Gold Standard for the Global Goals

TEMPLATE

MONITORING REPORT

PUBLICATION DATE **14.10.2020**

VERSION **v. 1.1**

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

This document contains the following Sections

KEY PROJECT INFORMATION

Programme of Activity Information – (delete below table if N/A)

GS ID of Programme	GS1340
Title of Programme	Efficient cookstoves in Burkina Faso (PoA)
Version of POA-DD applicable to this monitoring report	4

Name and GS ID of fully Validated CPA/VPAs (i.e. non compliance check)	- GS1340 Efficient cookstoves in Burkina Faso – VPA-01 - tiipaalga F3PA cookstoves in Bam and Loroum (GS2456) - GS1340 Efficient cookstoves in Burkina Faso – VPA-02 - tiipaalga F3PA cookstoves in Bam and Loroum (GS3516) - GS1340 Efficient cookstoves in Burkina Faso – VPA-03 - tiipaalga F3PA cookstoves in Bam and Loroum (GS3517) - GS1340 Efficient cookstoves in Burkina Faso – VPA-04 - tiipaalga F3PA cookstoves in Bam and Loroum (GS3518) - GS1340 Efficient cookstoves in Burkina Faso – VPA-05 - tiipaalga F3PA cookstoves in Bam and Loroum (GS3519) - GS1340 Efficient cookstoves in Burkina Faso – VPA-06 - tiipaalga F3PA cookstoves in Bam and Loroum (GS3520) - GS1340 Efficient cookstoves in Burkina Faso – VPA-07 - tiipaalga F3PA cookstoves in Bam and Loroum (GS3521) - GS1340 Efficient cookstoves in Burkina Faso – VPA-08 - tiipaalga F3PA cookstoves in Bam and Loroum (GS3522) - GS1340 Efficient cookstoves in Burkina Faso – VPA-09 - tiipaalga F3PA cookstoves in Bam and Loroum (GS3523) - GS1340 Efficient cookstoves in Burkina Faso – VPA-10 - tiipaalga F3PA cookstoves in Bam and Loroum (GS3524) - GS1340 Efficient cookstoves in Burkina Faso – VPA-11– Tiipaalga – F3PA cookstoves in Kourwéogo (GS6152) - GS1340 Efficient cookstoves in Burkina Faso – VPA-12– Tiipaalga – F3PA cookstoves in Kourwéogo (GS6419) - GS1340 Efficient cookstoves in Burkina Faso – VPA-13– Tiipaalga – F3PA cookstoves in Kourwéogo (GS6420) - GS1340 Efficient cookstoves in Burkina Faso - VPA-14 – Improved cookstove F3PA project in Nahouri (GS10778) - GS1340 Efficient cookstoves in Burkina Faso - VPA-15 – Improved cookstove F3PA project in Nahouri (GS10779) - GS1340 Efficient cookstoves in Burkina Faso - VPA-16 – Improved cookstove F3PA project in Nahouri (GS10780)

	- GS1340 Efficient cookstoves in Burkina Faso - VPA-17 – Improved cookstove F3PA project in Nahouri (GS10781) - GS1340 - Efficient cookstoves in Burkina Faso – tiipaalga F3PA cookstoves in Center-South Protected Areas - VPA-18 (GS10922) - GS1340 - Efficient cookstoves in Burkina Faso – tiipaalga F3PA cookstoves in Center-South Protected Areas - VPA-19 (GS10923) - GS1340 - Efficient cookstoves in Burkina Faso – tiipaalga F3PA cookstoves in Center-South Protected Areas - VPA-20 (GS10924) - GS1340 - Efficient cookstoves in Burkina Faso – tiipaalga F3PA cookstoves in Center-South Protected Areas - VPA-21 (GS10925) - GS1340 - Efficient cookstoves in Burkina Faso – tiipaalga F3PA cookstoves in Center-South Protected Areas - VPA-22 (GS10926) - GS1340 - Efficient cookstoves in Burkina Faso – tiipaalga F3PA cookstoves in Center-South Protected Areas - VPA-23 (GS10927) - GS1340 - Efficient cookstoves in Burkina Faso – tiipaalga F3PA cookstoves in Center-South Protected Areas - VPA-24 (GS10928) - GS1340 Efficient cookstoves in Burkina Faso – VPA-25 – Solidagro F3PA cookstoves in Passoré (GS11070) - GS1340 Efficient cookstoves in Burkina Faso – VPA-26 – Solidagro F3PA cookstoves in Passoré (GS11071) - GS1340 Efficient cookstoves in Burkina Faso – VPA-27 – Solidagro F3PA cookstoves in Passoré (GS11072) - GS1340 Efficient cookstoves in Burkina Faso – VPA-28 – Solidagro F3PA cookstoves in Passoré (GS11073) - GS1340 Efficient cookstoves in Burkina Faso - VPA-29 - Improved Cookstove F3PA project in Nahouri (GS11074)

Key Project Information

GS ID (s) of Project (s)	- GS2456 (VPA-01) - GS3516 (VPA-02) - GS3517 (VPA-03) - GS3518 (VPA-04) - GS3519 (VPA-05) - GS3520 (VPA-06) - GS3521 (VPA-07)

	- GS3522 (VPA-08) - GS3523 (VPA-09) - GS3524 (VPA-10)
Title of the project (s) covered by monitoring report	- GS1340 Efficient cookstoves in Burkina Faso – VPA-01 - tiipaalga F3PA cookstoves in Bam and Loroum (GS2456) - GS1340 Efficient cookstoves in Burkina Faso – VPA-02 - tiipaalga F3PA cookstoves in Bam and Loroum (GS3516) - GS1340 Efficient cookstoves in Burkina Faso – VPA-03 - tiipaalga F3PA cookstoves in Bam and Loroum (GS3517) - GS1340 Efficient cookstoves in Burkina Faso – VPA-04 - tiipaalga F3PA cookstoves in Bam and Loroum (GS3518) - GS1340 Efficient cookstoves in Burkina Faso – VPA-05 - tiipaalga F3PA cookstoves in Bam and Loroum (GS3519) - GS1340 Efficient cookstoves in Burkina Faso – VPA-06 - tiipaalga F3PA cookstoves in Bam and Loroum (GS3520) - GS1340 Efficient cookstoves in Burkina Faso – VPA-07 - tiipaalga F3PA cookstoves in Bam and Loroum (GS3521) - GS1340 Efficient cookstoves in Burkina Faso – VPA-08 - tiipaalga F3PA cookstoves in Bam and Loroum (GS3522) - GS1340 Efficient cookstoves in Burkina Faso – VPA-09 - tiipaalga F3PA cookstoves in Bam and Loroum (GS3523) - GS1340 Efficient cookstoves in Burkina Faso – VPA-10 - tiipaalga F3PA cookstoves in Bam and Loroum (GS3524)
Version number of the PDD/VPA-DD (s) applicable to this monitoring report	- GS2456 (VPA-01): 10 - GS3516 (VPA-02): 7 - GS3517 (VPA-03): 7 - GS3518 (VPA-04): 7 - GS3519 (VPA-05): 7 - GS3520 (VPA-06): 5 - GS3521 (VPA-07): 5 - GS3522 (VPA-08): 5 - GS3523 (VPA-09): 5 - GS3524 (VPA-10): 4
Version number of the monitoring report	3
Completion date of the monitoring report	19/03/2024

Date of project design certification	- GS2456 (VPA-01): 10/11/2014 - GS3516 (VPA-02): 21/10/2015 - GS3517 (VPA-03): 21/10/2015 - GS3518 (VPA-04): 21/10/2015 - GS3519 (VPA-05): 21/10/2015 - GS3520 (VPA-06): 21/10/2015 - GS3521 (VPA-07): 21/10/2015 - GS3522 (VPA-08): 21/10/2015 - GS3523 (VPA-09): 21/10/2015 - GS3524 (VPA-10): 20/11/2015
Date of Last Annual Report	02/12/2022
Monitoring period number	8th monitoring period
Duration of this monitoring period	- GS2456 (VPA-01): 01/01/2022 – 31/12/2022 - GS3516 (VPA-02): 01/01/2022 – 31/12/2022 - GS3517 (VPA-03): 01/01/2022 – 31/12/2022 - GS3518 (VPA-04): 01/01/2022 – 31/12/2022GS3519 (VPA-05): 01/01/2022 – 31/12/2022 - GS3520 (VPA-06): 01/01/2022 – 31/12/2022 - GS3521 (VPA-07): 01/01/2022 – 31/12/2022 - GS3522 (VPA-08): 01/01/2022 – 31/12/2022 - GS3523 (VPA-09): 01/01/2022 – 31/12/2022 - GS3524 (VPA-10): 01/01/2022 – 31/12/2022
Project Representative	Association tiipaalga
Host Country	Burkina Faso
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
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
13	Number of tCO2e reduced by the project	VPA-01: 4,280 VPA-02: 1,872 VPA-03: 10,000 (11,928) VPA-04: 6,566 VPA-05: 10,000 (11,940) VPA-06: 10,000 (13,587) VPA-07: 10,000 (11,292) VPA-08: 9,817 VPA-09: 10,000 (14,630) VPA-10: 10,000 (11,623) Total: 82,535 (97,535)	VER
1	Parameter #1: Number of leader women (Monitrice endogène) who benefit from microcredit Parameter #2: Proportion of leader women (Monitrice endogène) participating to microcredit scheme which make benefits from Income Generating Activities financed through the microcredit scheme Parameter #3: Total benefit from Income Generating activities financed through the microcredit scheme	Parameter #1: 452 Parameter #2: 39% Parameter #3: 11,500,000 FCFA or 17,528€	Parameter #1: Persons Parameter #2: Percentage Parameter #3: FCFA or €

3	Proportion of households perceiving: -Smoke level reduction -Incidence of coughing reduction -Incidence of respiratory illness reduction -Incidence of itchy eyes reduction	100% 100% 100%	Percentage
4	Parameter #1: Number of training initiatives for staff involved in the programme Parameter #2: Number of workshops carried out for women	Parameter #1: 1 Parameter #2: 128	Units
5	Proportion of stove users perceiving reduced amount of time spent on wood fuel collection and/or proportion of user perceiving reduced amount of money spent on wood fuel purchase	Reduced amount of time spent on wood fuel collection: 100% Reduced amount of money spent on wood fuel purchase: 100%	Percentage
7	Number of F3PA efficient cookstoves disseminated	VPA 01: 3,279 VPA 02: 1,397 VPA 03: 9,132 VPA 04: 4,331 VPA 05: 9,410 VPA 06: 11,801 VPA 07: 9,367 VPA 08: 5,609 VPA 09: 9,546 VPA 10: 6,885 Total:70,757	ICS units

Table 2 – Product Vintages

			Amount Achieved
No. VPA	**Start Dates**	**End Dates**	**VERs**
VPA 1	01/01/2022	31/12/2022	4,280
VPA 2	01/01/2022	31/12/2022	1,872
VPA 3	01/01/2022	31/12/2022	10,000 (11,928)
VPA 4	01/01/2022	31/12/2022	6,566
VPA 5	01/01/2022	31/12/2022	10,000 (11,940)
VPA 6	01/01/2022	31/12/2022	10,000 (13,587)
VPA 7	01/01/2022	31/12/2022	10,000 (11,292)
VPA 8	01/01/2022	31/12/2022	9,817
VPA 9	01/01/2022	31/12/2022	10,000 (14,630)
VPA 10	01/01/2022	31/12/2022	10,000 (11,623)

SECTION A. DESCRIPTION OF PROJECT

A.1. General description of project

The group of 10 micro-scale voluntary project activities (mVPA's) promotes the distribution and utilisation of the mud made three stones efficient woodstove "F3PA" in the Northern rural zones of Burkina Faso. The 10 mVPA's are all together implemented in the provinces of Bam and Loroum. The F3PA efficient cookstoves replace the traditional open air three stone cooking method whilst respecting the local three stone cooking culture. This is possible as the F3PA efficient cookstove, seen in the figure below integrates the three stones from each household inside its design. These three stones represent the pillar of the household's marital union.
The improved technology F3PA is significantly more efficient than the traditional open fire three stone cooking method. The project activities will thus help reduce wood consumption by more than half in each household and therefore preserve the local forests and their biodiversity. This will also help combat the ever-increasing threat of desertification in the area. The F3PA efficient cookstove has further benefits such as avoiding hazardous open flame systems and reducing the quantity of harmful smoke in the local rural village households. Local families and women also benefit significantly through a reduction in time spent and distance walked in collecting wood. The project does not consist in a fuel switch as locally available wood is still being used.

