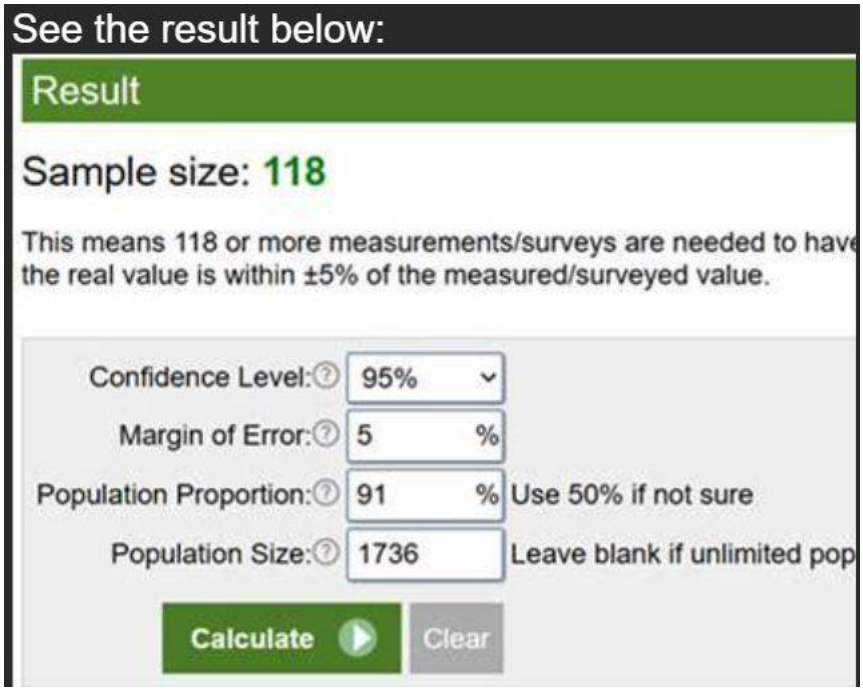
D.4. Implementation of sampling plan

The sampling plan for the parameters to be monitored by survey uses random sampling for each age group of ICS. The age group is defined by the monitoring frequency.

The survey will be conducted following simple random sampling approach and the minimum sample size will be determined as follows;

- Project target population < 300: Minimum sample size 30
- Project target population 300 to 1000: Minimum sample size 10% of group size
- Project target population > 1000 Minimum sample size 100

We did a sample size calculation using last year population size of 1736 stoves, using last year stove usage rate of 91% as expected population proportion. We want to achieve a confidence level of 95% and a margin of error of 5%. The minimum sample size would be 118 stoves, which was rounded up to 120. We calculated using an online calculator: https://www.calculator.net/sample-size-calculator.html



The formula RAND of Excel was applied to the sales database to receive randomly order of stoves out of the number of installed stoves for this monitoring period.

In order to have a fair representation, random sampling was conducted for each age group. The number of selected samples for each age group was based on the size of its population i.e the age group with the highest population was considered to take the largest portion.

Stoves monitored included 60 for age 3-4, 33 for age 2-3, 27 for age 1-2. Age group 0-1 was not monitored but the data were copied from the age group 0-1 of the previous monitoring.

SECTION E. CALCULATION OF SDG IMPACTS

E.1. Calculation of baseline value or estimation of baseline situation of each SDG Impact

1. SDG target	13. TAKE URGENT ACTION TO COMBAT CLIMATE CHANGE AND ITS IMPACTS.
Selected Indicator	Amount of CO_2 emissions reduced by the project
Baseline value	0
Source of data	ER Calculation
Monitoring frequency	Annual

As there is no reduction of CO_2 emissions of the baseline, no calculation is provided.

2. SDG target	7.1. By 2030, ensure universal access to affordable, reliable and modern energy services.
Selected Indicator	Number of installed improved cookstoves
Baseline value	0 improved cookstoves disseminated or installed
Source of data	Project database
Monitoring frequency	Continuous

As no improved cookstove was installed as baseline, no numbers are provided.

