Monitoring report form

(Version 05.1)

Complete this form in accordance with the Attachment "Instructions for filling out the monitoring report form" at the end of this form.

MONITORING REPORT	
Title of the project activity	GS1340 Efficient cookstoves in Burkina Faso – VPA-01 - tiipaalga F3PA cookstoves in Bourzanga – Bam GS1340 Efficient cookstoves in Burkina Faso – VPA-02 - tiipaalga F3PA cookstoves in Bourzanga – Bam GS1340 Efficient cookstoves in Burkina Faso – VPA-03 - tiipaalga F3PA cookstoves in Rollo – Bam GS1340 Efficient cookstoves in Burkina Faso – VPA-04 - tiipaalga F3PA cookstoves in Ouindigui – Loroum GS1340 Efficient cookstoves in Burkina Faso – VPA-05 - tiipaalga F3PA cookstoves in Tikaré – Bam GS1340 Efficient cookstoves in Burkina Faso – VPA-06 - tiipaalga F3PA cookstoves in Kongoussi – Bam GS1340 Efficient cookstoves in Burkina Faso – VPA-07 - tiipaalga F3PA cookstoves in Kongoussi – Bam GS1340 Efficient cookstoves in Burkina Faso – VPA-08 - tiipaalga F3PA cookstoves in Guibaré – Bam GS1340 Efficient cookstoves in Burkina Faso – VPA-09 - tiipaalga F3PA cookstoves in Nasséré and Sabcé – Bam GS1340 Efficient cookstoves in Burkina Faso – VPA-10 - tiipaalga F3PA cookstoves in Rouko and Sabcé - Bam
UNFCCC reference number of the project activity	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)
Version number of the monitoring report	Version 2
Completion date of the monitoring report	24/5/2016
Monitoring period number and duration of this monitoring period	Monitoring period Number 1 (first and last days included): VPA-01: 05/02/2015 – 31/12/2015 VPA-02: 08/02/2015 – 31/12/2015

	VPA-03: 03/02/2015 – 31/12/2015 VPA-04: 06/02/2015 – 31/12/2015 VPA-05: 02/02/2015 – 31/12/2015 VPA-06: 11/02/2015 – 31/12/2015 VPA-07: 14/02/2015 – 31/12/2015 VPA-08: 02/02/2015 – 31/12/2015 VPA-09: 02/02/2015 – 31/12/2015 VPA-10: 11/02/2015 – 31/12/2015	
Project participant(s)	Association tiipaalga	
Host Party	Burkina Faso	
Sectoral scope(s)	Scope 3 – Energy demand	
Selected methodology(ies)	The Gold Standard Simplified Methodology for Efficient Cookstoves - Version 1	
Selected standardized baseline(s)		
Estimated amount of GHG emission reductions or net GHG removals by sinks for this monitoring period in the registered PDD	VPA-01: 3,330 tCO2e VPA-02: 3,330 tCO2e VPA-03: 3,333 tCO2e VPA-04: 3,332 tCO2e VPA-05: 3,331 tCO2e VPA-06: 3,333 tCO2e VPA-07: 3,333 tCO2e VPA-08: 3,331 tCO2e VPA-09: 3,330 tCO2e VPA-10: 3,333 tCO2e Total: 33,316 tCO2e	
Total amount of GHG emission reductions or net GHG removals by sinks achieved in this monitoring period	GHG emission reductions or net GHG removals by sinks reported up to 31 December 2012	GHG emission reductions or net GHG removals by sinks reported from 1 January 2013 onwards
		VPA-01: 2,292 tCO2e VPA-02: 1,964 tCO2e VPA-03: 1,805 tCO2e VPA-04: 1,808 tCO2e VPA-05: 2,213 tCO2e VPA-06: 1,962 tCO2e VPA-07: 1,748 tCO2e VPA-08: 1,712 tCO2e VPA-09: 1,381 tCO2e VPA-10: 2,045 tCO2e Total: 18,931 tCO2e

SECTION A. Description of project activity

A.1. Purpose and general description of project activity

>> 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 figure 1, 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 cookstove

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 first monitoring period from 02/02/2015 for VPA-05, VPA-08 and VPA-09, 03/02/2015 for VPA-03, 05/02/2015 for VPA-01, 06/02/2015 for VPA-04, 08/02/2015 for VPA-02, 11/02/2015 for VPA-06 and VPA-10, and 14/02/2015 for VPA-07 till 31/12/2015 it is calculated that **18,931** tons of CO2eq emission reductions have been generated for the group of 10 mVPA's.

A.2. Location of project activity

>> The 10 mVPA's has activities in the provinces of Bam and Loroum in the North of Burkina Faso:

- VPA-01: municipality of Bourzanga in the province of Bam;
- VPA-02: municipality of Bourzanga in the province of Bam;
- VPA-03: municipality of Rollo in the province of Bam;
- VPA-04: municipality of Ouindigui in the province of Loroum;
- VPA-05: municipality of Tikaré in the province of Bam;
- VPA-06: municipality of Kongoussi in the province of Bam;
- VPA-07: municipality of Kongoussi in the province of Bam;
- VPA-08: municipality of Guibaré in the province of Bam;
- VPA-09: municipalities of Nasséré and Sabcé in the province of Bam;
- VPA-10: municipalities of Rouko and Sabcé in the province of Bam;

A.3. Parties and project participant(s)

Party involved ((host) indicates a host Party)	Private and/or public entity(ies) project participants (as applicable)	Indicate whether the Party involved wishes to be considered as project participant (yes/no)
Burkina Faso (host)	Association tiipaalga (Private entity)	No

A.4. Reference of applied methodology and standardized baseline

>> The 10 mVPA's follow the Gold Standard Methodology "The Gold Standard Simplified Methodology for Efficient Cookstoves", (February 2013), http://www.goldstandard.org/sites/default/files/documents/gs-simplified-micro-scale-cookstove-meth-2013.pdf

A.5. Crediting period of project activity

>> VPA-01: Crediting period 1: February 05, 2015 to December 31, 2015 (both days included)

VPA-02: Crediting period 1: February 08, 2015 to December 31, 2015 (both days included)

VPA-03: Crediting period 1: February 03, 2015 to December 31, 2015 (both days included)

VPA-04: Crediting period 1: February 06, 2015 to December 31, 2015 (both days included)

VPA-05: Crediting period 1: February 02, 2015 to December 31, 2015 (both days included)

VPA-06: Crediting period 1: February 11, 2015 to December 31, 2015 (both days included)

VPA-07: Crediting period 1: February 14, 2015 to December 31, 2015 (both days included)

VPA-08: Crediting period 1: February 02, 2015 to December 31, 2015 (both days included)

VPA-09: Crediting period 1: February 02, 2015 to December 31, 2015 (both days included)

VPA-10: Crediting period 1: February 11, 2015 to December 31, 2015 (both days included)

A.6. Contact information of responsible persons/entities

>> The private project participant and project coordinator, Association tiipaalga, is responsible for completion of the monitoring report. Contact details are provided in Appendix 1.

SECTION B. Implementation of project activity

B.1. Description of implemented registered project activity

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

VPA-nr	Number of households	Dissemination calendar	Generated VER
VPA-01	993	4/2/2015 – 20/6/2015	2,292
VPA-02	867	7/2/2015 – 1/7/2015	1,964
VPA-03	778	2/2/2015 – 19/6/2015	1,805
VPA-04	763	5/2/2015 – 17/7/2015	1,808
VPA-05	930	1/2/2015 – 30/6/2015	2,213
VPA-06	920	10/2/2015 – 16/6/2015	1,962
VPA-07	863	13/2/2015 – 10/7/2015	1,748
VPA-08	714	1/2/2015 – 7/7/2015	1,712
VPA-09	516	1/2/2015 – 23/7/2015	1,381
VPA-10	779	10/2/2015 – 13/6/2015	2,045
TOTAL	8123		18,931

B.2. Post-registration changes

B.2.1. Temporary deviations from registered monitoring plan, applied methodology or applied standardized baseline

>> N/A

B.2.2. Corrections

>> N/A

B.2.3. Changes to start date of crediting period

>> N/A

B.2.4. Inclusion of a monitoring plan to the registered PDD that was not included at registration

>> N/A

B.2.5. Permanent changes from registered monitoring plan, applied methodology or applied standardized baseline

>> N/A

B.2.6. Changes to project design of registered project activity

>> N/A

B.2.7. Types of changes specific to afforestation or reforestation project activity

>> N/A

SECTION C. Description of monitoring system

>>

Process of unique identification of stove users:

Most of the households in the project area are polygamous. Each wife of the household included in the carbon project must have a cookstove set of at least two efficient F3PA 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 will be implemented according the cooking habits of the stove users. The sizes of the cooking pots and so the cookstoves used in this VPA 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 Construction 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:

- *Tiipaalga - DR - HH data - Year 1*: distribution records (DR) of households of first year of implementation 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;
- *Tiipaalga - DR - ICS data 1 - 4 - Year 1*: data on wives (1 to 4) 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 (Tiipaalga - DR - HH data - Year 1):
  - Identification data per wife (from wife 1 to 4): name, picture of wife with it stoves;
  - Data on stoves used per wife (from wife 1 to 4): size of stoves, construction dates of each stove, location of stoves, …
- *Tiipaalga - DR - ICS data 5 - 7 - Year 1*: data on wives (5 to 7) 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 (Tiipaalga - DR - HH data - Year 1):
  - Identification data per wife (from wife 5 to 7): name, picture of wife with it stoves;
  - Data on stoves used per wife (from wife 5 to 7): size of stoves, construction date of each stove, location of stoves, …

Based on the collected data *lists of households per village* included in the VPA_01 to VPA-10 have been set up, with the following data **per household**: (i) ID of household with name of head of household; (ii) Number of wife of head of household; (iii) Municipality and village of household; (iv) GPS coordinates; and (v) mobile number, and **per wife in the household**: (i) Nr of wife within the household; (ii) Name of wife; (iii) mobile number; and (iv) picture of wife with its stoves.