Figure 1 F3PA efficient cookstoves

The Monitoring Report applies to the F3PA efficient cookstove which is the primary technology disseminated and progressively installed for households in the rural provinces Bam and Loroum in the north of Burkina Faso within the group of 10 mVPA's. During the eight monitoring period from 01/01/2022 to 31/12/2022, it is calculated that VPA-01, VPA-02, VPA-03, VPA-04, VPA-05, VPA-06, VPA-07, VPA-08, VPA-09 and VPA-10 have generated **82,535** tonnes of CO2eq emission reductions.

A.2. Location of project

- Host country: Burkina Faso
- Geographical location :

Table 3 Coordinates of the project intervention area

Province	Municipality	Latitude	Longitude
Bam	Bourzanga	13° 40' 41" N	1° 32' 46" W
Bam	Rollo	13° 35' 58'' N	1° 42' 21'' W
Loroum	Ouindigui	13° 40' 60'' N	1° 58' 00'' W
Bam	Tikaré	13° 17' 29'' N	1° 43' 34'' W
Bam	Kongoussi	13° 19' 33'' N	1° 32' 05'' W
Bam	Guibaré	13° 06' 00'' N	1° 36' 00'' W
Bam	Nasseré	13° 20' 00'' N	1° 22' 00'' W
Bam	Sabcé	13° 11' 52'' N	1° 31' 18'' W
Bam	Rouko	13° 13' 00'' N	1° 38' 00'' W

- Map:

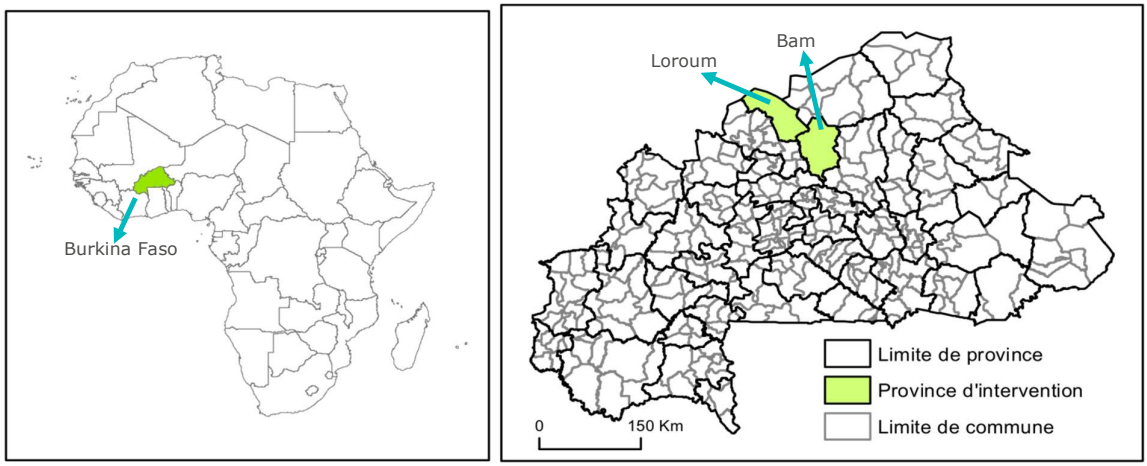

Figure 2 Location of project intervention area

A.3. Reference of applied methodology

"The Gold Standard Simplified Methodology for Efficient Cookstoves", version 1

A.4. Crediting period of project

- GS2456 (VPA-01): 05/02/2015 – 04/02/2025, 10 years;
- GS3516 (VPA-02): 08/02/2015 – 07/02/2025, 10 years;
- GS3517 (VPA-03): 03/02/2015 – 02/02/2025, 10 years;
- GS3518 (VPA-04): 06/02/2015 – 05/02/2025, 10 years;
- GS3519 (VPA-05): 02/02/2015 – 01/02/2025, 10 years;
- GS3520 (VPA-06): 11/02/2015 – 10/02/2025, 10 years;
- GS3521 (VPA-07): 14/02/2015 – 13/02/2025, 10 years;
- GS3522 (VPA-08): 02/02/2015 – 01/02/2025, 10 years;
- GS3523 (VPA-09): 02/02/2015 – 01/02/2025, 10 years;
- GS3524 (VPA-10): 11/02/2015 – 10/02/2025, 10 years.

SECTION B. IMPLEMENTATION OF PROJECT

B.1. Description of implemented project

The project activities have served the following number of households with F3PA efficient cookstoves with a corresponding calculated GHG offsets generated during the seventh monitoring period:

GS/VPA number	Number of households	Dissemination calendar	Generated VER's
GS2456 (VPA-01)	1,216	04/02/2015 – 31/12/2022	4,280
GS3516 (VPA-02)	533	07/02/2015 – 31/12/2022	1,872
GS3517 (VPA-03)	3,436	02/02/2015 – 31/12/2022	10,000 (11,928)
GS3518 (VPA-04)	1,792	05/02/2015 – 31/12/2022	6,566
GS3519 (VPA-05)	3,354	01/02/2015 – 31/12/2022	10,000 (11,940)
GS3520 (VPA-06)	4,310	10/02/2015 – 31/12/2022	10,000 (13,587)
GS3521 (VPA-07)	3,576	13/02/2015 – 31/12/2022	10,000 (11,292)
GS3522 (VPA-08)	2,761	01/02/2015 – 31/12/2022	9,817
GS3523 (VPA-09)	3,751	01/02/2015 – 31/12/2022	10,000 (14,630)
GS3524 (VPA-10)	2,949	10/02/2015 – 31/12/2022	10,000 (11,623)
Total:	**27,679**		82,535 (97,535)

During MP8, 2,162 Households have seen their stoves removed due to bad state. New stoves have been installed in 6,470 households. Stoves in 4,265 households have been renewed. These data are detailed in the spreadsheet: Tiipaalga_VPA1-10_ MP8_Date recente_All HH_v1.0.

It is important to mention that in the Loroum region some villages have been displaced to other villages due to security issues. Most of them have carried out their stoves while moving to other villages. They have been accounted in the calculation of the usage rate through the monitoring surveys.

Tiipaalga has been able to trace the displaced households by two means: i) most of the households have been displaced to Kongoussi, where Tiipaalga was involved in the humanitarian assistance to IDP's through food distribution which goes along with registration of the households; ii) through the involvement of leader women embedded within the community who know the households within their neighbourhood.

The following table provides an overview of villages with displaced households per VPA in October 2023.

VPA	# villages/sectors	# villages with displaced households	%	Remarks
VPA 01	20	17	85%	3 sectors still on site but road is not secure
VPA 02	26	21	81%	5 sectors still on site but road is not secure
VPA 03	22	16	73%	5 sectors and 1 village still on site but road is not secure
VPA 04	16	16	100%	The whole municipality unstable
VPA 05	34	10	29%	
VPA 06	29	4	14%	
VPA 07	29	12	41%	
VPA 08	23	0	0%	
VPA 09	46	28	61%	
VPA 10	30	2	7%	
TOTAL	**275**	**126**	**46%**	

Regarding repair and maintenance, the Association tiipaalga organises theatrical performances to sensitize households and MEs on the adoption of the F3PA technology and on how to rebuild the old F3PAs to facilitate the diffusion-construction of F3PAs in new households and to encourage maintenance, repair and protection of F3PAs in old households. These sensitization activities provided without any charge to the leading women and are clarified in the report *Tranche2_Livrable2_Rapport mise à jour liste ME et sensibilisation partenaires an4 (1) en.*

B.1.1 Forward Action Requests

FAR raised during the 7th verification: As per GS4GG PoA requirements v1.2 (2019) para 9.1.2 'A microscale VPA must be subjected to an Objective Observer appraisal and site visit at least once within three years of the date of VPA inclusion or start of crediting period, whichever is later.' an onsite visit will be conducted for the next periodic verification.

A deviation request was sent (COVID_DEV 352) for the remote audit and approved for the monitoring period 01/01/2021 to 31/12/2021, however, as per the deviation decision authorized by GS for remote site visits for all VPAs, and in accordance with paragraph 11.1.2 of the microscale project requirement, CME shall facilitate VVB's on-site audit during the next periodic verification

B.2. Post-Design Certification changes

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

For MP8, the surveys were planned to be conducted in March 2023, but due to the security reasons, they have been delayed by several months and pushed towards August. This consists in a deviation from the approved monitoring plan, which is justified by the exceptional situation on the field for some districts. B.2.2. Corrections

No corrections to project information or fixed parameters have been applied.

B.2.3. Changes to start date of crediting period

No change of start date of the project was made.

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

For the sampling, it has been decided to follow TPDDTEC guidelines, for security reasons. Therefore, a minimum of 30 households per Age Group have been selected, and 1 single Usage Rate has been calculated for all ag groups. This is mainly due to security reasons, as only a limited number of households can be visited.

B.2.5. Changes to project design of approved project

No changes to the project design have been made during this monitoring period.

SECTION C. DESCRIPTION OF MONITORING SYSTEM APPLIED BY THE PROJECT

Process of unique identification of stove users:

Significant part of the households in the project area are polygamous. Most of the wives within a household included in the carbon project have a cookstove set of at least two F3PA efficient cookstoves of different sizes. The project cookstoves are single pot stoves. As every cooking pot size has its specific size of cookstove, different sizes of project cookstoves have been implemented according to the cooking habits of the stove users. The sizes of the cooking pots and so the cookstoves used in the VPA's are 2, 3, 4, 5, 6, 7, 8, 10, 12 and 15 due to its frequency of utilization. The women using different cookstove sets in a polygamous household are credited as one single household.

The individual identification of the micro scale – VPA's is ensured with the identification of each household and each wife within the household using the project cookstoves by a unique serial number referring to the micro scale VPA's 1 to 10. The syntax of the unique serial number is defined as GS1340-VPA-xx-yyyy/z, where (i) GS1340 is the Gold Standard number of the PoA "Efficient cookstoves in Burkina Faso" to which the VPA belongs, (ii) VPA-xx is the number of the VPA of the PoA, (iii) yyyy is the number of the household from 1 to 9999 and (iv) z is the number of the wife in the household from 1 to 9.

The following information is documented for each household of which each wife of the household (when polygamous) has replaced all traditional three stones cookstoves for domestic use with project cookstoves:

i. Unique VPA ID number of each household and each wife within the household;
ii. Type and size of appliance (ex. F3PA – size 2);
iii. GPS Coordinates of the household;
iv. Name/Address/national ID Number/Mobile Number/Picture of wife with her project cookstoves;
v. Stove Installation Date.

All data are stored in an electronic database using AKVO Flow software (www.akvo.org). The following files are raw data files of data stored in the cloud:

- '*DR_Tiipaalga_VPA01-10_HH _MP8_v0.1'* _: distribution records (DR) of households with the following data:
    - Identifier (Unique internal ID number);
    - GS number: GS PoA-nr / VPA-nr / Household nr;
    - Location info;
    - Data on head of household.
- '*DR_Tiipaalga_VPA01-10_ICS_MP8'*: data on wives and type of stoves used per wife within the household with the following data:
    - Identifier (Unique internal ID number) which is the unique key to household info ('*DR_Tiipaalga_VPA01-10_HH_ MP8_v0.1'*):
    - Identification data per wife: name, picture of wife with her stoves;
    - Data on stoves used per wife: size of stoves, installation dates of each stove, location of stoves, …

The start of the crediting period of each household is considered as the latest installation date of all stoves within the cooking sets of the different wives within the household (see file '*Tiipaalga_VPA1-10_ MP8_Date recente_All HH_v0.1*). For each household, the number of days in age group 0-1, age group 1-2, age group 2-3, age group 3-4 and age-group 4-5 are calculated based on this date. The file '*Tiipaalga_VPA1-10_ MP8_Date recente_All HH_v1.0'* contains also the sampling frame used for the sampling of the project database required for the monitoring survey. All the households are assigned to an age group (AG) at the date of sampling (08/08/2023) based on their years of usage up to this date.

