Gold Standard for the Global Goals
Key Project Information & VPA Design Document (PDD)

Version 1 – July 2017

Gold Standard

KEY PROJECT INFORMATION

Title of Project:	GS1340 Efficient cookstoves in Burkina Faso – VPA12 – Tiipaalga – F3PA cookstoves in the Province of Kourweogo GSID: GS6419
Title of PoA:	GS1340 Efficient cookstoves in Burkina Faso
Brief description of Project:	This micro-scale VPA project promotes the distribution and utilisation of the mud made 3 stones efficient woodstove "F3PA" in the province of Kourwéogo in the region Plateau Central in the centre of Burkina Faso. Almost 94% of the households in the province of Kourwéogo uses the traditional stove with woodfuel as energy source. The province of Kourwéogo includes more than 20,881 households for a total population of 138,217 inhabitants (2006 Census). National statistics show that more than 46% of the population of the Plateau Central region (with the province of Kourwéogo) can be considered as poor. This microscale VPA is part of a group of 3 VPA's in PoA GS1340 Efficient cookstoves in Burkina Faso, which will be implemented together in the province of Kourwéogo. The efficient F3PA cookstoves will replace the traditional stove whilst respecting the local three stone cooking culture. This is possible as the efficient F3PA cookstove will integrate the three stones from each household inside its design. These three stones represent the pillar of the household's marital union. The F3PA is significantly more efficient than the traditional open fire three stone cooking method. The project 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 has further benefits like the reduction of harmful smoke in the local rural village households and the reduction of time spent in collecting wood. The project does not consist in a fuel switch as locally available wood is still being used.
Expected Implemetation Date: Expected duration of Project:	1/2/2019 21 years
Project Developer:	Tiipaalga
Project Representative:	CO2logic
Project Participants and any communities involved:	Villages located in the municipalities of Boussé, Niou, Toéghin and Sourgoubila in the province of Kourwéogo.
Version of PDD: Date of Version:	3 01/04/2019
Host Country / Location:	Burkina Faso
Certification Pathway (Project Certification/Impact Statements & Products	Pathway 1 (VER Project Certification)
Activity Requirements applied: (mark GS4GG if none relevant)	Community Services Activity Requirements
Methodologies applied:	The Gold Standard Simplified Methodology for Efficient Cookstoves Version 1 of February 2013.
Product Requirements applied:	GHG Emission Reductions & Sequestration Product Requirements
Regular/Retroactive:	Regular
SDG Impacts:	1 – SDG 3 Good Health and Well-Being 2 – SDG 4 Quality Education 3 – SDG 5 Gender Equality 4 – SDG 7 Affordable and Clean Energy 5 – SDG 13 Climate Action

Estimated amount of SDG Impact Certified	SDG 13: 9,737 Verified Emission Reductions (VERs)/year

SECTION A. Description of project

A.1. Purpose and general description of project

>> (Provide a brief description of the project including the description of scenario existing prior to the implementation of the project.)

Burkina Faso heavily depends on woodfuels as the main energy source. Having some of the highest annual population increments and lowest indexes of human development anywhere in the world, Burkina's dependency on firewood and charcoal is forecasted to even increase in the coming decades. This increasing woodfuel consumption is believed to be the main driver of deforestation and forest degradation[1]. According to the FAO, during the period between 1990 and 2010, forest cover has declined at an average of 1% per year[2]. More specifically Plateau Central is one of the regions of the country which is severely affected by the shortage of fuelwood. In this area the available resources can only meet 12% of the demand[3].

This micro-scale VPA project promotes the distribution and utilisation of the mud made 3 stones efficient woodstove "F3PA" in the province of Kourwéogo in the region Plateau Central in the centre of Burkina Faso. Almost 94% of the households in the province of Kourwéogo uses the traditional stove with woodfuel as energy source[4]. The province of Kourwéogo includes more than 20,881 households for a total population of 138,217 inhabitants (2006 Census[5]). According to the National Human Development report of Burkina Faso 2012[6] the province of Kourwéogo has a human development index[7] well below the national average: Kourwéogo (0.250) and Burkina Faso (0.336). National statistics show that more than 46% of the population of the Plateau Central region (with the province of Kourwéogo) can be considered as poor[8].

This microscale VPA is part of a group of 3 VPA's, which will be implemented together in the province of Kourwéogo. The efficient F3PA cookstoves will replace the traditional stove whilst respecting the local three stone cooking culture. This is possible as the efficient F3PA cookstove, seen in the figure below, will integrate the three stones from each household inside its design. These three stones represent the pillar of the household's marital union. The F3PA is significantly more efficient than the traditional open fire three stone cooking method[9]. The project 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 has further benefits like the reduction of harmful smoke in the local rural village households and the reduction of time spent in collecting wood. The project does not consist a fuel switch as locally available wood is still being used.