The start of the crediting period of each household is considered as the latest construction date of all stoves within the cooking sets of the different wives within the household. The file *Tiipaalga - DR - ICS data 1 - 4 - Year 1 – Date* provides per household the cumulative number of days (expressed in fraction of year) for verification in year 1.

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. At this time, to the best of our knowledge there are no other registered GHG reduction projects in Burkina Faso promoting the F3PA efficient cookstoves. Tiipaalga is aware of another cookstove project of SNV in Burkina Faso aiming registration at the Gold Standard, which promotes different stoves.

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 analyse. 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:

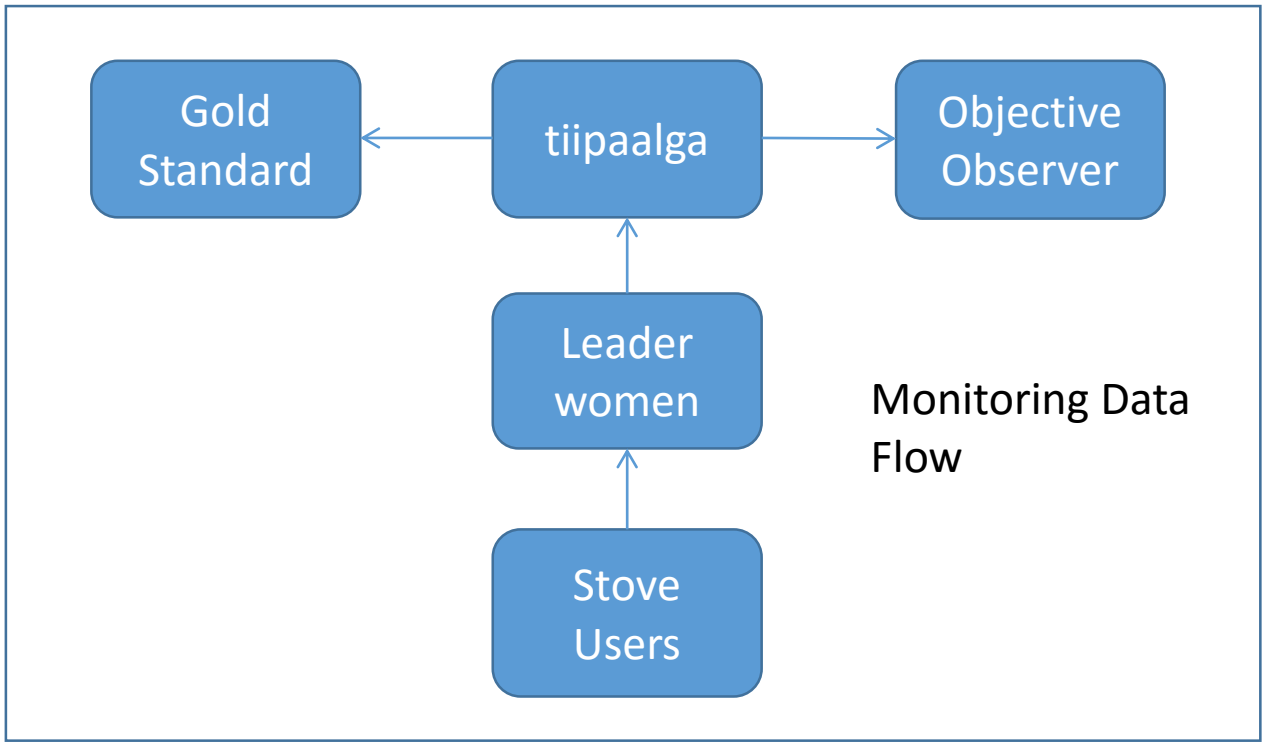
- *Green*: the construction norms have been respected and the F3PA efficient cookstove doesn't need any maintenance action. It means that (i) the outer surface of the F3PA efficient cookstove are not washed by rain, (ii) there is no hole in the floor of the efficient stove;
- *Orange*: the construction 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 been constructed more than two years ago and that need re-polishing of internal and outer surface; (iii) 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. An example of poor usage, is sitting before the entrance of the stove. The combustion will not happen in an appropriate way and the risk that the cookstove will crack at the level of the entrance is high. 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, on the short term, receive the red status. Orange F3PA efficient cookstoves are considered to have the same efficiency as the green F3PA efficient cookstoves. The red F3PA efficient cookstoves will be monitored, as long as the cookstove has not been reconstructed. After reconstruction, 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 F3PA efficient cookstoves do not have serial numbers. In order to have unique identification in the field of households included in the project, lists of households with unique numbers (PoA / VPA-nr / household number within VPA) will be made available per village for verification purposes.

Diagram of Responsibilities

Tiipaalga is responsible for the development of the project activities, the initial data collection and project monitoring. CO2logic provides technical support in the initial data collection, data quality assurance, monitoring, drafting of the verification report and in the communication with the Gold Standard Foundation and the Objective Observer. A diagram of responsibilities is shown here below.



Tiipaalga employees train leader women, who are selected by the women in the villages, for the construction, the use and maintenance of the F3PA efficient cookstoves. 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. 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. In addition, end-user information is contained in an emission reduction contract. Hard copies of the contracts are filed as additional backup to prevent any losses in case of emergencies such as fire/theft and for verification purposes.

Monitoring tasks such as monitoring surveys are managed by tiipaalga and realized by the tiipaalga agents. They are the most capable of collecting these data because of extensive knowledge of the technology and end-users. The tiipaalga agents are trained and retrained prior conducting surveys. 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

Data/parameter:	**$EF_{b,fuel,CO2}$**
Unit	tCO_2/ton of firewood
Description	CO_2 emission factor arising from use of firewood in baseline scenario
Source of data	IPCC default values, table 1.4 of chapter 1 of Vol.2, 2006 IPCC Guidelines for National Greenhouse Gas Inventories
Value(s) applied)	1.747 tCO_2/ton of firewood
Choice of data or measurement methods and procedures	As defined under The Gold Standard Simplified Methodology for Efficient Cookstoves
Purpose of data	Calculation of emission reductions
Additional comments	

Data/parameter:	$EF_{b,fuel,non\_CO2}$
Unit	tCO_2/ton of firewood
Description	Non-CO_2 emission factor arising from use of firewood in baseline scenario
Source of data	IPCC default values, table 2.9 of chapter 2 of Vol.2, 2006 IPCC Guidelines for National Greenhouse Gas Inventories
Value(s) applied)	0.5297 tCO2/ton of firewood
Choice of data or measurement methods and procedures	As defined under The Gold Standard Simplified Methodology for Efficient Cookstoves
Purpose of data	Calculation of emission reductions
Additional comments	

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
Value(s) applied)	0.10
Choice of data or measurement methods and procedures	As defined under The Gold Standard Simplified Methodology for Efficient Cookstoves
Purpose of data	Calculation of emission reductions
Additional comments	

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)	η_p will be defined ex-post. Current value used for ex-ante calculations is 0.234[1].
Choice of data or measurement methods and procedures	As defined under The Gold Standard Simplified Methodology for Efficient Cookstoves
Purpose of data	Calculation of emission reductions
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 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 $\underline{\eta_{p,y}}$ will be determined using the discount factor DF_η to account for efficiency loss of project cookstove per year of operation (fraction).

[1] 2IE Ouagadougou, Laboratoire Biomasse Energie et Biocarburant, Rapport sur les tests de performances énergétiques des foyers trois pierres améliorés (F3PA) de l'association Tiipaalga

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
Purpose of data	Calculation of emission reductions
Additional comments	The project activity may choose to update the fNRB,b,y during the crediting period

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[2]. The minimum service level or the default baseline biomass consumption according the Gold Standard Simplified Methodology for Efficient Cookstoves 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 : 3.78
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 year3. 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	

[2] 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.

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

D.2. Data and parameters monitored

Emission reductions

Data/parameter:	**$U_{p,y}$**
Unit	Percentage
Description	Usage rate in project scenario p during year y
Measured/calculated/default	Measured
Source of data	Annual usage survey/Monitoring survey:
Value(s) of monitored parameter	0.993 for the age group 0-1.
Monitoring equipment	
Measuring/reading/recording frequency:	Annual
Calculation method (if applicable):	N/A
QA/QC procedures:	Transparent data analysis and reporting
Purpose of data:	Calculation of emission reductions
Additional comments:	A usage parameter is derived for each age group of project cookstove 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)[4]. 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'.

Data/parameter:	**$N_{p,y}$**
Unit	Number of households included in the project (Units), based on days of usage during the monitoring period related to one year.
Description	Household in the project database for project scenario p through year y 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)
Measured/calculated/default	Measured
Source of data	Project database

[4] A cookstove set is a compilation of several cookstoves used by one women within a household. A polygamous household will comprise of different cookstove sets, one for each women within the household.