Process of project cookstoves renewal:

For the third time since the beginning of the project in 2015, PD decided to conduct renewal activities in 2023 in order to ensure the lasting quality of the project cookstoves. As during MP7, PD decided to trigger in 2022 the renewal campaigns for the oldest project cookstoves (5 years old), namely the ones installed in the third year of the project in 2017. This renewal process was made possible thanks to the revenues generated by the carbon credits issued during the previous performance certifications of the project. The renewal campaign took place in different steps:

- **Initiation:** The renewal campaign for the households equipped with F3PA cookstoves in 2017 started in November 2020. Till the end of this year, animations were conducted by Association tiipaalga in the concerned villages to prepare the leader women ("monitrices endogènes") for the future renewal processes. Trainings for the F3PA construction and maintenance methods were provided. If they were interested, new leader women could also join the activities and be trained by the facilitators of Association tiipaalga.
- **Renewal of F3PAs:** Once the F3PA construction and maintenance trainings were completed, the (re)trained women go back to their villages to set up the renewal activities within households. Those activities intended to restore the F3PAs built in 2016 but also the construction of new F3PAs for the households who did not have one.
- **Recording of the households:** Once the renewal process is well established in the villages, the renewed households are updated in a new database. In practice, the tiipaalga's database manager goes to the village and identifies, with the help of the president of the leader women, all the households from 2017 who participated to the renewal campaigns in 2022. Based on an appreciation on the state of all the F3PAs of all the women of the households, the surveyor decides if the household will be included in the renewal database as part of AG0-1. If one of the F3PA is not in an acceptable state ("red" state, see below); the household will not be included in the renewal database. In this case, the household has until the end of the renewal campaigns (December 2022) to meet the requirements to be included back in the project database; else the household will be removed from the database. On the other hand, the surveyor visits also the households which were not initially included in 2017 database but who now also have F3PAs cookstoves set thanks to the renewal activities. If those households meet the

requirements, they are also included as new households (AG0-1) in the renewal database. Figure 3 presents a diagram of the state of the database for MP8.

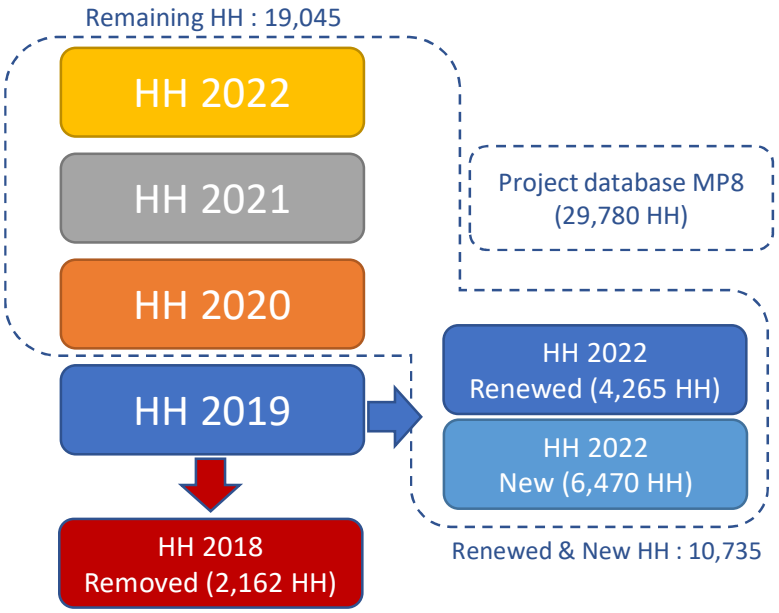

Figure 3 Repartition of MP8 households (HH) database

Data concerning double counting:

The project developer tiipaalga monitors any risks of double counting in this project, specifically determining whether any of the efficient cookstoves part of this project are counted in any other emission reduction project. There are other registered GHG reduction projects in Burkina Faso promoting the F3PA efficient cookstoves under the PoA GS1340:

1. **VPA's 11 to 13 (GS6152-6419-6420):** are implemented in the province Kourwéogo in the Plateau Central region;
2. **VPA's 14 to 17 and VPA 29 (GS10778 to GS10781 and GS11074):** are located in the Center-South region of Burkina Faso, in the province of Nahouri;
3. **VPA's 18 to 24 (GS10922 to GS10928):** are located in the provinces of Nahouri and Zoundwéogo;
4. **VPA's 25 to 28 (GS11070 to GS11073):** are located in the province of Passoré.

The first three projects are also monitored by Association tiipaalga, that ensures there is no double counting. The fourth one is implemented by another NGO Solidagro in a separate area, hence there is also no risk of double counting. Association tiipaalga is also aware of another cookstove project[1] in Burkina Faso registered under the Gold

[1] The project (https://registry.goldstandard.org/projects/details/665) is an initiative of SNV, the Netherland Development Organization, to promote improved "dolo" stoves in the Boucle du Mouhoun Region of Burkina Faso. These stoves are used for brewing of "Dolo", a traditional local drink made from sorghum which is is consumed during any ceremony, rituals, festivities and non-special occasions.

Standard. However, this project promotes a different kind of stoves rather for non-domestic cooking purposes.
Association tiipaalga continues to monitor whether any other projects with same technology exist. In such cases, tiipaalga will make every effort to compare total distribution databases with the other project developer(s) to ensure that there is no overlap. In addition, the project continues to use all legal documentation outlined in the VPA-DD to ensure legal ownership over offsets, a step that further avoids double counting.

Data processing and archiving:
Distribution records are captured with Smartphones using the AKVO Flow software with necessary pictures and GPS coordinates. Monitoring data are extracted to Microsoft Excel for analyses. Records will be kept for two years after the project activity is completed.

Quality assurance and quality control measures
Quality control rules were developed for the F3PA efficient cookstoves and were explained during the stove construction trainings. Quality control rules included in the construction protocol of the F3PA efficient cookstove are among others:

- It should be possible to move a hand between the wall of the cookstove and the cookpot;
- The height of the wood entrance of the cookstove is at most half the total height of the cookstove;
- The distance between the cooking pot and floor of cookstove should either not be higher than a hand or the handles of the cooking pot should be higher than the wall of the cookstove.

During monitoring surveys the F3PA efficient cookstoves are evaluated with the following statuses:

- *Green:* the construction norms have been respected and the F3PA efficient cookstove does not need any maintenance action. It means that (i) the outer surface of the F3PA efficient cookstove are not washed by rain, (ii) there is no hole in the floor of the efficient stove;
- *Orange:* the construction norms have been respected, but the efficient cookstove has not well been maintained. It concerns F3PA efficient cookstoves (i) from which the outer surface has been washed by rain and that need re-polishing; (ii) that have some cracks, but which are external and do not affect the quality of the combustion of the wood. For these cases, the application of the reparation protocol will fix the cracks and repolish the surface, so that the status will turn again into green.
- *Red:* the construction norms are not respected, or the F3PA efficient cookstoves have not been well maintained or used in a proper way. If the F3PA efficient cookstove has not been well constructed, the cookstove will not be registered in the initial database. A red cookstove needs to be reconstructed.

Orange cookstoves will be monitored, so that the maintenance activities of these stoves bring them again in green status. If these maintenance activities do not take place, they probably will in the short term, get into the red status. Orange F3PA efficient cookstoves are considered to have the same efficiency as the green F3PA efficient

cookstoves of the same age group. The red F3PA efficient cookstoves will be monitored, as long as the cookstove has not been reconstructed. After reconstruction/renewal, the status of the F3PA efficient cookstove will turn to green. Red F3PA efficient cookstoves do not have the targeted efficiency of the F3PA efficient cookstove anymore, and so are not considered in the emission reduction calculations as long as they are not reconstructed.
The Association tiipaalga also organises theatrical performances to sensitize households and MEs on the adoption of the F3PA technology and on how to rebuild the old F3PAs to facilitate the diffusion-construction of F3PAs in new households and to encourage maintenance, repair and protection of F3PAs in old households.

Diagram of responsibilities
As there are several entities involved in initial data collection and project monitoring it is important to clearly designate the relationships between and responsibilities of entities. Association tiipaalga will act as the managing entity of the project and be responsible for communication with the Gold Standard Foundation and the Objective Observer. CO2logic provides technical support in the initial data collection, data quality assurance, monitoring, drafting of the verification report. A diagram of responsibilities is shown here below.

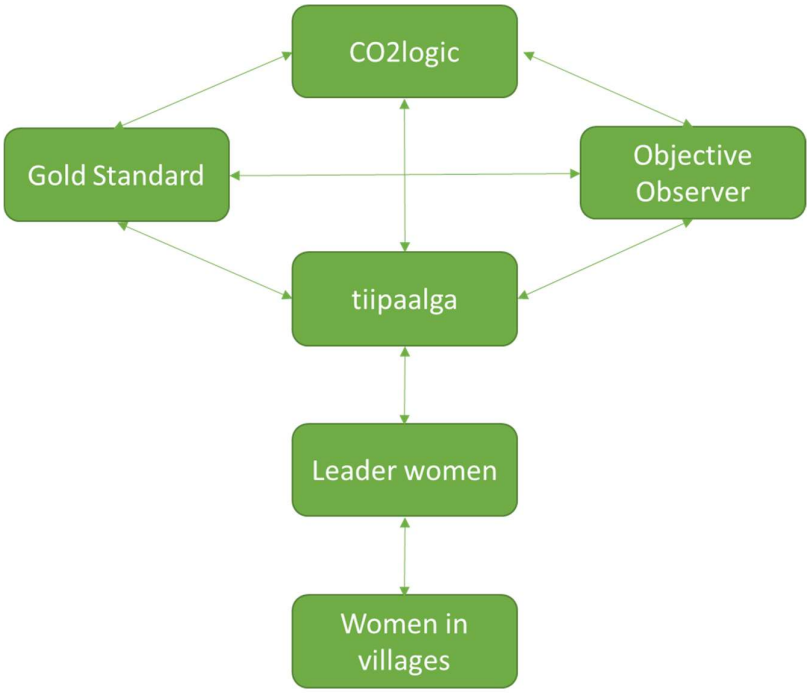

Figure 4 Diagram of responsibilities

Employees from Association tiipaalga train leader women, who are selected by the women in the villages, for the construction, the use and maintenance of mud made 3 stones efficient woodstoves. These leader women conduct the same training sessions with the women in their villages and help them to build the cookstoves. tiipaalga

employees in collaboration with the leader women, will perform quality checks and collect the initial stove data.
End user information is collected by tiipaalga agents with mobile smartphone and is consolidated into an electronic database in the cloud from which project monitoring can be conducted. The central electronic database is accessible by tiipaalga and CO2logic. Data can be made available through data extraction. CO2logic performs quality checks. Monitoring tasks such as monitoring surveys are managed by tiipaalga and realized by the tiipaalga surveyors. They are the most capable of collecting these data because of extensive knowledge of the technology and end-users. The tiipaalga surveyors are trained and retrained prior conducting surveys during a 2-days training session which was this year conducted from 09/08/2023 till 10/08/2023[2]. CO2logic assists tiipaalga in cross-checking the integrity of data with other variables to ensure consistency and accuracy, and to avoid mistakes.

SECTION D. DATA AND PARAMETERS

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

Relevant SDG Indicator	SDG 13, Climate Action
Data/parameter:	**$EF_{b,fuel,CO2}$**
Unit	tCO2/ton of firewood
Description	CO2 emission factor arising from use of firewood in baseline scenario
Source of data	IPCC default value, table 1.4 of Chapter 1 of Vol.2, 2006 IPCC Guidelines for National Greenhouse Gas Inventories
Value(s) applied)	1.747 tCO2/ton of firewood
Choice of data or measurement methods and procedures	As defined under the Gold Standard Simplified Methodology for Efficient Cookstoves v1.0
Purpose of data	Calculation of emission reductions
Additional comments	N/A

Relevant SDG Indicator	SDG 13, Climate Action
Data/parameter:	**$EF_{b,fuel,non\_CO2}$**
Unit	tCO2/ton of firewood
Description	Non-CO2 emission factor arising from use of firewood in baseline scenario
Source of data	IPCC Fifth Assessment Report : Climate Change (IPCC AR5)
Value(s) applied)	0.581 tCO2/ton of firewood

[2] Report of the training session, see document: '*GS1340_VPA1-10_MP7_Rapport de formation_with comments*'.