3. SDG target	3.9. By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination
Selected Indicator	Number of households reporting improved indoor air quality due to smoke reduction through the improved cookstove.

Baseline value	0 households reporting improved air quality
Source of data	Survey
Monitoring frequency	Annual

As no improved cookstove was installed as baseline, no household reported improved indoor air quality.

E.2. Calculation of project value or estimation of project situation of each SDG Impact

1. SDG target	13. TAKE URGENT ACTION TO COMBAT CLIMATE CHANGE AND ITS IMPACTS.
Selected Indicator	Amount of CO2 emissions reduced by the project
Project value	8753 tCO_2e reduced by the project stoves
Source of data	ER Calculation for 4. Monitoring 2024
Monitoring frequency	Annual

Calculation of Emission reduction(s)

The emissions reductions are calculated as follows:

$ER_y = \sum N_y * P_y * U_y * (fNRB * EF_{fuel,CO2} + EF_{fuel, nonCO2}) * (1- DF_{b,Stove,y})$

	2019-2021	2021-2022	2022-2023	2023-2024	
ηp,y	0.260	0.262	0.265	0.268	Fraction
Py = Bb,y * (1-ηb/ηp,y)	2.46	2.47	2.49	2.50	Tonnes fire wood per household per year
Uy	0.95	0.97	0.85	0.97	Fraction
fNRB,b,y	0.88	0.88	0.88	0.88	Fraction
EFb,fuel,CO2	1.75	1.75	1.75	1.75	tCO2/tonne of fire wood

EFb,fuel,non_CO2	0.53	0.53	0.53	0.53	tCO2/tonne of firewood
DFb,Stove,y	0.01	0.02	0.01	0.06	Fraction
ERy for 1 stove	**4.77**	**4.88**	**4.32**	**4.96**	**tCO2**

	age 3-4	**age 2-3**	**age 1-2**	**age 0-1**	Total	Unit
	2019-2021	2021-2022	2022-2023	2023-2024		
stoves constructed	593	558	585	225	1961	number
Ny	593	558	585	137	1873	number
stove years in use					0	
Ery (tCO2)	**2827**	**2721**	**2526**	**679**	**8753**	**tCO2**
with cap					0	
baseline (tCO2)	4904	4614	4838	1133	15489	tCO2
project emissions (tCO2)	2077	1894	2312	541	6823	tCO2

2. SDG target	7.1. By 2030, ensure universal access to affordable, reliable and modern energy services.
Selected Indicator	Number of installed improved cookstoves
Project value	1961 improved cookstoves disseminated or installed

Source of data	Project sales database
Monitoring frequency	Continuous

The number is derived from the project database, independently from the days the cookstoves were in use up to the end of the crediting period and not considering actual usage by the user.

3. SDG target	3.9. By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination
Selected Indicator	Number of households reporting improved indoor air quality due to smoke reduction through the improved cookstove.
Project value	1943 households
Source of data	Survey samples and dashboard for Monitoring 2024
Monitoring frequency	Annual

Calculated from the survey percentage as reported by the user:

improved indoor air quality	age 3-4	age 2-3	age 1-2	age 0-1	Total
survey results (fraction)[2]	0.97	1	1	1	
stoves installed	593	558	585	225	
number of households with improved air quality	575	558	585	225	**1943**

[2] Survey results and Dashboard 24 Jan 2025.xlsx

E.3. Calculation of leakage

None

E.4. Calculation of net benefits or direct calculation for each SDG Impact

Item	Baseline Estimate	Project Estimate	Net benefit
1. SDG 13	15,489	6736	8753
2. SDG 7	0	1961	1961
3. SDG 3	0	1943	1943

E.5. Comparison of actual SDG Impacts with estimates in approved PDD

SDG	Values estimated in ex ante calculation of approved PDD for this monitoring period	Actual values[3] achieved during this monitoring period

Item	Values estimated in ex ante calculation of approved PDD	Actual values achieved during this monitoring period
1. SDG 13	7463	8753 tCO2e reduced
2. SDG 7	1900	1961 ICS
3. SDG 3	1560	1943 HH

E.5.1. Explanation of calculation of value estimated ex ante calculation of approved PDD for this monitoring period

The project targeted 1900 ICS only but the installation continued after reaching that number. Klima Kollekte promised to buy carbon credits for 1900 ICS only when the project was designed but agreed to buy up to 10000 carbon credits per year later. Thus, the ERs are higher in year 2024 monitoring survey than in the PDD.