Value(s) of monitored parameter	VPA-01 – Bourzanga: 692 VPA-02 – Bourzanga: 593 VPA-03 – Rollo: 554 VPA-04 – Ouindigui: 525 VPA-05 – Tikaré: 664 VPA-06 – Kongoussi: 663 VPA-07 – Kongoussi : 591 VPA-08 – Guibaré : 510 VPA-09 – Nasséré and Sabcé: 378 VPA-10 – Rouko and Sabcé : 553
Monitoring equipment	
Measuring/reading/recording frequency:	Continuous
Calculation method (if applicable):	
QA/QC procedures:	Transparent data analysis and reporting
Purpose of data:	Calculation of emission reductions
Additional comments:	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. For the determination of the number of usage days at household level, the latest start day of use of all constructed F3PA efficient cookstoves within the household will be taken in order to have conservative approach.

Data/parameter:	**DF_{η}**
Unit	Fraction
Description	Discount factor to account for efficiency loss of project stoves
Measured/calculated/default	Default
Source of data	Gold Standard Simplified Methodology for Efficient Cookstoves
Value(s) of monitored parameter	Default value: 0.99 i.e., 1 % efficiency loss per year
Monitoring equipment	
Measuring/reading/recording frequency:	Annual
Calculation method (if applicable):	
QA/QC procedures:	
Purpose of data:	Calculation of emission reductions

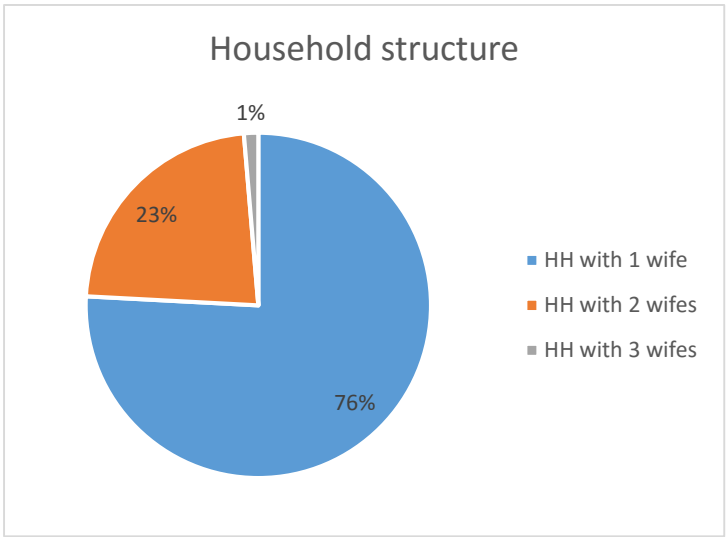
Additional comments:	The default value of 0.99 is used if stoves are found in good condition during annual surveys. For each year, the stoves of the age-group x-y should be physically verified. In case of progressive installations, stove of age-group 0 – 1 shall also be physically verified each year through a random sampling approach. The survey format described in the Monitoring Plan should be used to capture the required information. During annual surveys, if it is found that the project cookstoves are not in working conditions, the proportionate population of project cookstoves should be excluded from the project database, until these cookstoves are replaced with new cookstoves. A site visit by an Objective Observer with relevant technical background would be required at the time of first internal verification and then subsequently after every 2 years from the previous issuance. The Objective Observer shall use the guidance provided in the Monitoring Plan to carry out field studies.

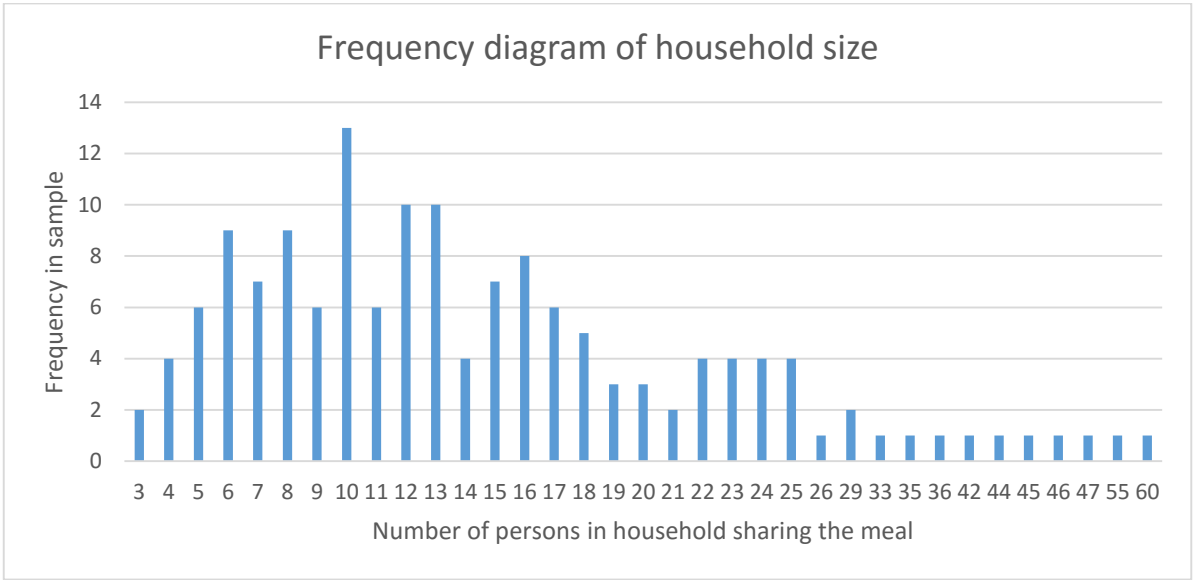
Data/parameter:	**$DF_{b,stove,y}$**
Unit	Fraction
Description	Discount factor to account for the baseline stove use in project scenario p during the year y
Measured/calculated/default	Measured
Source of data	Monitoring surveys
Value(s) of monitored parameter	0.073
Monitoring equipment	
Measuring/reading/recording frequency:	Annual
Calculation method (if applicable):	
QA/QC procedures:	Transparent data analysis and reporting
Purpose of data:	Calculation of emission reductions
Additional comments:	The discount factor for the baseline-stove shall be determined based on the number of meals cooked using the baseline stove. The required information shall be captured through sample surveys carried out following a random sampling approach for each age-group of the project stove. The impact of seasonal variation on use of baseline stove should be considered as part of the monitoring survey. The survey format for sample question to capture this information is described in the Monitoring Plan. The impact of seasonal variation on use of the baseline stove should be considered as part of the monitoring survey. In case of polygamous households the discount factor shall be determined for each cookstove set and the highest value of all cookstove sets within the household shall be used as representative discount factor for the household.