Choice of data or measurement methods and procedures	As per Rule Update "Applicability of Global Warming Potential for Gold Standard For The Global Goals Projects" published on 27/10/2020.
Purpose of data	Calculation of emission reductions
Additional comments	N/A

Relevant SDG Indicator	**SDG 13, Climate Action**
Data/parameter:	η_b
Unit	Fraction
Description	Efficiency of the cookstove being used in the baseline scenario
Source of data	Gold Standard Simplified Methodology for Efficient Cookstoves v1.0
Value(s) applied)	0.10
Choice of data or measurement methods and procedures	As defined under the Gold Standard Simplified Methodology for Efficient Cookstoves v1.0
Purpose of data	Calculation of emission reductions
Additional comments	N/A

Relevant SDG Indicator	**SDG 13, Climate Action**
Data/parameter:	η_p
Unit	Fraction
Description	Efficiency of the cookstove being used in the project scenario
Source of data	Determined following the Water Boiling Test Protocol
Value(s) applied)	0.234[3]
Choice of data or measurement methods and procedures	As defined under the Gold Standard Simplified Methodology for Efficient Cookstoves v1.0
Purpose of data	Calculation of emission reductions

[3] Rapport sur les tests de performances énergétiques des Foyers trois pierres améliorés (F3PA) de l'association Tiipaalga, Laboratoire Biomasse Energie et Biocarburant de 2IE, Ouagadougou, July 2015 (see document in English : « *tiipaalga_Report WBT thermal efficiency_F3PA_24_07_2015_VF_EN* »)

Additional comments	For each wife of one household included in the VPA, at least two efficient cookstoves of the defined project sizes 2, 3, 4, 5, 6, 7, 8, 10, 12 and 15 will be installed according to the local cooking habits. Each size of project cookstove is tested according to the WBT protocol. To determine the project cookstove efficiency of one particular size, three sample runs have been carried out on one randomly selected project cookstove. The average of the three results is taken as the efficiency for the project cookstove of this particular size. The lowest value of project cookstove efficiency of the various sizes is taken as reference value for the efficiency of the cookstoves being used in the project scenario to calculate the emission reductions. The project cookstove efficiency in the year y $\eta_{p,y}$ will be determined using the discount factor DF_{η} to account for efficiency loss of project cookstove per year of operation (fraction).

Relevant SDG Indicator	**SDG 13, Climate Action**
Data/parameter:	**$f_{NRB,b,y}$**
Unit	Fractional non-renewability
Description	Non-renewability status of wood fuel during year y
Source of data	Default NRB value provided by the CDM executive board and endorsed by the host country DNA (http://cdm.unfccc.int/DNA/fNRB/docs/burkina.pdf)
Value(s) applied)	0.90
Choice of data or measurement methods and procedures	As defined under the Gold Standard Simplified Methodology for Efficient Cookstoves v1.0
Purpose of data	Calculation of emission reductions
Additional comments	The project activity may choose to update the $f_{NRB,b,y}$ during the crediting period

Relevant SDG Indicator	**SDG 13, Climate Action**
Data/parameter:	**$B_{b,y}$**
Unit	Tonnes firewood per household per year
Description	Firewood consumption for cooking in the baseline

Source of data	Average household size within the project boundary is determined for each VPA using data from the latest population census in 2006 of the National Institute for Statistics and Demography[4]. The minimum service level or the default baseline biomass consumption according the Gold Standard Simplified Methodology for Efficient Cookstoves v1.0 is set at 0.5 tonnes per capita per year.
Value(s) applied)	VPA-01 – Bourzanga: 3.39 VPA-02 – Bourzanga: 3.39 VPA-03 – Rollo: 3.33 VPA-04 – Ouindigui: 3.53 VPA-05 – Tikaré: 3.41 VPA-06 – Kongoussi: 3.03 VPA-07 – Kongoussi : 3.03 VPA-08 – Guibaré : 3.44 VPA-09 – Nasséré and Sabcé: 3.74 VPA-10 – Rouko and Sabcé : 3.79
Choice of data or measurement methods and procedures	Option c of Minimum service level has been chosen to determine the firewood consumption for cooking in the baseline as detailed information per municipality on average household size is available in the "Recensement général de la population et de l'habitation (RGPH) de 2006 du Burkina Faso" or the general census of the population and habitat of Burkina Faso, table 15. Other sources show that the population in Burkina Faso is growing each year[5]. This means that the used value can be considered as conservative to calculate the CO2 reduction emissions.
Purpose of data	Calculation of emission reductions
Additional comments	N/A

D.2 Data and parameters monitored

Relevant SDG Indicator	**SDG 1, No poverty**
Data/ Parameter	**Number of leader women (Monitrice endogène) who benefit from microcredit**
Unit	Number of persons
Description	Number of leader women (Monitrice endogène) who benefit from microcredit

[4] INSD, recensement général de la population et de l'habitation de 2006, juillet 2008, Ministère de l'Economie et des Finances, p43 (tableau 15), 52 pages (document *Resultats_definitifs_RGPH_2006*)

[5] INSD, Annuaire Statistique 2011, Ministère de l'Economie et des Finances, Edition 2013, p24 - 27 (table 02.18), 420 p.) – Document *Annuaire_statistiques_finale2011*

Source of data	Reports regarding the implementation of microcredit scheme for leader women involved in the project: see document *'Tranche4_Livrable2_Rapport_Mise en place_Micro Crédit An6_2022 EN',* Table 2, p 6.
Value(s) applied	452
Measurement methods and procedure	The measurement of the parameter is based on qualitative information collected in the reports regarding the microcredit scheme.
Monitoring frequency	Annual
QA/QC procedures	The data has been reviewed in the reports regarding the microcredit scheme, which is made available for review.
Purpose of data	Calculation of the parameter "Number of leader women (Monitrice endogène) who benefit from microcredit"
Additional comment	In the sixth phase of the implementation of the Tiipaalga microcredit scheme 452 leading women from 25 villages received 11,500,000 FCFA or 17,528 € on their microcredit account for the finance of income generating activities (see Table 5 on page 11 of document *'Tranche4_Livrable2_Rapport_Mise en place_Micro Crédit An6_2022 EN*).

Relevant SDG Indicator	**SDG 1, No poverty**
Data/ Parameter	**Proportion of leader women (Monitrice endogène) participating to microcredit scheme which make benefits from Income Generating Activities financed through the microcredit scheme**
Unit	Fraction
Description	Number of leader women (Monitrice endogène) participating to microcredit scheme which make benefits from Income Generating Activities financed through the microcredit scheme / Number of leader women (Monitrice endogène) participating to the microcredit scheme
Source of data	2022_Rapport_Evaluation_Cycle1_FAME-AGR_Villages an5 EN: report of the impact of phase 6 of the microcredit scheme (Conclusion page 14: 194 out of the 498 leader women made some losses).
Value(s) applied	39%
Measurement methods and procedure	The measurement of the parameter is based on qualitative information collected in the reports regarding the microcredit scheme.
Monitoring frequency	After each implementation phase of the microcredit scheme

QA/QC procedures	The data has been reviewed in the reports regarding the microcredit scheme, which is made available for review.
Purpose of data	Calculation of the parameter "Proportion of leader women (Monitrice endogène) participating to microcredit scheme which make benefits from Income Generating Activities financed through the microcredit scheme"
Additional comment	In the sixth phase of the implementation of the Tiipaalga microcredit scheme 452 monitrices endogènes from 25 villages received 11,500,000 FCFA or 17,528 € on their microcredit account for the finance of income generating activities (see Table 5 on page 11 of document '*Tranche4_Livrable2_Rapport_Mise en place_Micro Crédit An6_2022 EN*).

Relevant SDG Indicator	**SDG 1, No poverty**
Data/ Parameter	**Total benefit from Income Generating activities financed through the microcredit scheme**
Unit	FCFA and/or €
Description	Total amount in FCFA or € of benefit generated by Income Generating Activities which are managed by the leader women (Monitrice endogène) and funded by the microcredit scheme
Source of data	Reports regarding the implementation of microcredit scheme for leader women involved in the project: see document '*Tranche4_Livrable2_Rapport_Mise en place_Micro Crédit An6_2022 EN,* pg 11.
Value(s) applied	11,500,000 FCFA or 17,528 €
Measurement methods and procedure	The measurement of the parameter is based on qualitative information collected in the reports regarding the microcredit scheme.
Monitoring frequency	After each implementation phase of the microcredit scheme
QA/QC procedures	The data has been reviewed in the reports regarding the microcredit scheme, which is made available for review.
Purpose of data	Calculation of the parameter "Total benefit from Income Generating activities financed through the microcredit scheme"

Additional comment	In the fourth phase of the implementation of the Tiipaalga microcredit scheme 452 monitrices endogènes from 48 villages received 11,500,000 FCFA or 17,528 € on their microcredit account for the finance of income generating activities (see Table 5 on page 11 of document '*Tranche4_Livrable2_Rapport_Mise en place_Micro Crédit An6_2022 EN*).

Relevant SDG Indicator	**SDG 3, Good health and well-being**
Data/ Parameter	**Proportion of households perceiving less often smoke levels, incidence of coughing, incidence of respiratory illness, incidence of itchy eyes**
Unit	Fraction
Description	Proportion of households perceiving less often smoke levels, incidence of coughing, incidence of respiratory illness, incidence of itchy eyes since the implementation of F3PA efficient cookstoves
Source of data	Monitoring survey, see document '*GS1340_VPA1-10_MP8_MS'*/ Tab 'Analysis'.
Value(s) applied	Smoke level reduction: 100% Incidence of coughing reduction: 100% Incidence of respiratory illness reduction: 100% Incidence of itchy eyes reduction: 100%
Measurement methods and procedure	The measurement of the parameter is based on qualitative information collected during Monitoring surveys. The end users are asked whether, since they have the F3PA efficient cookstoves, smoke level occurs for each more often, less often among the family members or the situation has not changed. The same is asked for coughing, respiratory illnesses and itchy eyes.
Monitoring frequency	Annual
QA/QC procedures	The data is analyzed in the monitoring report and raw data of the Monitoring surveys is made available for review.
Purpose of data	Calculation of the parameter "Proportion of households perceiving less often smoke levels, incidence of coughing, incidence of respiratory illness, incidence of itchy eyes"
Additional comment	N.A.

Relevant SDG Indicator	**SDG 4, Quality Education**
Data/ Parameter	**Number of training initiatives for staff involved in the programme**

Unit	Number
Description	Number of training initiatives for staff involved in the programme in order to increase their performance in the programme
Source of data	Reports regarding the training initiatives See document 'Rapport de formation agents de collecte_ EN.docx'.
Value(s) applied	1
Measurement methods and procedure	The list of training initiatives during the corresponding monitoring period
Monitoring frequency	Annual
QA/QC procedures	The data is analyzed in the reports regarding the training initiatives, which is made available for review
Purpose of data	Calculation of the parameter "Number of trainings initiatives for staff involved in the programme"
Additional comment	Four surveyors received a 2-day training under the supervision of two members of Association tiipaalga on the 9th and 10th of August 2023. The purpose of the training was to teach the fundamentals of the usage survey with a theoretical and practical phase and to familiarize with the used tools (Akvo software). The surveyors were ultimately able to collect quality data from the households on the field for the purpose of the monitoring survey. More details regarding the training and the participants list can be found in document: 'Rapport de formation agents de collecte_ EN.docx'. In total 1 training has been organized during the monitoring period: Training initiative: - August 2023: 2 days; - Tiipaalga office in Ouagadougou and field tests; - 4 participants - Utilization of smartphones with AKVO Flow software for monitoring survey (of the 8th verification); See document Rapport de formation agents de collecte_ EN.docx'.