E.6. Remarks on increase in achieved SDG Impacts from estimated value in approved PDD

None

[3] Whenever emission reductions are capped, both the original and capped values used for calculations must be transparently reported. Use brackets to denote original values.

SECTION F. SAFEGUARDS REPORTING

a) An update on the implementation including information on relative success and failures, or improvements to proposed mitigation measures

SUCCESS
1. Installed 1961 stoves overall.
2.More than 85% of stoves usage rate i.e. of the installed.

Challenges and Steering Measures

Challenge, change in circumstances/ conditions/context	**Mitigating actions, Required Changes for Project Planning including Budget Reallocations**
Delayed delivery of materials especially liners to the store.	The production process takes 3 months. Procurement in bulk shall speed up stove installations. Furthermore, change of the liners to curved bricks will be considered.
Higher costs for Stove materials (rise in prices, use of more materials than initially planned).	New revised costs will inform replanning for the subsequent fund requests.
Higher costs for transport for Field Officers and Stove constructors as well as transportation of materials due to high fuel costs, difficult circumstances, bad roads and far distances.	New revised costs will inform replanning for the subsequent fund requests.

(b) Monitoring and reporting on any key indicators identified, including against pre-set tolerances

INDICATOR TARGETS	**ACHIEVED**
1900 stoves installed by 2024	1961 stoves installed by 2024

SECTION G. STAKEHOLDER INPUTS AND LEGAL DISPUTES

G.1. List all Inputs and Grievances which have been received via the Continuous Input and Grievance Mechanism together with their respective responses/mitigations.

No.	Grievance	Mitigation measure
1.	Breakdown of bricks on firewood rest	Repaired with new bricks
2.	Chimney leakages	Repaired, filling with polythene, sand, terazo and cement
3.	Smoke in the Kitchen	Refresher trainings held on removing soot from the chimney.
4.	Broken grates	Replaced with better metallic grates.
5.	Small rings	Replaced with fitting ring.

MITIGATION MEASURE	STATUS	RESPONSIBLE PERSON
1. Establish stakeholder platform	Platform is in Place	Project Coordinator
2. Liaise with District and Parish Units in planning and feedback meetings	Ongoing	Project Coordinator
3. Establish monitoring teams at village levels.	In plan	District CDO
4. Determine accessible homes & Institutions as demo sites.	Ongoing	Project Coordinator
5. Engage partner organizations to reach the grassroot more efficiently and effectively.	Ongoing	Project Coordinator
6. Include motivations to Influential persons in the community.	In plan	Project Coordinator

7. Determine centers in communities	Ongoing	Project Coordinator

N.B:

Currently, there is a social media platform (WhatsApp group) where stakeholders present their concerns and receive instant feedback.

Most of the repairs have been done. Though some are still pending like 20%.

G.2. Report on any stakeholder mitigations that were agreed to be monitored.

None

G.3. Provide details of any legal contest that has arisen with the project during the monitoring period

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None

Revision History

Version	Date	Remarks
1.1	14 October 2020	Hyperlinked section summary to enable quick access to key sections Improved clarity on Key Project Information Section for POA monitoring Forward action request section Improved Clarity on SDG contribution/SDG Impact term used throughout Clarity on safeguard reporting Clarity on design changes Leakage section added for VER/CER projects Addition of Comparison of monitored parameters with last monitoring period Provision of an accompanying Guide to help the user understand detailed rules and requirements
1.0	10 July 2017	Initial adoption