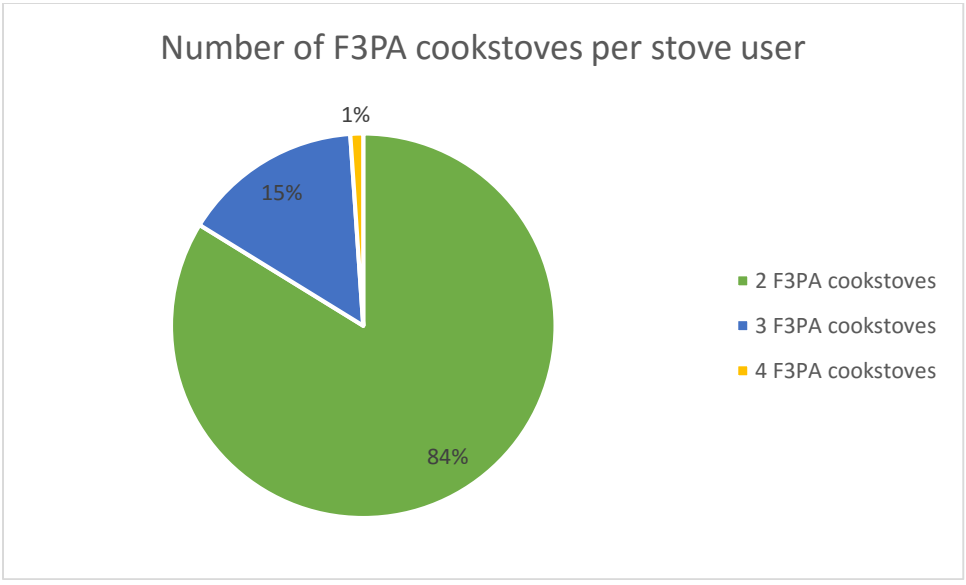
Sustainable development indicators

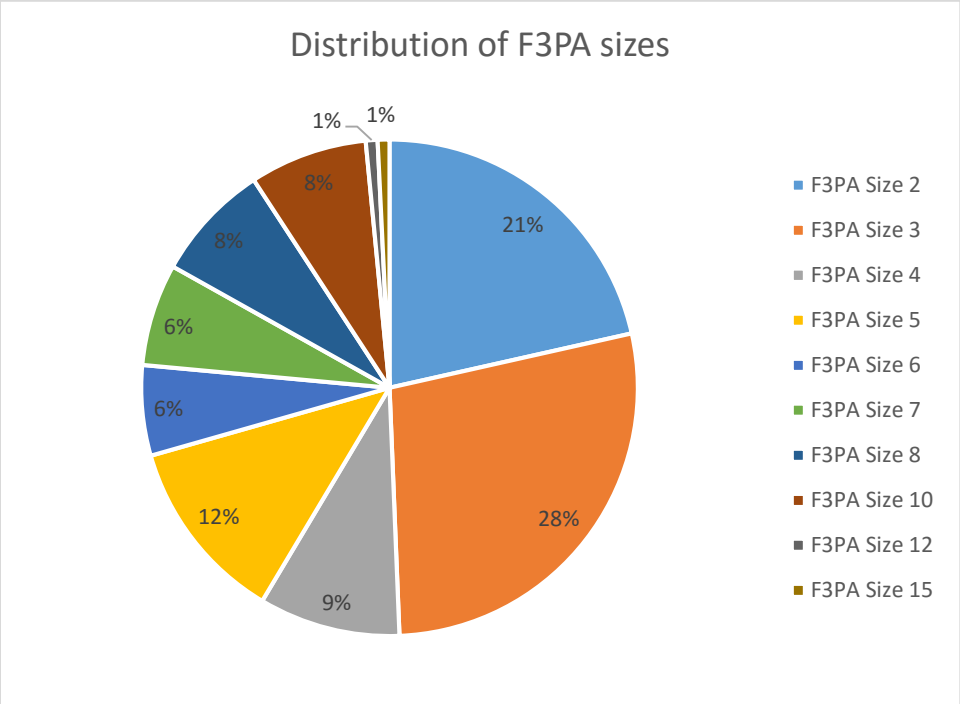
Analysis of the survey organized conform the monitoring plan found out that 76% of the respondents consists of households with one wife, 23% with two wives and 1% with three wives. The average number of adults and children sharing the meal is 15.2 with a standard deviation of 10.0. One can see that this number is much higher than the average household sizes used in the emission reduction calculation which vary between 6.05 for the municipality of Kongoussi (VPA-06 and VPA-07) and 7.57 for the municipalities of Rouko/Sabcé (VPA-10). Stove users of households participating in the project will have at least 2 F3PA efficient cookstoves and may choose between 10 different sizes according to their cooking habits and their cooking pots. 84% of the respondent stove users have two F3PA efficient cookstoves, whereas 15% three F3PA efficient cookstoves and 1% four F3PA efficient cookstoves. Size 2 and 3 are mostly used, whereas the sizes 12 and 15 are the least used sizes. 96% of the respondent stove users have their F3PA efficient cookstoves outside, whereas 4% inside and outside depending on the season. Almost no respondents mentioned they only had F3PA

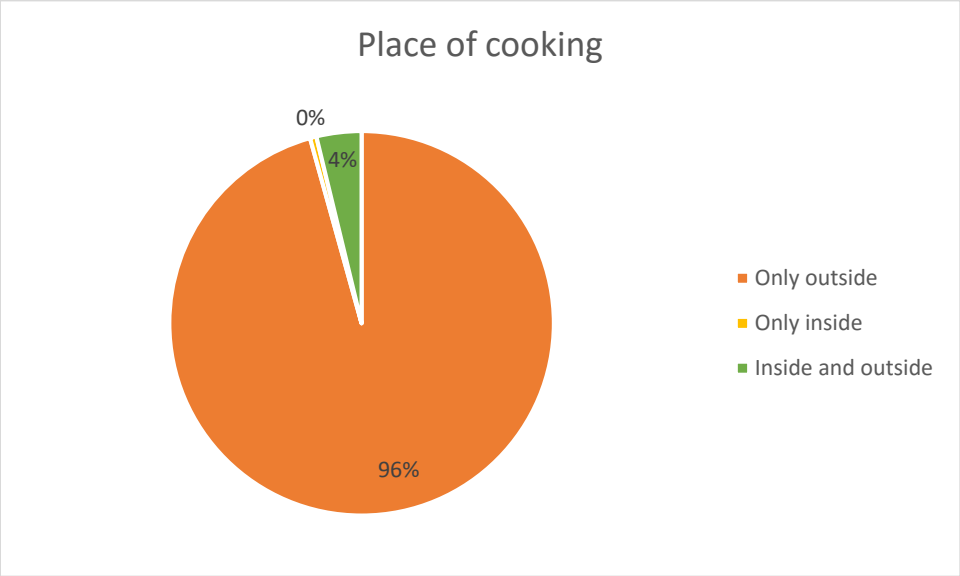
efficient cookstove inside their kitchen. All stove users use wood as only fuel during dry and wet season. 94% of the respondents collect wood, whereas 6% purchase wood fuel.











The impact of the 10 VPA's on sustainable development are monitored through the indicators identified in the corresponding sustainability monitoring plan. The parameter for each indicator has been surveyed and is presented below

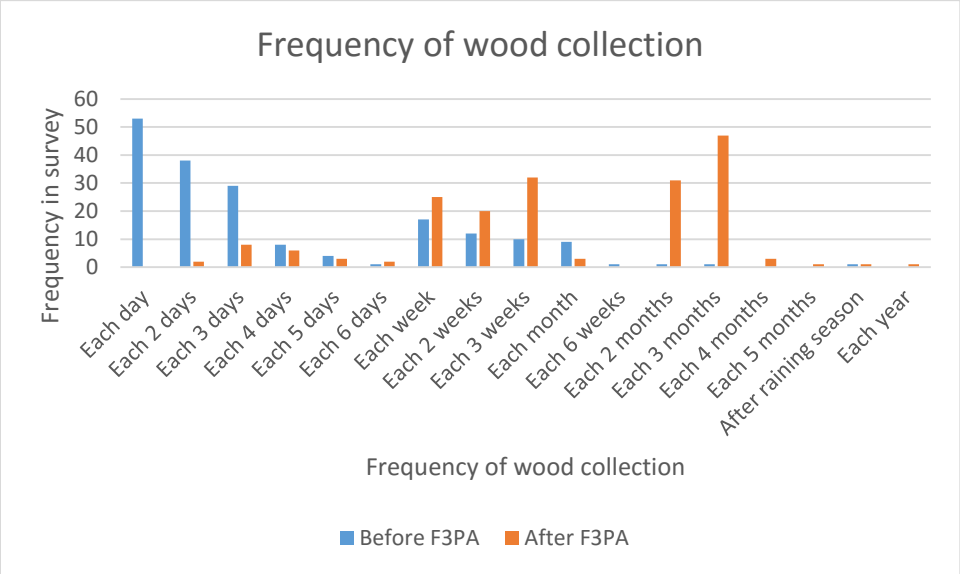
No	**01**
Indicator	**Air Quality**
Mitigation measure	Positive impact
Chosen parameter	Measurement through household surveys of user perceptions between baseline stove and new F3PA efficient cookstove: perceived smoke levels, incidence of coughing, incidence of respiratory illness, Incidence of itchy eyes
Current situation of parameter	Most households with baseline stoves report high smoke levels, incidence of coughing, incidence of respiratory illness, and incidence of itchy eyes.

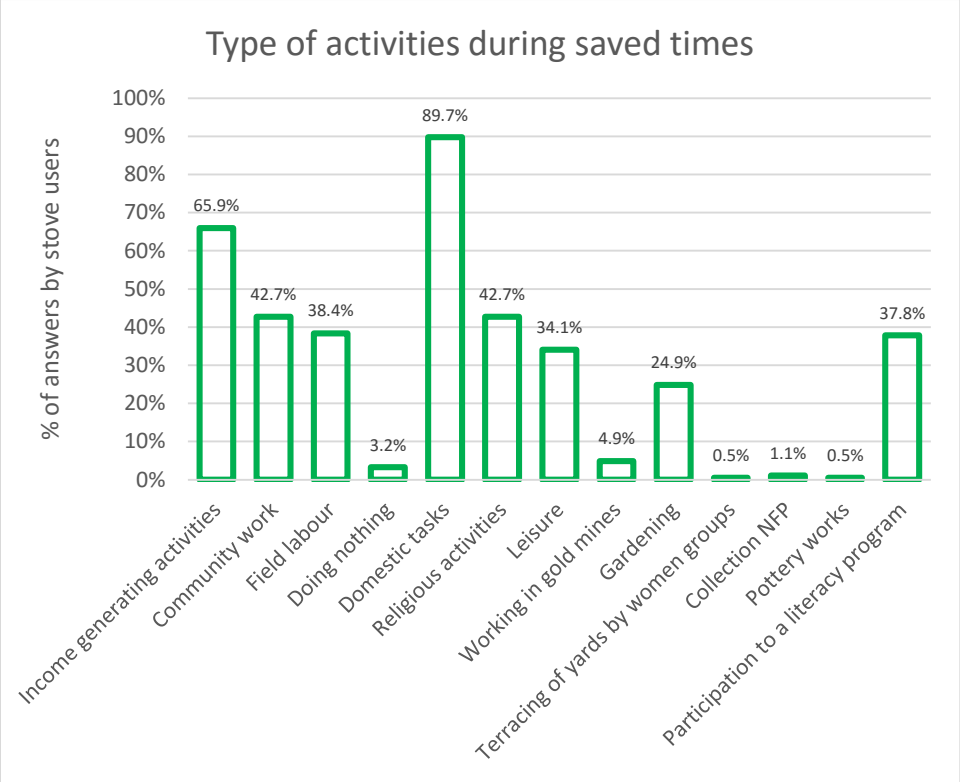
Estimation of baseline situation of parameter		Current situation will persist
Way of monitoring	How	Baseline household surveys and household monitoring surveys regarding sustainability issues will be conducted.
	When	Yearly
	By who	Association tiipaalga
Result of survey for parameter		All respondents reported reduced smoke levels with the F3PA efficient cookstoves compared to the traditional stoves; All respondents reported reduced incidence of coughing with the F3PA efficient cookstoves compared to the traditional stoves; All respondents reported reduced incidence of respiratory illness with the F3PA efficient cookstoves compared to the traditional stoves; All respondents reported reduced incidence of itchy eyes with the F3PA efficient cookstoves compared to the traditional stoves;