Relevant SDG Indicator	**SDG 4, Quality Education**
Data/ Parameter	**Number of workshops carried out for women**
Unit	Number

Description	Number of workshops carried out for women in order to increase their empowerment
Source of data	Reports regarding the workshops carried out for women. Complete summary can be found in documents *'01-BAM-SYNTHESE DE ACTIVITES PROJET F3PA-2022*.
Value(s) applied	128
Measurement methods and procedure	The list of workshops carried out for women during the corresponding monitoring period
Monitoring frequency	Annual
QA/QC procedures	The data is analyzed in the reports regarding the workshops carried out for women, which is made available for review
Purpose of data	Calculation of the parameter "Number of workshops carried out for women"

Additional comment	Two types of workshops were organized: 1) sensitization workshops; and 2) training workshops of leader women for the construction and renewal of F3PA efficient cookstoves. During the sensibilization sessions different activities were conducted: i. Stove users are informed about the advantages of the project cookstoves for the climate and desertification of the project area, tiipaalga's activities, on how the banco or mud should be prepared for the construction of the cookstoves etc. ii. Beneficiaries of the micro-credit schemes are informed towards the modality and good practices of the lending money principles; iii. Theatrical performances to sensitize households and MEs on the adoption of the F3PA technology and on how to rebuild the old F3PAs to facilitate the diffusion-construction of F3PAs in new households and to encourage maintenance, repair and protection of F3PAs in old households During training sessions leader women are trained on how the F3PA efficient cookstoves should be constructed and maintained. In total, 5,920participants were present during the workshops; 97% of which were women. A complete summary of the different sessions can be found in documents : *'01-BAM-SYNTHESE DE ACTIVITES PROJET F3PA-2022*. Evidence of the sensitization sessions and training workshops can be shared upon request.

Relevant SDG Indicator	**SDG 5, Gender equality**

Data/ Parameter	**Proportion of stove users perceiving reduced amount of time spent on wood fuel collection and/or proportion of user perceiving reduced amount of money spent on wood fuel purchase**
Unit	Fraction
Description	Proportion of stove users perceiving reduced time spent on wood fuel collection and/or reduced money spent on wood fuel purchase since the implementation of the F3PA efficient cookstoves
Source of data	Monitoring survey, see document '*GS1340_VPA1-10_MP8_MS'* / Tab '*Analysis*'.
Value(s) applied	Proportion of stove users perceiving reduced amount of time spent on wood fuel collection: 100% Activities done in saved time: i. Domestic tasks$_p$: 99% ii. Income generating activities$_p$: 41% iii. Field labour$_p$: 23% iv. Gardening$_p$: 1% v. Participating in a literacy program$_p$: 1% vi. Community work$_p$: 6% vii. Doing nothing$_p$: 0% viii. Religious activities$_p$: 1% ix. Leisure$_p$: 3% Proportion of stove users perceiving reduced amount of money spent on wood fuel purchase: 100% Usage of saved money: i. School fees$_p$: 28% ii. Purchase of medical drugs$_p$: 84% iii. Purchase of food$_p$: 56% iv. Savings$_p$: 0% v. Other$_p$: 4%
Measurement methods and procedure	The measurement of the parameter is based on quantitative information collected during Monitoring surveys. The end users are asked, how much time they spent collecting wood fuel for domestic cooking since they have the F3PA efficient cookstoves.
Monitoring frequency	Annual
QA/QC procedures	The data is analyzed in the monitoring report and raw data of the Monitoring surveys is made available for review.
Purpose of data	Calculation of the parameter "Proportion of stove users perceiving reduced amount of time spent on wood fuel collection and/or proportion of user perceiving reduced amount of money spent on wood fuel purchase"
Additional comment	N.A.

Relevant SDG Indicator	SDG 7, Affordable and clean energy
Data/ Parameter	**Number of F3PA efficient cookstoves disseminated for the group of VPA's**
Unit	Number
Description	Number of F3PA efficient cookstoves included in the project database for project scenario p
Source of data	Project database. See document *'DR_Tiipaalga_VPA01-10*_ICS_MP8
Value(s) applied	VPA 01: 3,279 VPA 02: 1,397 VPA 03: 9,132 VPA 04: 4,331 VPA 05: 9,410 VPA 06: 11,801 VPA 07: 9,367 VPA 08: 5,609 VPA 09: 9,546 VPA 10: 6,885 Total: 70,757
Measurement methods and procedure	The project database provides a list of end-users with number of F3PA efficient cookstoves per end-user.
Monitoring frequency	Continuous
QA/QC procedures	The data is analyzed in the monitoring report and Project database is made available for review.
Purpose of data	Calculation of the parameter "Number of F3PA efficient cookstoves disseminated"
Additional comment	N.A.

Relevant SDG Indicator	SDG 13, Climate action
Data/ Parameter	**U_p**
Unit	Percentage
Description	Usage rate in project scenario p
Source of data	Annual usage/monitoring survey. See document: *'GS1340_VPA1-10_MP8_ANALISIS'* / Tab 'Analysis'.
Value(s) applied	95.07%

Measurement methods and procedure	The measurement of the usage rate is based on qualitative information collected in the usage/monitoring survey. A question concerning the current use of the technology is asked to each end user of the sample and is validated by the observation of the surveyor in order to determine the usage rate of each technology age category.
Monitoring frequency	Annual
QA/QC procedures	Transparent data analysis and reporting
Purpose of data	Calculation of emission reductions
Additional comment	A usage parameter is derived for each age group of project cookstoves being credited. The usage survey will determine if the project cookstoves can be considered as 'in use' or 'not in use' and if the project cookstoves are in 'good condition' or 'not in good condition'. The record keeping system of the 10 VPA's included in this PoA is at household level (with household number) for which all baseline cookstove set(s) (comprising of several traditional three stone cookstoves for domestic use) have been replaced by project cookstove set(s) . Cookstove set(s) within a household can only be considered 'in use' if all the cookstoves in the set(s) (in polygamous households all cookstoves of all cookstove sets of all women in the household) are being used. Similarly, cookstove set(s) can only be considered in 'good condition' as long as all cookstoves within the cookstove set(s) (in polygamous households all cookstoves of all cookstove sets of all women in the household) are in a 'good condition'.

Relevant SDG Indicator	**SDG 13, Climate action**
Data/ Parameter	**$N_{p,1}$**
Unit	Number of households included in the project (Units), based on days of usage of age group 0-1 during the monitoring period related to one year.
Description	Household in the project database for project scenario p through year i for which all baseline cookstove set(s) (comprising of several traditional three stone cookstoves for domestic use) have been replaced by project cookstove set(s).
Source of data	Project database. See document '*Tiipaalga_VPA1-10_ MP8_Date recente_All HH'* / Tab 'Analysis'.

Value(s) applied	VPA 01: 86 VPA 02: - VPA 03: 1,327 VPA 04: 193 VPA 05: 1,590 VPA 06: 1,501 VPA 07: 1,491 VPA 08: 619 VPA 09: 2,052 VPA 10: 1,276 Total: 10,125
Measurement methods and procedure	For the determination of the number of usage days at household level for age group 0-1 during the corresponding monitoring period, the latest start day of use of all constructed F3PA efficient cookstoves within the household will be taken in order to have conservative approach. Number of households included in the project (Units) are calculated based on days of usage of age group 0-1 during the corresponding monitoring period related to one year. For each household the number of days in each age group are calculated and divided by the number of days in one year. Hence, a household equipped with F3PA cookstove during 6 months of the MP would be considered as 0.5 household equivalent, this to ensure conservativeness in the ER calculations.
Monitoring frequency	Annual
QA/QC procedures	Transparent data analysis and reporting
Purpose of data	Calculation of emission reductions

Additional comment	A part of the households in the project area of the 10 VPA's are polygamous. Each wife of the household included in the carbon project must have at least two F3PA efficient cookstoves. This is a local cooking requirement as one is for the Mush "Tô", the other for the sauce "Sauce". Additional cookstoves could be used for boiling water or preparing the soup. All the traditional three stone cookstoves for domestic use will be replaced by the F3PA efficient cookstoves. This means that according to the needs of the household, an un-predetermined number of project cookstoves will be constructed and used at household level. As the quantity of firewood consumed in the baseline is determined at household level, the number of households will be monitored instead of project cookstoves to determine the emissions reductions. Women will be trained by the tiipaalga instructors or leader women to build the project cookstoves themselves using local materials according a strict construction protocol. In tight collaboration of the project coordinator, the instructor and the leader women the logistical management, quality assurance of the project cookstoves according the construction protocol and the management of the project database recording all constructed project cookstoves will be ensured.

Relevant SDG Indicator	**SDG 13, Climate action**
Data/ Parameter	**$N_{p,2}$**
Unit	Number of households included in the project (Units), based on days of usage of age group 1-2 during the monitoring period related to one year.
Description	Household in the project database for project scenario p through year i for which all baseline cookstove set(s) (comprising of several traditional three stone cookstoves for domestic use) have been replaced by project cookstove set(s).
Source of data	Project database. See document '*Tiipaalga_VPA1-10_ MP8_Date recente_All HH' /* Tab 'Analysis'.

Value(s) applied	VPA 01: 466 VPA 02: 199 VPA 03: 1,148 VPA 04: 882 VPA 05: 935 VPA 06: 1,548 VPA 07: 1,239 VPA 08: 641 VPA 09: 787 VPA 10: 737 Total: 8,582
Measurement methods and procedure	For the determination of the number of usage days at household level for age group 1-2 during the corresponding monitoring period, the latest start day of use of all constructed F3PA efficient cookstoves within the household will be taken in order to have conservative approach. Number of households included in the project (Units) are calculated based on days of usage of age group 1-2 during the corresponding monitoring period related to one year. For each household the number of days in each age group are calculated and divided by the number of days in one year. Hence, a household equipped with F3PA cookstove during 6 months of the MP would be considered as 0.5 household equivalent, this to ensure conservativeness in the ER calculations.
Monitoring frequency	Annual
QA/QC procedures	Transparent data analysis and reporting
Purpose of data	Calculation of emission reductions

Additional comment	A part of the households in the project area of the 10 VPA's are polygamous. Each wife of the household included in the carbon project must have at least two F3PA efficient cookstoves. This is a local cooking requirement as one is for the Mush "Tô", the other for the sauce "Sauce". Additional cookstoves could be used for boiling water or preparing the soup. All the traditional three stone cookstoves for domestic use will be replaced by the F3PA efficient cookstoves. This means that according to the needs of the household, an un-predetermined number of project cookstoves will be constructed and used at household level. As the quantity of firewood consumed in the baseline is determined at household level, the number of households will be monitored instead of project cookstoves to determine the emissions reductions. Women will be trained by the tiipaalga instructors or leader women to build the project cookstoves themselves using local materials according a strict construction protocol. In tight collaboration of the project coordinator, the instructor and the leader women the logistical management, quality assurance of the project cookstoves according the construction protocol and the management of the project database recording all constructed project cookstoves will be ensured.

Relevant SDG Indicator	**SDG 13, Climate action**
Data/ Parameter	**$N_{p,3}$**
Unit	Number of households included in the project (Units), based on days of usage of age group 2-3 during the monitoring period related to one year.
Description	Household in the project database for project scenario p through year i for which all baseline cookstove set(s) (comprising of several traditional three stone cookstoves for domestic use) have been replaced by project cookstove set(s).
Source of data	Project database. See document '*Tiipaalga_VPA1-10_ MP8_Date recente_All HH' /* Tab 'Analysis'.

Value(s) applied	VPA 01: 648 VPA 02: 309 VPA 03: 688 VPA 04: 633 VPA 05: 660 VPA 06: 936 VPA 07: 716 VPA 08: 566 VPA 09: 370 VPA 10: 518 Total: 6043
Measurement methods and procedure	For the determination of the number of usage days at household level for age group 2-3 during the corresponding monitoring period, the latest start day of use of all constructed F3PA efficient cookstoves within the household will be taken in order to have conservative approach. Number of households included in the project (Units) are calculated based on days of usage of age group 2-3 during the corresponding monitoring period related to one year. For each household the number of days in each age group are calculated and divided by the number of days in one year. Hence, a household equipped with F3PA cookstove during 6 months of the MP would be considered as 0.5 household equivalent, this to ensure conservativeness in the ER calculations.
Monitoring frequency	Annual
QA/QC procedures	Transparent data analysis and reporting
Purpose of data	Calculation of emission reductions

Additional comment	A part of the households in the project area of the 10 VPA's are polygamous. Each wife of the household included in the carbon project must have at least two F3PA efficient cookstoves. This is a local cooking requirement as one is for the Mush "Tô", the other for the sauce "Sauce". Additional cookstoves could be used for boiling water or preparing the soup. All the traditional three stone cookstoves for domestic use will be replaced by the F3PA efficient cookstoves. This means that according to the needs of the household, an un-predetermined number of project cookstoves will be constructed and used at household level. As the quantity of firewood consumed in the baseline is determined at household level, the number of households will be monitored instead of project cookstoves to determine the emissions reductions. Women will be trained by the tiipaalga instructors or leader women to build the project cookstoves themselves using local materials according a strict construction protocol. In tight collaboration of the project coordinator, the instructor and the leader women the logistical management, quality assurance of the project cookstoves according the construction protocol and the management of the project database recording all constructed project cookstoves will be ensured.