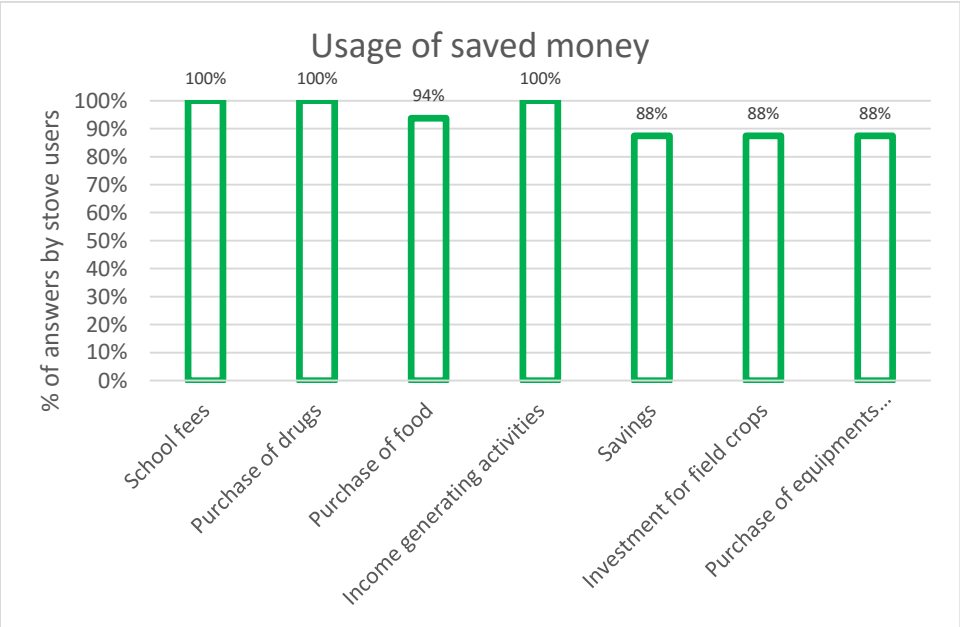
No		**02**
Indicator		**Quality of employment**
Mitigation measure		Positive impact
Chosen parameter		Number of trainings initiatives for staff involved in the programme
Current situation of parameter		Part of the staff involved in the implementation of VPA-10 has followed some training within the framework of the pilot project of dissemination of 9000 F3PA efficient cookstoves in Burkina Faso.
Estimation of baseline situation of parameter		Several trainings have been organized for the pilot project, but the exact number is not known.
Way of monitoring	How	Number of internal and external trainings with description of training content.
	When	Yearly
	By who	Association tiipaalga
Result of survey for parameter		*Training initiative 1*: • December 2014: 3 days (internal) • 11 staff members • Construction, usage and maintenance of F3PA efficient cookstoves, *Training initiative 2*: • December 2014: 2 days (internal) • 11 staff members • Facilitation training *Training initiative 3*: • December 2014: 4 days (external) • 2 staff members • Configuration of the AKVO Flow software for data collection and monitoring survey *Training initiative 4*: • December 2014: 2 days (internal) • 10 staff members • Utilization of smartphones with AKVO Flow software for data collection The trainings were organized in the training centre Gampéla of tiipaalga. Pictures of these trainings can be found in Appendix 2.

No	**03**
Indicator	**Livelihood of the poor**
Mitigation measure	Positive impact
Chosen parameter	Reduced time spent on fuel collection/reduced money spent on wood fuel purchase

Current situation of parameter		Families purchasing fuelwood report a significant percentage of monthly income going toward fuel. Families that gather fuelwood spend a significant amount of time per month gathering wood and have to travel considerable distances to obtain it.
Estimation of baseline situation of parameter		Current situation will persist. Increasing deforestation will result in shortages of non-renewable biomass, causing fuel prices and average time families spend gathering fuel to rise.
Way of monitoring	How	Baseline household surveys and household monitoring surveys regarding sustainability issues will be conducted.
	When	Yearly
	By who	Association tiipaalga
Result of survey for parameter		100% of the respondents collecting wood reported that they collect less frequent wood and so spend less time to gather wood fuel. 65% of the respondents mentioned they collected at least each three days wood at the time they were using the traditional stove, whereas 64% of the respondents replied they collect wood less than each two weeks since they use the F3PA cookstove (see figure below). Most of the saved time is used by the respondents for domestic activities and income generating activities, but also community work and/or participation to literacy program (see figure below). 100% of the respondents purchasing fuelwood reported that they save money for the purchase of wood since they use the F3PA efficient cookstove. The average amount saved on a yearly basis by one stove user is 28.000 FCFA or 43 €. The saved money is mainly used to pay the school fees and medicinal drugs and to make investments for income generating activities (see figure below).







No		**04**
Indicator		**Access to affordable and clean energy services**
Mitigation measure		Positive impact
Chosen parameter		Number of F3PA efficient cookstoves disseminated
Current situation of parameter		Tiipaalga carried out some sampling to investigate if some efficient cook stoves were recently disseminated in the project boundary of VPA-10. The survey showed that 6% of the households in the intervention zone had some efficient cookstoves and 94% still used a three stone fire.
Estimation of baseline situation of parameter		6 %
Future target for parameter		60.048
Way of monitoring	How	Distribution records (Database) that include all necessary information of disseminated efficient cook stoves

	When	Yearly
	By who	Association tiipaalga
Result of survey for parameter		So far 21,988 F3PA efficient cookstoves have been installed within 8,123 households.

No		**05**
Indicator		**Human and institutional capacity**
Mitigation measure		Positive impact
Chosen parameter		Number of demonstration workshops for women carried out
Current situation of parameter		No demonstration workshops has been carried out
Estimation of baseline situation of parameter		0
Future target for parameter		Demonstration workshops in which more than 750 leader women (Monitrice endogène) will be trained, depend on the implementation schedule and are to be decided on a case by case basis, thus future target of parameter is unknown.
Way of monitoring	How	List of demonstration workshops (Time, Location, Objective of workshop, Target Population, members of VPA implementer that carried out the demonstration)
	When	Yearly
	By who	Association tiipaalga
Result of survey for parameter		56 demonstration workshops were organized in the first year of implementation across the different villages in the 10 VPA's. 1273 leader women attended the demonstration workshop with an average of 23 women per workshop. The list below provides the villages per VPA where the demonstration workshop was organized and how much leader women attended the workshop. • VPA-01 – Bourzanga : Basse (28), Kourao (30), Namsiguia (40), Zana (25), Zon (20) ; • VPA-02 – Bourzanga : Bani (30), Kieke (30), Nafo (26), Napalgué (28), Sam (35) ; • VPA-03 – Rollo : Koulweogo (20), Lourfa (20), Pogoro (25), Rollo (30), Tampoui (16), Toessin (18) ; • VPA-04 – Ouindigui : Kobo (20), Ouindigui (30), Sirfou (18), Tansombo (22), Toolo (25) ; • VPA-05 – Tikaré : Gonga (28), Hore (29), Koulniéré (32), Managtaaba-Mossi (35), Sance (19) ; • VPA-06 – Kongoussi : Birou (20), Boalin (25), Mogodin (25), Rissiam (23), Sakonde (20), Yougounini (20) ; • VPA-07 – Kongoussi : Nienega-Mossi (20), Rambo Watinoma (22), Sakou (23), Yalga (22), Yalgo (22), Yargo (20) ; • VPA-08 – Guibaré : Guibaré (20), Karentenga (20), Niangouela (20), Vousnango (20), Wattinoma (20), Yilou (20) ; • VPA-09 – Nassséré/Sabcé : Beguemdéré (30), Nassséré (18), Sika(15), Bisa (18), Kougsabla (20), Ouintini (16) ; • VPA-10 – Rouko : Gourgoudou (16), Pittenga (15), Raka (15), Rilgo (15), Silmidougou (16), Yaoghin (18). Examples of evidences of demonstration workshops are provided in Appendix 3.

No	**06**
Indicator	**Quantitative employment and income generation**
Mitigation measure	Positive impact

Chosen parameter		Number of leader women (Monitrice endogène) who will benefit from microcredit
Current situation of parameter		No microcredit yet in the project boundary of VPA-10
Estimation of baseline situation of parameter		0
Future target for parameter		At least 750 leader women (Monitrice endogène) will benefit each of 50.000 FCFA or 76 € of microcredit during 3 years.
Way of monitoring	How	End user survey will be used to analyze how the microcredit has contributed to income generation
	When	Yearly
	By who	Association tiipaalga
Result of survey for parameter		The implementation of the micro-credit program didn't start yet.

D.3. Implementation of sampling plan

>> In parallel with the distribution of the F3PA efficient cookstoves, and as per the monitoring plan in the respective registered VPA-DD's (VPA-01 till VPA-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)
11th November – 20th November, 2015	Monitoring survey	(i) To establish single usage rate factor 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 to account for the baseline stove use.

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. Since the two 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 one month, 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 and then the sample size is calculated using the sampling guidelines described below.

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). Only the households recorded in the database are part of the project activity.