Relevant SDG Indicator	**SDG 13, Climate action**
Data/ Parameter	**$N_{p,4}$**
Unit	Number of households included in the project (Units), based on days of usage of age group 3-4 during the monitoring period related to one year.
Description	Household in the project database for project scenario p through year i for which all baseline cookstove set(s) (comprising of several traditional three stone cookstoves for domestic use) have been replaced by project cookstove set(s).
Source of data	Project database. See document '*Tiipaalga_VPA1-10_ MP8_Date recente_All HH' /* Tab 'Analysis'.

Value(s) applied	VPA 01: 3 VPA 02: 5 VPA 03: 18 VPA 04: 23 VPA 05: 12 VPA 06: 44 VPA 07: 3 VPA 08: 380 VPA 09: 50 VPA 10: 81 Total: 619
Measurement methods and procedure	For the determination of the number of usage days at household level for age group 3-4 during the corresponding monitoring period, the latest start day of use of all constructed F3PA efficient cookstoves within the household will be taken in order to have conservative approach. Number of households included in the project (Units) are calculated based on days of usage of age group 3-4 during the corresponding monitoring period related to one year. For each household the number of days in each age group are calculated and divided by the number of days in one year. Hence, a household equipped with F3PA cookstove during 6 months of the MP would be considered as 0.5 household equivalent, this to ensure conservativeness in the ER calculations.
Monitoring frequency	Annual
QA/QC procedures	Transparent data analysis and reporting
Purpose of data	Calculation of emission reductions

Additional comment	A part of the households in the project area of the 10 VPA's are polygamous. Each wife of the household included in the carbon project must have at least two F3PA efficient cookstoves. This is a local cooking requirement as one is for the Mush "Tô", the other for the sauce "Sauce". Additional cookstoves could be used for boiling water or preparing the soup. All the traditional three stone cookstoves for domestic use will be replaced by the F3PA efficient cookstoves. This means that according to the needs of the household, an un-predetermined number of project cookstoves will be constructed and used at household level. As the quantity of firewood consumed in the baseline is determined at household level, the number of households will be monitored instead of project cookstoves to determine the emissions reductions. Women will be trained by the tiipaalga instructors or leader women to build the project cookstoves themselves using local materials according a strict construction protocol. In tight collaboration of the project coordinator, the instructor and the leader women the logistical management, quality assurance of the project cookstoves according the construction protocol and the management of the project database recording all constructed project cookstoves will be ensured.

Relevant SDG Indicator	**SDG 13, Climate action**
Data/ Parameter	**$N_{p,5}$**
Unit	Number of households included in the project (Units), based on days of usage of age group 4-5 during the monitoring period related to one year.
Description	Household in the project database for project scenario p through year i for which all baseline cookstove set(s) (comprising of several traditional three stone cookstoves for domestic use) have been replaced by project cookstove set(s).
Source of data	Project database. See document '*Tiipaalga_VPA1-10_ MP8_Date recente_All HH' /* Tab 'Analysis'.

Value(s) applied	VPA 01: 13 VPA 02: 20 VPA 03: 255 VPA 04: 61 VPA 05: 157 VPA 06: 282 VPA 07: 128 VPA 08: 555 VPA 09:502 VPA 10: 337 Total: 2,310
Measurement methods and procedure	For the determination of the number of usage days at household level for age group 4-5 during the corresponding monitoring period, the latest start day of use of all constructed F3PA efficient cookstoves within the household will be taken in order to have conservative approach. Number of households included in the project (Units) are calculated based on days of usage of age group 4-5 during the corresponding monitoring period related to one year. For each household the number of days in each age group are calculated and divided by the number of days in one year. Hence, a household equipped with F3PA cookstove during 6 months of the MP would be considered as 0.5 household equivalent, this to ensure conservativeness in the ER calculations.
Monitoring frequency	Annual
QA/QC procedures	Transparent data analysis and reporting
Purpose of data	Calculation of emission reductions

Additional comment	A part of the households in the project area of the 10 VPA's are polygamous. Each wife of the household included in the carbon project must have at least two F3PA efficient cookstoves. This is a local cooking requirement as one is for the Mush "Tô", the other for the sauce "Sauce". Additional cookstoves could be used for boiling water or preparing the soup. All the traditional three stone cookstoves for domestic use will be replaced by the F3PA efficient cookstoves. This means that according to the needs of the household, an un-predetermined number of project cookstoves will be constructed and used at household level. As the quantity of firewood consumed in the baseline is determined at household level, the number of households will be monitored instead of project cookstoves to determine the emissions reductions. Women will be trained by the tiipaalga instructors or leader women to build the project cookstoves themselves using local materials according a strict construction protocol. In tight collaboration of the project coordinator, the instructor and the leader women the logistical management, quality assurance of the project cookstoves according the construction protocol and the management of the project database recording all constructed project cookstoves will be ensured.

Relevant SDG Indicator	**SDG 13, Climate action**
Data/ Parameter	**DF_{η}**
Unit	Fraction
Description	Discount factor to account for efficiency loss of project stoves
Source of data	Gold Standard Simplified Methodology for Efficient Cookstoves v1.0
Value(s) applied	Default value: 0.99 i.e., 1 % efficiency loss per year
Measurement methods and procedure	N.A.
Monitoring frequency	N.A.
QA/QC procedures	N.A.
Purpose of data	Calculation of emission reductions
Additional comment	N.A.

Relevant SDG Indicator	**SDG 13, Climate action**
Data/ Parameter	**$DF_{b,stove}$**

Unit	Percentage
Description	Discount factor to account for the baseline stove use in project scenario p
Source of data	Annual usage/monitoring survey. See document: '*GS1340_VPA1-10_MP8_MS'* / Tab '*Analysis*'.
Value(s) applied	0.0%
Measurement methods and procedure	The measurement of the discount factor to account for the baseline stove use is based on qualitative information collected in the usage/monitoring survey. A question concerning the current use of the baseline technology is asked to each end user of the sample and is validated by the observation of the surveyor in order to determine the discount factor to account for the baseline stove use in project scenario p of each technology age category.
Monitoring frequency	Annual
QA/QC procedures	Transparent data analysis and reporting
Purpose of data	Calculation of emission reductions
Additional comment	The discount factor for the baseline-stove is determined based on the number of meals cooked using the baseline stove. The required information is captured through sample surveys carried out following a random sampling approach for all age groups. The impact of seasonal variation on use of baseline stove is considered as part of the monitoring survey. The survey format for sample question to capture this information is described in the Monitoring Plan. In case of polygamous households the discount factor is determined for each cookstove set and the highest value of all cookstove sets within the household is used as representative discount factor for the household.

Relevant SDG Indicator	**SDG 13, Climate Action**
Data/ Parameter	**Number of tCO2e reduced by the project**
Unit	Tonne of CO2e
Description	Number of tCO2e reduced thanks to the implementation of the project during the corresponding monitoring period.

Measured/calculated/default	Measured
Source of data	ER calculations: see document *'GS 1340 - VPA 01-10 - ER_MP8'*.
Value(s) of monitored parameter	VPA-01: 4,280 VPA-02: 1,872 VPA-03: 10,000 (11,928) VPA-04: 6,566 VPA-05: 10,000 (11,940) VPA-06: 10,000 (13,587) VPA-07: 10,000 (11,292) VPA-08: 9,817 VPA-09: 10,000 (14,630) VPA-10: 10,000 (11,623) Total: 82,535 (97,535)
Monitoring equipment	N/A
Measuring/reading/recording frequency	Annual
Calculation method (if applicable)	See section E.4
QA/QC procedures	Transparent data analysis and reporting
Purpose of data	Calculation of emission reductions
Additional comments	N.A.

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

Data/Parameter	Value obtained in this monitoring period	Value obtained last monitoring period
SDG 1 **Parameter #1:** Number of leader women (Monitrice endogène) who benefit from microcredit **Parameter #2:** Proportion of leader women (Monitrice endogène) participating to microcredit scheme which make benefits from Income Generating Activities financed through the microcredit scheme **Parameter #3:** Total benefit from Income Generating activities financed through the microcredit scheme	Parameter #1: 452 Parameter #2: 39% Parameter #3: 11,500,000 FCFA or 17,528 €	Parameter #1: 870 Parameter #2: 99.5% Parameter #3: 17,787,695 FCFA or 27,194 €

SDG 3 Proportion of households perceiving less often smoke levels, incidence of coughing, incidence of respiratory illness, incidence of itchy eyes	Smoke level reduction: 100% Incidence of coughing reduction: 100% Incidence of respiratory illness reduction: 100% Incidence of itchy eyes reduction: 100%	Smoke level reduction: 100% Incidence of coughing reduction: 100% Incidence of respiratory illness reduction: 100% Incidence of itchy eyes reduction: 100%
SDG 4 **Parameter #1:** Number of training initiatives for staff involved in the programme **Parameter #2:** Number of workshops carried out for women	Parameter #1: 1 Parameter #2: 128	Parameter #1: 1 Parameter #2: 307
SDG 5 Proportion of stove users perceiving reduced amount of time spent on wood fuel collection and/or proportion of user perceiving reduced amount of money spent on wood fuel purchase	Reduced amount of time spent on wood fuel collection: 100% Reduced amount of money spent on wood fuel purchase: 100%	Reduced amount of time spent on wood fuel collection: 100% Reduced amount of money spent on wood fuel purchase: 100%
SDG 7 Number of F3PA efficient cookstoves disseminated	VPA 01: 3,279 VPA 02: 1,397 VPA 03: 9,132 VPA 04: 4,331 VPA 05: 9,410 VPA 06: 11,801 VPA 07: 9,367 VPA 08: 5,609 VPA 09: 9,546 VPA 10: 6,885 Total : 70,757	VPA 01: 6,151 VPA 02: 5,557 VPA 03: 8,779 VPA 04: 8,553 VPA 05: 8,303 VPA 06: 11,040 VPA 07: 9,340 VPA 08: 8,989 VPA 09: 8,256 VPA 10: 8,012 Total : 82,980

SDG 13 VER	VPA-01: 4,280 VPA-02: 1,872 VPA-03: 10,000 (11,928) VPA-04: 6,566 VPA-05: 10,000 (11,940) VPA-06: 10,000 (13,587) VPA-07: 10,000 (11,292) VPA-08: 9,817 VPA-09: 10,000 (14,630) VPA-10: 10,000 (11,623) Total: 82,535 (97,535)	GS2456 (VPA-01): 5,656 tCO2e GS3516 (VPA-02): 4,668 tCO2e GS3517 (VPA-03): 8,919 tCO2e GS3518 (VPA-04): 8,452 tCO2e GS3519 (VPA-05): 8,193 tCO2e GS3520 (VPA-06): 9,860 tCO2e GS3521 (VPA-07): 8,418 tCO2e GS3522 (VPA-08): 8,760 tCO2e GS3523 (VPA-09): 9,049 tCO2e GS3524 (VPA-10): 9,006 tCO2e Total: 80,981 tCO2e

D.4. Implementation of sampling plan

In parallel with the distribution/renewal of the F3PA efficient cookstoves, and as per monitoring plan in the respective registered VPA-DD's (VPA-01 to 10), tiipaalga conducted the following monitoring activities:

Date	Activity	Purpose
Ongoing	Project database	Establish total distribution record to track number of households for which all baseline cookstove set(s) (comprising of several traditional three stone cookstoves for domestic use) have been replaced by project cookstove set(s)
From 11/08/2023 To 28/09/2023	Monitoring survey	(i) To establish single usage rate factor of age group 0-1, age group 1-2, age group 2-3, ag group 3-4 and age-group 4-5 based on if the project cookstoves can be considered as 'in use' or 'not in use' and if the project cookstoves are in 'good condition' or 'not in good condition'; (ii) To establish single discount factor age group 0-1, age group 1-2, age group 2-3, age group 3-4 and age group 4-5 to account for the baseline stove use; (iii) To measure the parameters regarding SDG 3 and SDG 5.

a) Collected data

The parameters which need to be monitored through surveys for the 10 VPA's are (i) $U_{p,y}$ Usage rate in project scenario p during year y; and (ii) $DF_{b,stove,y}$ Discount factor to account for the baseline stove use in project scenario p during the year y (iii) parameters to evaluate SDG 3 and SDG 5 indicators. Since those parameters of interest are assumed to be the same in each VPA at the time of sampling survey during the monitoring period and the start of the crediting period of the 10 VPA's lies within two months, a single survey with cross sampling of households has been undertaken using a single random sampling plan. The populations of all 10 VPAs are combined together, for which the sample size is calculated using the sampling guidelines described below.

b) Sampling approach

Determination of the sampling frame

The number of households of which each wife of the household (when polygamous) has replaced all traditional three stones cookstoves for domestic use with project cookstoves, is recorded in the project database (see data base records file '*DR_Tiipaalga_VPA01-10_HH_MP8'* and '*DR_Tiipaalga_VPA01-10_ICS_MP8*'). Only the households recorded in the database are part of the project activity.

The project activities started in February 2015, but the renewal activities in 2020, 2021 and 2022 (described in SECTION C. DESCRIPTION OF MONITORING SYSTEM APPLIED BY THE PROJECT) intended to replace/renew the cookstoves installed in the first year and second years of the project (respectively 2015 and 2016). The start of the crediting period of each household is considered as the latest construction/replacement date of all stoves within the cooking sets of the different wives within the household. This information is presented in the file '*Tiipaalga_VPA1-10_ MP8_Date recente_All HH_v0.1'* for the different households included in the database (see also Figure 3 for the representation of the project database during MP8). Hence, the project database in MP8 comprises the following households:

i. **Remaining households**: which were equipped with F3PA cookstoves during previous monitoring periods and are since part of the project database. Those will be included in future renewal campaigns in the subsequent monitoring periods.
ii. **Renewed households:** which were initially equipped with F3PA cookstoves in the past but participated successfully to the renewal activities. Hence, all their cookstoves are in a state "as good as new" and belong again in the AG 0-1 at renewal.
iii. **New households:** new households equipped with F3PAs. Those did not belong to the project database prior to this monitoring period.

The households equipped with F3PA cookstoves set in 2016 and 2017 but did not participate to the renewal activities are discarded from the project database (removed households).

For each household the number of technology-days during MP8 are calculated per age group: (i) age group 0-1 (i.e. construction date till construction date + 365 days), (ii) age group 1-2 (i.e. construction date + 365 days till construction date + 2 * 365 days),

(iii) age group 2-3 (i.e. construction date + 2 * 365 days till construction date + 3 * 365 days), (iv) age group 3-4 (i.e. construction date + 3 * 365 days till construction date + 4 * 365 days), and (v) age group 4-5 (i.e. construction date +4 * 365 days till construction date +5 * 365 days). The number of households per age-group are determined after cumulation of the technology-days per age group of the households in the project database divided by the number of days in a year, i.e. 365 days.

Determination of the random sample

Each household is assigned to one age group (AG) depending on the years of usage up to the sampling date. For example, at the sampling date (08/08/2023), a household installed on the 27/11/2022 has used its F3PAs cookstoves for 0.70 years; hence it belongs to the AG 0-1 for the monitoring and usage survey. At the sampling date (08/08/2023), there were 6 age groups, i.e. 0-1 age group, 1-2 age group, 2-3 age group, 3-4 age group, 4-5 age group and 5-6 age group. The households belonging to the AG5-6 are excluded from the sampling frame since no technology days are claimed for this age-group for this MP. Those households will reintegrate the project data base as part of AG0-1 if they participate to renewal activities during the next verification period. If not, they will not be removed from the project database.

The minimum household sample size of each age group is determined according to the following guidelines (according the Gold Standard TPDDTEC v3.1): the minimum total sample size is 100, with at least 30 samples for project technologies of each age being credited

The minimum sample size for age-group 0-1, age-group 1-2, age-group 2-3 age group 3-4 and age group 4-5 is 30. It has been decided for this MP to use the TPDDTEC guidelines for the sampling for security reasons.

The method for the random section of households for the sampling list is the following[6]: all the households are ordered based on their years of usage (oldest till newest). A randomization per age-group is made based on this number using the random sequence generator *Randomdraws* (*https://www.randomdraws.com/random-sequence-generator/*). From those new randomized lists, the *n* first households (*n* being greater than the minimum sampling size) are included in the sample.

The selection of the sample for the monitoring survey is summarized in Table 4.

Age group at sampling date	#Households	Minimum sample size	#households surveyed
AG 0-1	9,304	30	40
AG 1-2	9,199	30	40
AG 2-3	7,884	30	40
AG 3-4	1,251	30	40

[6] Refer to document '*GS1340_VPA1-10_MP8__Sampling_20230808_v1.0'*/Tab '*Sampling method'* for more details.

AG 4-5	1,729	30	40
AG 5-6	6433	*Excluded from sampling frame since no technology.days during MP*	
Total	**29,347**	**150**	**200**

Table 4 Number of surveys conducted for MP8 verification

For all parameters that are monitored via sampling, it is understood that only the age of the project cookstove has an influence. Therefore, no geographic representativeness is deemed necessary for the selection of users participating in the sample groups. The monitoring surveys are performed by user interviews. Only people older than 18 years are interviewed.

c) Analysis of collected data

The questions used during the survey are presented in the file '*GS1340_VPA01-10_MS_MP8_ANALYSIS*[7]. Apart from information for the sustainable development indicators (SDG 3 and SDG 5), the survey has been built up in order to collect reliable data to calculate the usage rate $U_{p,y}$ per age group and the discount factor to account for the baseline stove use $DF_{b,stove,y}$ per age group.

The file '*GS1340_VPA01-10_MS_MP8_ANALYSIS''* of the monitoring survey contains the following data in worksheet 'Group 2':

- Identifier (Unique internal ID number) which is the unique key of household info
- Identification data per wife: name, picture of wife with it stoves;
- Data on stoves used per wife: size of stoves, construction dates of each stove, location of stoves, frequency of usage, condition of stove …
- Data on cooking habits during dry and wet season;
- Data related to sustainable indicators.

Based on this information the usage rate $U_{p,y}$ is calculated per household in column T and the discount factor to account for the baseline stove use $DF_{b,stove,y}$ per households in column AU. The worksheet "Analysis" contains the evaluated parameters usage rate $U_{p,y}$ and discount factor to account for the baseline stove use $DF_{b,stove,y}$ per age group.

The surveyed households are per age group presented with pictures of stove users and stoves in the file : '*GS1340_VPA01-10_MS_MP8_ANALYSIS' tab "Group2"'.*

The following points were considered when evaluating the usage rate $U_{p,y}$:

- All project cookstoves within the sample are assessed if they are still operational. If one stove user doesn't use any of its project cookstoves, the corresponding household is considered as drop-off;
- The working conditions of project cookstoves are evaluated on the status (i) Green: the stove is in good working conditions, (ii) Orange: the stove is in acceptable working conditions, but needs some maintenance activities; and (iii) Red: the stove is not working well, and needs to be reconstructed (see section C for more details). A household with at least one red project cookstove is considered as a drop-off;

[7] Document is in French. However, translation of the questions is available in the headers of the monitoring survey results file '*GS1340_VPA1-10_MP7_MS'*.

- If a stove-user migrated even for a temporary period or is not available for the survey for security reasons, the corresponding household is considered as a drop-off;

Based on the collected data during the survey for monitoring period the average usage rate $U_{p,y}$ for all age groups is 95.07%. In total 6 households out of the 200 households surveyed across the five age groups are considered as non users and had a usage rate of 0% because of migration or displacement, and 1 household because of too bad condition of at least one F3PA efficient cookstove (status red),1 households because the cookstove is not used by all wives. All other project cookstoves were used and in operational conditions. The project intervention area (provinces of Bam and Loroum in the North Region of Burkina Faso) and more globally the Sahel region are currently under high instability due to threats and attacks of violent armed groups. The attacks against civilians have led to hundreds of thousands of internally displaced persons[8]. During this 8th monitoring period, Tiipaalga association has organized 2 operations of emergency aid operations (i.e. food donations) with the help of Livelihoods and Netwtree in the project's intervention zone. This enabled to get in touch with many leading women, and by extension, F3PA"s beneficiary households. Therefore, many more households than last monitoring period could be surveyed. Only 6 households initially in the sample could not be found and hence it was not possible to assess whether they are still using or not the F3PA improved cookstoves. To remain conservative, it was decided to consider them as non-users, hence a usage rate of (parameter $U_{p,y}$) of 0%.

The discount factor to account for the baseline stove use is calculated based on the number of meals that have been cooked with the baseline stove during the monitoring period. The impact of dry and wet season on the baseline stove use has been evaluated. The baseline stove usage has been questioned in the survey in two ways (see *GS1340_VPA01-10_MS_MP8_ANALYSIS'* columns BO till BP) (i) relative based on a week usage during dry and wet season; (ii) absolute based on total number of usages during dry and wet seasons. The following points were considered when evaluating the discount factor to account for the baseline stove use $DF_{b,stove,y}$:

- The wet season starts on the 1st of June and ends the 31nd of October, which is 153 days;
- Usage of baseline stove during wet and dry season has been surveyed, as well as the number of meals cooked during dry and wet season;
- Based on the number of meals cooked with the baseline cookstove compared to the number of cooked meals, the baseline usage fraction is calculated per stove user. In the case of more than one stove user per household, the highest value will be taken in order to identify the baseline cookstove usage at household level;
- In case the two ways of baseline usage reporting (relative on weekly basis and absolute) didn't match, the highest baseline usage has been calculated for the corresponding household;
- The discount factor for the baseline stove use is based on the average baseline stove use fraction of all the households within the sample;

[8]See online situation report from United Nations Office for the Coordination of Humanitarian Affairs (UN OCHA) report: https://reports.unocha.org/fr/country/burkina-faso/ (consulted on the 07/09/2022).

- If a household has dropped off when evaluating the usage rate, it is not considered when calculating the average baseline stove use fraction;
- A conservative approach has been considered when evaluating the number of meals cooked with the baseline stove.

Based on the collected data during the survey, the baseline stove usage fractions have been evaluated at 0.0% for age group 0-1, 0.0% for age group 1-2, 0.0% for age group 2-3, 0.0% for age group 3-4 and 0.0% for age group 4-5. This means that, on average, less than 0 meal out of 100 meals are cooked with the baseline stove which can be considered as low.

d) Requirement on confidence/precision level

In alignment with the methodology 'the Gold Standard Simplified Methodology for Efficient Cookstoves v1.0', no confidence nor precision requirements are expected to be fulfilled for the monitoring survey results.

SECTION E. CALCULATION OF SDG IMPACTS

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

a) *SDG 1, No poverty*

Not applicable, the direct outcome is calculated, see section E.4.

b) *SDG 3, Good health and well-being*

Not applicable, the direct outcome is calculated, see section E.4.

c) *SDG 4, Quality Education*

Not applicable, the direct outcome is calculated, see section E.4.

d) *SDG 5, Gender equality*

Not applicable, the direct outcome is calculated, see section E.4.

e) *SDG 7, Affordable and clean energy*

Not applicable, the direct outcome is calculated, see section E.4.

f) *SDG 13, Climate Action*

The methodology directly provides equation for emission reductions (without separate baseline, projector leakage emission reduction equations). See section E.4. for the calculation of the emission reductions.

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

a) *SDG 1, No poverty*

Not applicable, the direct outcome is calculated, see section E.4.

b) *SDG 3, Good health and well-being*

Not applicable, the direct outcome is calculated, see section E.4.

c) *SDG 4, Quality Education*

Not applicable, the direct outcome is calculated, see section E.4.

d) *SDG 5, Gender equality*

Not applicable, the direct outcome is calculated, see section E.4.

e) *SDG 7, Affordable and clean energy*

Not applicable, the direct outcome is calculated, see section E.4.

f) *SDG 13, Climate Action*

The methodology directly provides equation for emission reductions (without separate baseline, projector leakage emission reduction equations). See section E.4. for the calculation of the emission reductions.