As the project activities just started, there is only one age group, i.e. 0-1 age group. The minimum household sample size of the 0-1 age-group is determined according the following guidelines (according the Gold Standard Simplified Methodology for Efficient Cookstoves):

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

As the number of recorded households for the 10 VPA's together is more than 1000, the minimum sample size is 100. For this monitoring survey the household size was set at 150 households (see sample file_monitoring period_1). The method of selecting households for the sample list for the monitoring survey will be random using the random functionality in excel. 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 periodical checks are performed by user interviews. Only people older than 18 years are interviewed.

The questions used during the survey are presented in the file "Questionnaire suivi V5". Apart from information for the sustainable development indicators, the survey has been built up in order to collect reliable data to calculate the usage rate $U_{p,y}$ and the discount factor to account for the baseline stove use $DF_{b,stove,y}$.

The *file Sampling Verification Year 1* contains the at random selected households across VPA-01 to VPA-10 for the monitoring survey. The following raw data files of the monitoring surveys contain the following data:

- *Verification_1_Ménages_20151201:*
  - Identifier (Unique internal ID number);
  - GS number: GS PoA-nr / VPA-nr / Household nr
  - Location info:
  - Data on head of household;
- *Verification_1_Epouses_20151201* :
  - Identifier (Unique internal ID number) which is the unique key to household info (Verification_1_Ménages_20151201):
  - 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;

The file *Verification_1_Epouses_20160308_Analyse* contains information on how the usage rate $U_{p,y}$ and the discount factor to account for the baseline stove use $DF_{b,stove,y}$ have been evaluated.

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

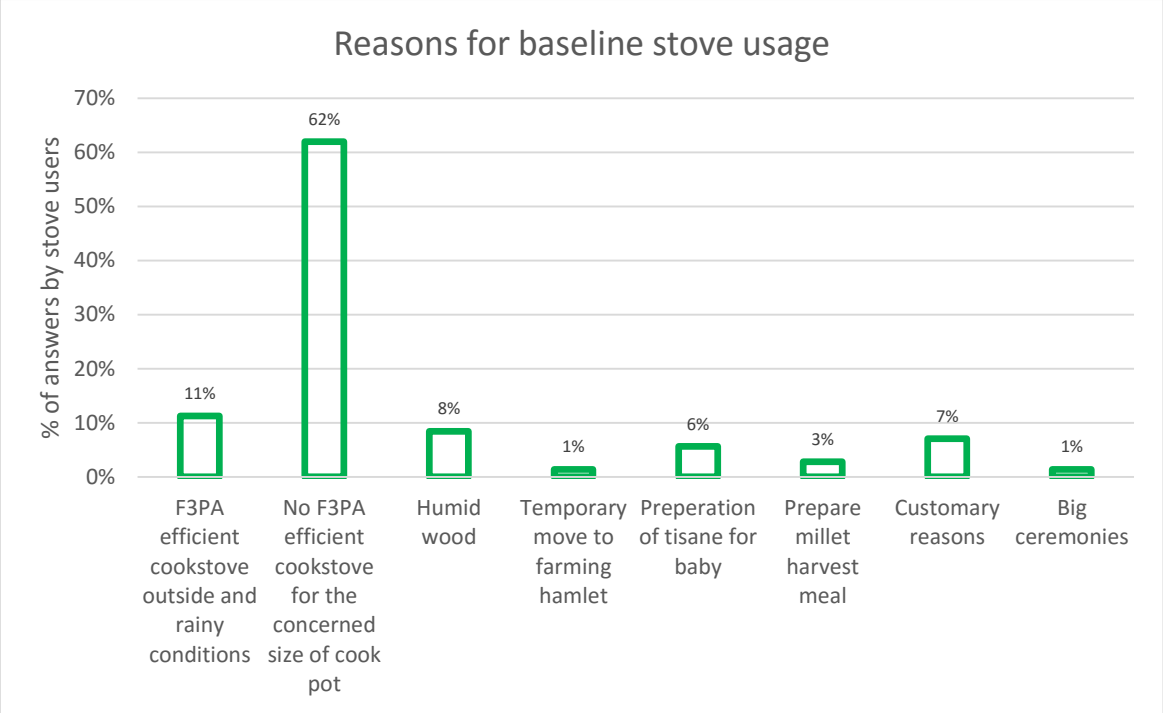
- All project cookstoves within the sample are assessed if they are still operational. If one stove user doesn't use any of its project cookstoves, the corresponding household is considered as drop-off;
- The working conditions of project cookstoves are evaluated on the status (i) Green: the stove is 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;
- If a stove-user migrated even for a temporary period, the corresponding household is considered as a drop-off;

Based on the collected data during the survey the usage rate $U_{p,1}$ during year 1 is evaluated at 99.33%. One stove user of the sample migrated for temporary period and all other project cookstoves were used and in operational conditions.

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 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 152 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;
- The discount factor for the baseline stove use is based on the average baseline stove use fraction of all the households within the sample;
- If a household has dropped off when evaluating the usage rate, it will not be 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 fraction has been evaluated at 7.28%. This means that, on average, approximately 7 meals out of 100 meals are cooked with the baseline stove. The reasons for baseline stove usage is presented in the figure below. The main reason is that the stove user does not have the appropriate F3PA efficient cookstove for a particular cookpot size, as the F3PA efficient cookstove is a monopot cookstove.



SECTION E. Calculation of emission reductions or GHG removals by sinks

E.1. Calculation of baseline emissions or baseline net GHG removals by sinks

>> The baseline emissions for each VPA are calculated using equation 1. Some of the parameters have the same value for each VPA, whereas some parameters will be VPA dependent.

$$BE_y = \sum_{0to1}^{xtoy} N_{P,y} * B_{b,y} * U_{P,y} * \left(f_{NRB,y} * EF_{b,fuel,CO2} + EF_{b,fuel,nonCO2}\right) * (1 - DF_{b,Stove,y}) \quad (1)$$

Where

BE_y	Baseline emissions in the year y
$N_{p,y}$	Number of households with project cookstoves of each age group operational in the year y – VPA dependent
$B_{b,y}$	Quantity of firewood consumed in baseline scenario during year y (tonnes per household per year) – VPA dependent
$U_{p,y}$	Usage rate for project cookstoves in year y,based on adoption rate and drop off rate revealed by usage surveys (fraction) – Monitored value equal for all VPA's: 0.993
$f_{NRB,y}$	Factional non-renewability status of wood fuel during year y - Default value: 0.90
$EF_{b,fuel,CO2}$	CO2 emission factor of firewood that is substituted or reduced – Default value equal for all VPA's: 1.747 tCO2/ton of wood
$EF_{b,fuel,nonCO2}$	Non CO2 emission factor of firewood that is substituted or reduced – Default value equal for all VPA's: 0.455 tCO2/ton of wood
$DF_{b,stove,y}$	Usage of baseline cookstove during the year y (fraction) in project scenario - Monitored value equal for all VPA's: 0.073
x	y-1
y	Year of the crediting period

The table below presents the results of the baseline emission calculations per VPA as well as the parameters which are VPA dependent. The detailed calculations can be found in the file "Calcultation_Monitoring_period_1_20160302".

VPA	Monitoring period MR1	$N_{p,1}$	$B_{b,1}$ (tonnes of wood per HH and Per year)	BE_1 (tCO2e)
VPA-01	05/02/2015 – 31/12/2015	692	3,39	4,425

VPA-02	08/02/2015 – 31/12/2015	593	3,39	3,791
VPA-03	03/02/2015 – 31/12/2015	554	3,33	3,485
VPA-04	06/02/2015 – 31/12/2015	525	3,53	3,490
VPA-05	02/02/2015 – 31/12/2015	664	3,41	4,271
VPA-06	11/02/2015 – 31/12/2015	663	3,03	3,788
VPA-07	14/02/2015 – 31/12/2015	591	3,03	3,373
VPA-08	02/02/2015 – 31/12/2015	510	3,44	3,305
VPA-09	02/02/2015 – 31/12/2015	378	3,74	2,665
VPA-10	11/02/2015 – 31/12/2015	553	3,79	3,947
			TOTAL:	**36,539**

E.2. Calculation of project emissions or actual net GHG removals by sinks

>> The project emissions for each VPA are calculated using equation 2. Some of the parameters have the same value for each VPA, whereas some parameters will be VPA dependent.

$$PE_y = \sum_{0to1}^{xtoy} N_{P,y} * B_{p,y} * U_{P,y} * \left(f_{NRB,y} * EF_{b,fuel,CO2} + EF_{b,fuel,nonCO2}\right) * (1 - DF_{b,Stove,y}) \qquad (2)$$

Where

PE_y	Project emissions in the year y
$N_{p,y}$	Number of project cookstoves of each age group operational in the year y – VPA dependent
$B_{p,y}$	Quantity of firewood consumed in project scenario during year y (tonnes per household per year) - VPA dependent
$U_{p,y}$	Usage rate for project cookstoves in year y,based on adoption rate and drop off rate revealed by usage surveys (fraction) – Monitored value equal for all VPA's: 0.993
$f_{NRB,y}$	Factional non-renewability status of wood fuel during year y - Default value equal for all VPA's: 0.90
$EF_{b,fuel,CO2}$	CO2 emission factor of firewood that is substituted or reduced – Default value equal for all VPA's: 1.747 tCO2/ton of wood
$EF_{b,fuel,nonCO2}$	Non CO2 emission factor of firewood that is substituted or reduced – Default value equal for all VPA's: 0.455 tCO2/ton of wood
$DF_{b,stove,y}$	Usage of baseline cookstove during the year y (fraction) in project scenario - Monitored value equal for all VPA's: 0.073
x	y-1
y	Year of the crediting period