E.3. Calculation of leakage

a) *SDG 13, Climate Action*

As defined under The Gold Standard Simplified Methodology for Efficient Cookstoves v1.0, the net emission reductions (ERy) for a micro-scale programme of activities (mPOA) need to be discounted by a factor of 0.95 to account for leakages related to non-renewable biomass saved by the project activity.

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

a) *SDG 1, No poverty*

Number of leader women (Monitrice endogène) who benefit from microcredit = Number of leader women (Monitrice endogène) who benefit from microcredit during the monitoring period.

Proportion of leader women (Monitrice endogène) participating to microcredit scheme which make benefits from Income Generating Activities financed through the microcredit scheme = Number of leader women (Monitrice endogène) participating to microcredit scheme which make benefits from Income Generating Activities financed through the microcredit scheme / Number of leader women (Monitrice endogène) participating to the microcredit scheme

Total benefit from Income Generating activities financed through the microcredit scheme = Total amount in FCFA or € of benefit generated by Income Generating Activities which are managed by the leader women (Monitrice endogène) and funded by the microcredit scheme

b) *SDG 3, Good health and well-being*

Smoke level reduction = (Number of stove users perceiving less smoke since the implementation of F3PA efficient cookstoves) / (Number of respondents)

Incidence of coughing reduction = (Number of stove users perceiving less incidence of coughing since the implementation of F3PA efficient cookstoves) / (Number of respondents)

Incidence of respiratory illness reduction = (Number of stove users perceiving less incidence of respiratory illnesses since the implementation of F3PA efficient cookstoves) / (Number of respondents)

Incidence of itchy eyes reduction = (Number of stove users perceiving less incidence of itchy eyes since the implementation of F3PA efficient cookstoves) / (Number of respondents)

c) *SDG 4, Quality education*

Number of trainings initiatives for staff involved in the programme = Number of trainings initiatives for staff involved in the programme during the monitoring period

Number of workshops carried out for women = Number of workshops carried out for women during the monitoring period

d) *SDG 5, Gender equality*

Proportion of stove users perceiving reduced amount of time spent on fuel collection = (Number of stove users perceiving reduced amount of time spent on fuel collection) / (Number of respondents collecting wood fuel)
Activities carried out by women during saved time:

i) **Domestic tasks$_p$** = (Number of women using their saved time to do domestic tasks) / (Number of women considering they save time thanks to the F3PA efficient cookstoves)
ii) **Income generating activities$_p$** = (Number of women using their saved time to do income generating activities) / (Number of women considering they save time thanks to the F3PA efficient cookstoves)
iii) **Field labour$_p$** = (Number of women using their saved time to do field labour) / (Number of women considering they save time thanks to the F3PA efficient cookstoves)
iv) **Gardening$_p$** = (Number of women using their saved time to do gardening) / (Number of women considering they save time thanks to the F3PA efficient cookstoves)
v) **Participation to a literacy program$_p$** = (Number of women using their saved time to participate to a literacy program) / (Number of women considering they save time thanks to the F3PA efficient cookstoves)

vi) **Community work$_p$** = (Number of women using their saved time to do community work) / (Number of women considering they save time thanks to the F3PA efficient cookstoves)

vii) **Doing nothing$_p$** = (Number of women using their saved time to do nothing) / (Number of women considering they save time thanks to the F3PA efficient cookstoves)

viii) **Religious activities$_p$** = (Number of women using their saved time to participate to religious activities) / (Number of women considering they save time thanks to the F3PA efficient cookstoves)

ix) **Leisure$_p$** = (Number of women using their saved time to participate to leisure) / (Number of women considering they save time thanks to the F3PA efficient cookstoves)

Proportion of stove users perceiving reduced amount of money spent on wood fuel purchase = (Number of stove users perceiving reduced amount of money spent on wood fuel purchase) / (Number of respondents purchasing fuel)
Usage of saved money by women:

i. **School fees$_p$** = (Number of women using their saved money for the payment of school fees) / (Number of women considering they save money thanks to the F3PA efficient cookstoves)

ii. **Purchase of medical drugs$_p$** = (Number of women using their saved money for the purchase of medical drugs) / (Number of women considering they save money thanks to the F3PA efficient cookstoves)

iii. **Purchase of food$_p$** = (Number of women using their saved money for the purchase of food) / (Number of women considering they save money thanks to the F3PA efficient cookstoves)

iv. **Investment for field crops$_p$** = (Number of women using their saved money to invest in field crops) / (Number of women considering they save money thanks to the F3PA efficient cookstoves)

v. **Purchase of equipments$_p$** = (Number of women using their saved money to purchase equipments like mobile, bicycle, …) / (Number of women considering they save money thanks to the F3PA efficient cookstoves)

vi. **Income generating activities$_p$** = (Number of women using their saved money for income generating activities) / (Number of women considering they save money thanks to the F3PA efficient cookstoves)

vii. **Savings$_p$** = (Number of women using their saved money for their savings) / (Number of women considering they save money thanks to the F3PA efficient cookstoves)

e) SDG 7, Affordable and clean energy

Number of F3PA efficient cookstoves disseminated = Number of F3PA efficient cookstoves included in the project database for project scenario p

f) SDG 13, Climate Action

The methodology directly provides equation for emission reductions (without separate baseline, projector leakage emission reduction equations). The emission reduction for the VPA are calculated using the following equation.

$$ERy = \sum_{0to1}^{xtoy} N_{P,y} * P_y * U_{P,y} * (f_{NRB,y} * EF_{b,fuel,CO} + EF_{b,fuel,nonCO}) * (1 - DF_{b,Stove,y})$$

Where

$N_{p,y}$	Number of households with project cookstoves of each age group operational in the year y
P_y	Quantity of firewood that is saved in the year y (tones per household in year y)
$U_{p,y}$	Usage rate for project cookstoves in year y, based on adoption rate and drop off rate revealed by usage surveys (fraction)
$f_{NRB,y}$	Factional non-renewability status of wood fuel during year y
$EF_{b,fuel,CO2}$	CO2 emission factor of firewood that is substituted or reduced
$EF_{b,fuel,nonCO2}$	Non CO2 emission factor of firewood that is substituted or reduced
$DF_{b,stove,y}$	Usage of baseline cookstove during the year y (fraction) in project scenario
X	y-1
Y	Year of the crediting period

Determination of quantity of biomass saved (P_y):

Quantity of firewood that is saved (P_y) is estimated using the following equation:

$$P_y = B_{b,y} * (1 - \frac{\eta_b}{\eta_{p,y}})$$

Where:

P_y	Quantity of firewood that is saved in the year y (tones per household in year y)
$B_{b,y}$	Quantity of firewood consumed in baseline scenario during year y (tones per household per year)
$\eta_{p,y}$	Efficiency of project cookstove in year y (fraction)
η_b	Efficiency of the baseline cookstove being replaced (fraction). A default value of 10% shall be used if the replaced cookstove is a three stone fire, or a conventional device without a grate or a chimney i.e. with no improved combustion air supply or flue gas ventilation
y	Year of the crediting period

Determination of quantity of fire wood consumed in the baseline ($B_{b,y}$):

The firewood consumed is the estimated average annual consumption of firewood per household (tones/year), which may be derived using option (c) of the methodology: minimum service level i.e. energy derived from the combustion of 0.5 tonnes per capita per year as the default baseline biomass consumption. The average household size per municipality is available in the "Recensement général de la population et de l'habitation (RGPH) de 2006 du Burkina Faso"[9] or the general census of the population and habitat of Burkina Faso, table 15.

Determination of project cookstove efficiency ($\eta_{p,y}$ and η_p):

Efficiency of project cookstove in year y ($\eta_{p,y}$) is estimated as follows:

$$\eta_{p,y} = \eta_p * \left(DF_\eta\right)^{y-1} * 0.94$$

Where

$\eta_{p,y}$	Efficiency of project cookstove in year y (fraction)
η_p	Efficiency of project cookstove (fraction) determined at the start of the project activity
DF_η	Discount factor to account for efficiency loss of project cookstove per year of operation (fraction)
0.94	Adjustment factor to account for uncertainty related to project cookstove efficiency test

SDG	SDG Impact	Baseline estimate	Project estimate	Net benefit

[9] INSD, recensement général de la population et de l'habitation de 2006, juillet 2008, Ministère de l'Economie et des Finances, p43 (tableau 15), 52 pages

13	Number of tCO2e reduced by the project			VPA-01: 4,280 VPA-02: 1,872 VPA-03: 10,000 (11,928) VPA-04: 6,566 VPA-05: 10,000 (11,940) VPA-06: 10,000 (13,587) VPA-07: 10,000 (11,292) VPA-08: 9,817 VPA-09: 10,000 (14,630) VPA-10: 10,000 (11,623) Total: 82,535 (97,535)

1	**Parameter #1:** Number of leader women (Monitrice endogène) who benefit from microcredit **Parameter #2:** Proportion of leader women (Monitrice endogène) participating to microcredit scheme which make benefits from Income Generating Activities financed through the microcredit scheme **Parameter #3:** Total benefit from Income Generating activities financed through the microcredit scheme			Parameter #1: 452 Parameter #2: 39% Parameter #3: 11,500,000 FCFA or 17,528€
3	*Proportion of households perceiving:* Smoke level reduction Incidence of coughing reduction Incidence of respiratory illness reduction Incidence of itchy eyes reduction			100% 100% 100% 100%

4	**Parameter #1:** Number of training initiatives for staff involved in the programme **Parameter #2:** Number of workshops carried out for women				Parameter #1: 1 Parameter #2: 128
5	Proportion of stove users perceiving reduced amount of time spent on wood fuel collection and/or proportion of user perceiving reduced amount of money spent on wood fuel purchase				Reduced amount of time spent on wood fuel collection: 100% Reduced amount of money spent on wood fuel purchase: 100%
7	Number of F3PA efficient cookstoves disseminated			VPA 01: 3,279 VPA 02: 1,397 VPA 03: 9,132 VPA 04: 4,331 VPA 05: 9,410 VPA 06: 11,801 VPA 07: 9,367 VPA 08: 5,609 VPA 09: 9,546 VPA 10: 6,885 Total : 70,757	

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[10] achieved during this monitoring period
13	GS2456 (VPA-01): 9,380 VER GS3516 (VPA-02): 9,380 VER GS3517 (VPA-03): 9,380 VER GS3518 (VPA-04): 9,380 VER GS3519 (VPA-05): 9,380 VER GS3520 (VPA-06): 9,380 VER GS3521 (VPA-07): 9,380 VER GS3522 (VPA-08): 9,380 VER GS3523 (VPA-09): 9,380 VER GS3524 (VPA-10): 9,380 VER **Total: 93,800VER**	VPA-01: 4,280 VPA-02: 1,872 VPA-03: 10,000 (11,928) VPA-04: 6,566 VPA-05: 10,000 (11,940) VPA-06: 10,000 (13,587) VPA-07: 10,000 (11,292) VPA-08: 9,817 VPA-09: 10,000 (14,630) VPA-10: 10,000 (11,623) Total: 82,535 (97,535)

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

N.A.

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

SDG 13: The difference between the actual values achieved during monitoring period 8 and the estimated value of year 8 in the registered PDD can mainly be attributed to lower replacement activities than expected, mainly due to security reasons and migration of population.

SECTION F. SAFEGUARDS REPORTING

Not applicable.
No safeguarding principles were added to the monitoring plan.

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.

The list of grievances collected in the grievance book (see document : *'Grievance book F3PA Bam Loroum VPA1-10'*) is resumed in the following table.

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

Date	Continuous Input Method Used	Person/Entity	Municipality	Comment	Response from Association tiipaalga
23/02/2022	Grievance book	Aminata Ouedraogo	Boken/Guibaré	Asks to be put in contact with the "caisse Populaire" in order to get a loan for the leading women after the retirement of Tiipaalga.	This request has been accepted, and an information letter has been sent to the "caisse Populaire".

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

Not applicable. No stakeholder mitigations were agreed to be monitored.

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

No legal contest or dispute has arisen.

Revision History

Version	Date	Remarks
1.1	14 October 2021	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