Quantity of firewood consumed in the project scenario $B_{p,y}$, is estimated as follows:

$$B_{p,y} = B_{b,y} * (\frac{\eta_b}{\eta_{p,y}}) \qquad (3)$$

Where

$B_{p,y}$	Quantity of firewood consumed in project scenario during year y (tonnes per household per year) – VPA dependent
$B_{b,y}$	Quantity of firewood consumed in baseline scenario during year y (tonnes per household per year) – VPA dependent
η_b	Efficiency of the baseline cookstove being replaced (fraction) – Default value equal for all VPA's: 0.1
$\eta_{p,y}$	Efficiency of project cookstove in year y (fraction) – Calculated value equal for all VPA's

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

$$\eta_{p,y} = \eta_p * \left(DF_\eta\right)^{y-1} * 0.94 \qquad (4)$$

Where

$\eta_{p,y}$	Efficiency of project cookstove in year y (fraction) - Calculated value equal for all VPA's
η_p	Efficiency of project cookstove (fraction) determined at the start of the project activity – Determined value using WBT equal for all VPA's: 0.234
DF_η	Discount factor to account for efficiency loss of project cookstove per year of operation (fraction) – Default value equal for all VPA's: 0.99
0.94	Adjustment factor to account for uncertainty related to project cookstove efficiency test

The table below presents the results of the project emission calculations per VPA as well as the parameters which are VPA dependent:

VPA	Monitoring period MR1	$N_{p,1}$	$B_{p,1}$ (tonnes of wood per HH and Per year)	PE_1 (tCO2e)
VPA-01	05/02/2015 – 31/12/2015	692	1,54	2,012
VPA-02	08/02/2015 – 31/12/2015	593	1,54	1,723
VPA-03	03/02/2015 – 31/12/2015	554	1,51	1,584
VPA-04	06/02/2015 – 31/12/2015	525	1,60	1,587
VPA-05	02/02/2015 – 31/12/2015	664	1,55	1,942
VPA-06	11/02/2015 – 31/12/2015	663	1,38	1,722
VPA-07	14/02/2015 – 31/12/2015	591	1,38	1,534
VPA-08	02/02/2015 – 31/12/2015	510	1,56	1,503
VPA-09	02/02/2015 – 31/12/2015	378	1,70	1,212
VPA-10	11/02/2015 – 31/12/2015	553	1,72	1,794
			Total:	**16,612**

E.3. Calculation of leakage

>> As defined under The Gold Standard Simplified Methodology for Efficient Cookstoves, the net emission reductions (ER_y) 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. Summary of calculation of emission reductions or net GHG removals by sinks

Item	Baseline emissions or baseline net GHG removals by sinks (t CO_2e)	Project emissions or actual net GHG removals by sinks (t CO_2e)	Leakage (t CO_2e)	GHG emission reductions or net GHG removals by sinks (t CO_2e) achieved in the monitoring period		
				Up to 31/12/2012	From 01/01/2013	Total amount
VPA-01	4,425	2,012	121		2,292	2,292
VPA-02	3,791	1,723	103		1,964	1,964
VPA-03	3,485	1,584	95		1,805	1,805
VPA-04	3,490	1,587	95		1,808	1,808
VPA-05	4,271	1,942	116		2,213	2,213
VPA-06	3,788	1,722	103		1,962	1,962
VPA-07	3,373	1,534	92		1,748	1,748
VPA-08	3,305	1,503	90		1,712	1,712
VPA-09	2,665	1,212	73		1,381	1,381
VPA-10	3,947	1,794	108		2,045	2,045
Total	**36,539**	**16,612**	**998**		**18,931**	**18,931**

Total VER's to be claimed in MR1 per VPA is well below the micro-scale VPA threshold of 10,000 VERs per year.

E.5. Comparison of actual emission reductions or net GHG removals by sinks with estimates in registered PDD

Item	Values estimated in ex ante calculation of registered PDD	Actual values achieved during this monitoring period
Emission reductions or GHG removals by sinks (t CO_2e)	3330 VERs for year 1 as per registered VPA-DD Version 8 for VPA-01	2,292 VER's for monitoring period 1 (05/02/2015 – 31/12/2015)
	3330 VERs for year 1 as per registered VPA-DD Version 5 for VPA-02	1,964 VER's for monitoring period 1 (08/02/2015 – 31/12/2015)
	3333 VERs for year 1 as per registered VPA-DD Version 5 for VPA-03	1,805 VER's for monitoring period 1 (03/02/2015 – 31/12/2015)
	3332 VERs for year 1 as per registered VPA-DD Version 5 for VPA-04	1,808 VER's for monitoring period 1 (06/02/2015 – 31/12/2015)
	3331 VERs for year 1 as per registered VPA-DD Version 5 for VPA-05	2,213 VER's for monitoring period 1 (02/02/2015 – 31/12/2015)
	3333 VERs for year 1 as per registered VPA-DD Version 3 for VPA-06	1,962 VER's for monitoring period 1 (11/02/2015 – 31/12/2015)
	3333 VERs for year 1 as per registered VPA-DD Version 3 for VPA-07	1,748 VER's for monitoring period 1 (14/02/2015 – 31/12/2015)
	3331 VERs for year 1 as per registered VPA-DD Version 3 for VPA-08	1,712 VER's for monitoring period 1 (02/02/2015 – 31/12/2015)
	3330 VERs for year 1 as per registered VPA-DD Version 3 for VPA-09	1,381 VER's for monitoring period 1 (02/02/2015 – 31/12/2015)
	3333 VERs for year 1 as per registered VPA-DD Version 2 for VPA-10	2,045 VER's for monitoring period 1 (11/02/2015 – 31/12/2015)

E.6. Remarks on difference from estimated value in registered PDD

>> The difference between the actual values achieved during monitoring period 1 and the estimated value in the registered PDD can mainly be attributed to:

- The number of households with project cookstoves per VPA in the first monitoring period is lower than estimated in the respective PDD;
- The monitoring period is less than one full year.

Appendix 1. Contact information of project participants and responsible persons/entities

Project participant and/or responsible person/ entity	**X** Project participant **X** Person/entity responsible for completing the CDM-MR-FORM
Organization name	Association tiipaalga
Street/P.O. Box	06 BP 9890
Building	
City	Ouagadougou 06
State/region	Kadiogo
Postcode	
Country	Burkina Faso
Telephone	+226 50 36 45 01
Fax	
E-mail	info@tiipaalga.org
Website	www.tiipaalga.org
Contact person	Franziska Kaguembèga-Müller
Title	Mrs
Salutation	
Last name	Kaguembèga-Müller
Middle name	Margrith
First name	Franziska
Department	
Mobile	+226 76 47 89 13
Direct fax	
Direct tel.	
Personal e-mail	franziska.kaguembega@tiipaalga.org

Appendix 2. Pictures of trainings for staff involved in the VPA's

Pictures of the training sessions held in the tiipaalga training centre of Gampéla of the animatrices on the construction, usage and maintenance of F3PA efficient cookstoves.

Appendix 3. Evidence of demonstration workshops for leader women

As an example, the presence lists, the meeting minutes and some pictures are provided of the demonstration workshop held in the village of Guibaré in the municipality of Guibaré between 23 and 25 of February 2015.

Presence list:

Association tiipaalga 06 BP 9890 Ouagadougou 06 Burkina Faso
+226 25 36 45 01
info@tiipaalga.org www.tiipaalga.org

Les arbres pour la vie

Liste de présence des Monitrices Endogènes (ME) aux sessions de formation en technique de construction, de diffusion, d'utilisation et d'entretien des Foyers 3 Pierres Améliorés (F3PA)

Province : Bam

Commune : Guibaré

Village : Guibaré

Date de la formation : 23/02/2015

N°	Nom et prénom (s)	Quartier	Age	Emmargement
01	Taonsa Salamata	Nayiri	39	
02	Koanda Aguirata	Yarcin	41	
03	Ouedraogo Stella Sonata	Tempeèlgaeyin	44	
04	Ouedraogo Awa	Raboud gueyiri	34	
05	Gansoré Honorine	Sibryiri	56	
06	Ouédraogo Azèta	Taongo	46	
07	Sawadogo Amie	Roadin	32	
08	Ouedraogo Azèta	Razinyiri	62	
09	Ouedraogo Habibou	yaodin	61	
10	Kinda Lizèta	Sanbougyiri	59	
11	Ouédraogo Maria	Rollé	28	
12	Ouedraogo Azèta	Rollé	30	
13	Sawadogo Rakimwendé	Mercaingiri	46	
14	Ouedraogo Azèta	Bougyiri	49	
15	Sawadogo Azèta	yaar de Guibaré	48	
16				
17				
18				
19				
20				

Arrêtée la présente liste de présence à Quinze (15) noms.

Liste de présence aux sessions de formation des ME
01.06.2014
1 / 1

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Les arbres pour la vie

Liste de présence des Monitrices Endogènes (ME) aux sessions de formation en technique de construction, de diffusion, d'utilisation et d'entretien des Foyers 3 Pierres Améliorés (F3PA)

Province : Bam

Commune : Guibaré

Village : Guibaré

Date de la formation : 24/02/2015

N°	Nom et prénom (s)	Quartier	Age	Emmargement
01	Taonsa Salamata	Nayiri	39	
02	Koanda Aguirata	Yarcin	41	
03	Ouédraogo Sida-Sanata	Tempèlguemyin	44	
04	Ouédraogo Awa	Raboud-Bouyiri	34	
05	Gansoré Honorine	Sibriyiri	56	
06	Ouédraogo Azèta	Taongo	46	
07	Sawadogo Awa	Roadin	32	
08	Ouédraogo Azèta	Razinyiri	62	
09	Ouédraogo Habibou	Yaodin	61	
10	Kinda Lizèta	Sanbouyiri	59	
11	Ouédraogo Maria	Bollé	28	
12	Ouédraogo Azèta	Bollé	30	
13	Sawadogo Rakinwendé	Tarcaïnyiri	46	
14	Ouédraogo Azèta	Bouyiri	49	
15	Sawadogo Azèta	Naaba de Guibaré	48	
16				
17				
18				
19				
20				

Arrêtée la présente liste de présence à quinze (15) noms.

Liste de présence aux sessions de formation des ME
01.06.2014
1 / 1

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Les arbres pour la vie

Liste de présence des Monitrices Endogènes (ME) aux sessions de formation en technique de construction, de diffusion, d'utilisation et d'entretien des Foyers 3 Pierres Améliorés (F3PA)

Province : Bam
Commune : Guibaré
Village : Guibaré
Date de la formation : 25/02/2015

N°	Nom et prénom (s)	Quartier	Age	Emmargement
01	Taonsa Salamata	Nayiri	39	
02	Koanda Aguirata	Yarcin	41	E
03	Ouedraogo Sida-Sanata	Tempéelguyiri	44	
04	Ouedraogo Awa	Rabaud-Gueyiri	34	
05	Gansoré Honorine	Sibriyiri	56	
06	Ouédraogo Azèta	Taonga	46	
07	Sawadogo Amie	Roadin	32	
08	Ouédraogo Azèta	Razinyiri	62	+
09	Ouedraogo Hawbou	Yao kin	61	
10	Kinda Lizèta	Sanbougyiri	59	
11	Ouedraogo Maria	Zollé	28	
12	Ouédraogo Azèta	Bollé	30	
13	Sawadogo Rakimwendé	Mercanyiri	46	
14	Ouedraogo Azèta	Bougyiri	49	
15	Sawadogo Azèta	Yaar de Guibaré	48	
16				
17				
18				
19				
20				

Arrêtée la présente liste de présence à Quinze (15) noms.

Liste de présence aux sessions de formation des ME
01.06.2014
1 / 1

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Meeting minutes:

Fiche de compte-rendu d'une session de formation

Cette fiche est renseignée à la fin de chaque session de formation des Monitrices Endogènes (ME) par le responsable de l'activité

Date : 23/02/2015

Lieu de la formation : Guibaré

Date ou période de la formation : du 23 au 25/02/2015

Nom des formateurs : KABORE Antonie

Commune : Guibaré	Village : Guibaré	Quartier : Yarcin
Public cible : Femmes		
Thème de la formation : Démonstration de construction du F3PA/ monitrices endogènes.		

Niveau de mobilisation	Bon : x	Moyen :	Insuffisant :
Nombre de femmes formées	15	Nombre d'auditrices libres : 89	
Nombre de F3PA construits lors de la formation	~~30~~ 28		

Déroulement de la formation

1) Quels ont été les thèmes difficiles à assimiler par les participants ? Les thèmes difficiles à assimiler par les participantes sont ; la localisation de l'emplacement des 3 pierres et l'ouverture de la porte.

2) Quels ont été les thèmes faciles à assimiler par les participants ? Les thèmes faciles à assimiler par les participantes sont ; l'élévation des parois, le crépissage externe et interne.

3) Quelles ont été les difficultés rencontrées lors de la formation ?

~~Néant~~ Insuffisance du banco

4) Observations des formateurs ? La mobilisation était forte, travail harmonieux. Satisfaction des femmes (ME) d'avoir réalisé leurs œuvres. Il y a eu des observateurs (cvp) et souhaitaient avoir la visite d'une mission comme elles l'ont appris l'écho de Vousnaongo.

NB : Joindre une liste de présence (préciser l'âge des ME).

Guide d'animation Sipaaga_VF

Fiche de compte-rendu d'une séance d'animation

Cette fiche est renseignée à la fin de chaque d'animation par le responsable de l'activité.

Date : 10 / 01 / 2015

Nom et prénom (s) des animateurs de la séance

KABORE Antonie

....

....

....

Commune : Guibaré	Village : Guibaré centre	Quartier : [illegible]	
Public cible : Femmes du village			
Thème de l'animation : Généralités sur les changements climatiques, la problématique de la désertification, causes et conséquences de la dégradation de l'environnement, lancement des [illegible]			
Support d'animation :			
Nombre de participants pendant l'animation : Hommes : — Femmes : 57 Total : 57			
Pourcentage de jeunes : .... (à estimer)			
Niveau de mobilisation	Bon : X	Moyen :	Insuffisant : ....
Niveau de participation	Bon : X	Moyen :	Insuffisant : ....

Questions essentielles suscitées R. AS

Conclusions générales tirées La mobilisation est bonne et la participation également. Les femmes adhèrent d'avantage, elles sont déterminées et s'engagent pour le projet de construction des F3PA. La liste des MF est établie.

Recommandations

Je les ai encouragé et les invite à toujours se mobiliser fortement les séances prochaines.

Guide d'animation_Nooaigo_vf
10.12.2014
[illegible]

Fiche de compte-rendu d'une séance d'animation

Cette fiche est renseignée à la fin de chaque d'animation par le responsable de l'activité.

Date : 06 / 01 / 2015

Nom et prénom (s) des animateurs de la séance

KABORE Antonie

Commune : Gnibaré	Village : Gnibaré Centre	Quartier : Yarcin
Public cible : villageois (population)		
Thème de l'animation : Assemblée Générale présentation de Tiipaalga et ses partenaires ses objectifs, ses actions, projet de construction de FSPA		
Support d'animation :		
Nombre de participants pendant l'animation : Hommes : 1 Femmes : 43 Total : 44		
Pourcentage de jeunes : .... (à estimer)		

Niveau de mobilisation	Bon :	Moyen X	Insuffisant :
Niveau de participation	Bon X	Moyen :	Insuffisant :

Questions essentielles suscitées demande en appui de retenu d'eau

Conclusions générales tirées La population a bien accueilli le Projet Carbone de Tiipaalga sous les acclamations et les sont déjà déterminées et s'engagent à la constructions, l'utilisation et entretien des FSPA

Recommandations Après remerciement et encouragement j'ai invité les femmes à sortir massivement pour la séance d'animation spécifique femme et toujours rester solidaire.

Guide d'animation_tiipaalga_vf

Fiche de compte-rendu d'une séance d'animation

Cette fiche est renseignée à la fin de chaque d'animation par le responsable de l'activité

Date : 29 / 12 / 2014

Nom et prénom (s) des animateurs de la séance

Kaboré Antonie

Commune : Guibaré	Village : Guibaré Centre	Quartier : Yarcin
Public cible : les responsables du villages		
Thème de l'animation : Présentation de l'ipaalgo et ses partenaires, ses objectifs, ses actions, projet de construction des PPA.		
Support d'animation : Deplian		
Nombre de participants pendant l'animation :		
Hommes : 8 Femmes : 1 Total : 9		
Pourcentage de jeunes : .... (à estimer)		

Niveau de mobilisation	Bon :	Moyen : X	Insuffisant : ......
Niveau de participation	Bon : X	Moyen :	Insuffisant : ......

Questions essentielles suscitées

Conclusions générales tirées Projet bien accueilli, manifestation de joie par les responsables du village. Ils nous ont promi de nous accompagner. Le CVD et la responsable des femmes sont prêts pour la diffusion de l'information. Ses numéros téléphoniques ont été échangés pour faciliter les rendez-vous.

Recommandations

Faire parvenir l'information à tout le monde et de se mobiliser massivement pour la séance d'animation en Assemblée Générale.

Pictures:

- - - - -

Document information

Version	*Date*	*Description*
05.1	4 May 2015	Editorial revision to correct version numbering.
05.0	1 April 2015	Revisions to: • Include provisions related to delayed submission of a monitoring plan; • Provisions related to the Host Party; • Remove reference to programme of activities; • Overall editorial improvement.
04.0	25 June 2014	Revisions to: • Include the Attachment: Instructions for filling out the monitoring report form (these instructions supersede the "Guideline: Completing the monitoring report form" (Version 04.0)); • Include provisions related to standardized baselines; • Add contact information on a responsible person(s)/ entity(ies) for completing the CDM-MR-FORM in A.6 and Appendix 1; • Change the reference number from *F-CDM-MR* to *CDM-MR-FORM*; • Editorial improvement.
03.2	5 November 2013	Editorial revision to correct table in page 1.
03.1	2 January 2013	Editorial revision to correct table in section E.5.
03.0	3 December 2012	Revision required to introduce a provision on reporting actual emission reductions or net GHG removals by sinks for the period up to 31 December 2012 and the period from 1 January 2013 onwards (EB70, Annex 11).
02.0	13 March 2012	Revision required to ensure consistency with the "Guidelines for completing the monitoring report form" (EB 66, Annex 20).
01	28 May 2010	EB 54, Annex 34. Initial adoption.

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