[1] Arevalo Javier, 2016, Improving woodfuel governance in Burkina Faso: The experts'assessment, Renewable and Sustainable Energy Reviews

[2] Readiness Preperation Plan for REDD Burkina Faso, Ministry of the Environment and Sustainable Development Page 54 (See document "13-11-08 R-PP Burkina EN VFin20h.pdf")

[3] Readiness Preperation Plan for REDD Burkina Faso, Ministry of the Environment and Sustainable Development, Table 20 on Page 62 (See document "13-11-08 R-PP Burkina EN VFin20h.pdf")

[4] Monographie de la Région du Plateau Central, Ministère de l'Economie et des Finances, Burkina Faso, Table 12.6, page 127 (See document « monographie_plateau_central.pdf »)

[5] Recensement Général de la Population et de l'habitation de 2006, INSD Burkina Faso, p. 38 (see document « Resultats_definitifs_RGPH_2006")

[6] Rapport national sur le développement humain Burkina Faso 2012, UNDP, p.226 (See document « rndh_bf_2012.pdf »)

[7] The HDI is a composite statistic of life expectancy, education, and income indices used to rank countries or regions according human development.

[8] La région du Plateau Central en chiffres, 2010, INSD, p.2 (see document « Plateaucentral_2010_VF.pdf »)

[9] Rapport sur les tests de performances énegétiques des Foyers trois pierres améliorés (F3PA) de l'association Tiipaalga, Laboratoire Biomasse Energie et Biocarburnat de 2IE, Ouagadougou, July 2015 (see document « tiipaalga_Rapport de tests de performance énergétiques_F3PA_24_07_2015_VF.pdf »)

Locally produced efficient F3PA cookstove

tiipaalga, a local association in Burkina Faso, has been working on reforestation and agriculture since 2003. On the demand of the women and the urgent need to better protect woody resources, tiipaalga introduced a project of efficient cookstoves in Burkina Faso. tiipaalga adapted and improved an already existing efficient mud made cookstove model and attached importance to the monitoring system. This innovative distribution system is based on a tight collaboration with the women to ensure the training and monitoring in the villages.

The project's approach involves training of women in the rural zones to build, use and maintain these efficient cookstoves themselves using local material. The training includes as well education on hygienic usage and on the threat of climate change and health hazards related to the old cooking system and inform on the health and environmental benefits of using such efficient cookstoves.

tiipaalga employees train leader woman who are selected of the women in the villages, in construction, using and maintaining mud made 3 stones efficient woodstoves. These leader women (or Monitrice Endogene) conduct the same training sessions with the women in their villages and help them to build and use in proper manner the efficient F3PA cookstoves on a voluntary basis.

Each efficient cookstove will be built according to a strict construction protocol[10]. The efficient cookstove construction instructions are published during the training and all levels of the process will be trained to have full knowledge of this construction criterion. The skills they require to build their own personally fabricated standardised efficient F3PA cookstove and how to use and maintain it.

The training sessions also involve a supervisory role to ensure the efficient F3PA cookstoves meet the protocol fabrication standard prior to be given an individual project registry code. The participating women will sign an agreement in exchange for this training whereby they consent the carbon offsets related to this project who will use these future revenues to cover the costs of the project structuring and development as well as costs related to the staff and training.

Each efficient cookstove or an equivalent in-service device will be operational over the full life time of the micro-scale VPA project.

The start of the project is February 2018.

[10] See document « Fiche technique de construction de F3PA_tiipaalga »

A.2. Eligibility of the project under approved PoA

>> (Demonstrate how each VPA meets the eligibility criteria as defined in approved PoA)

Nr	Eligibility Criteria		Compliance rational / Evidence
	Description	**Conditions to be met**	
1	Technological requirements	The VPA consists of the implementation or distribution of single pot or multi pot portable or an in-situ wood burning cookstoves with a specified efficiency of at least 20% to meet thermal energy requirements for household cooking as per Gold Standard Simplified Methodology for Efficient Cookstoves.	The project aims to replace traditional cookstoves with an efficient woodfuel cookstove technology. All the traditional three stones cookstoves for domestic use used by the different wives (if polygamous) of one household will be replaced with project stoves with an efficiency of at least 20%[11]. The sizes 2, 3, 4, 5, 6, 7, 8, 10, 12 and 15 will be taken in this VPA.
2	Baseline	The baseline fuel is only firewood and the baseline stove 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, as per Gold Standard Simplified Methodology for Efficient Cookstoves.	The baseline scenario is non-renewable fire wood consumption to meet thermal energy requirement for household cooking. The Baseline Survey[12] realized in the project boundary, shows that fire wood is the main baseline fuel. During the dry season 93% of the surveyed households use only fire wood and remaining 7% fire wood and stems (as agricultural residues), whereas during the wet season 98% only fire wood and 2% fire wood and stems.
3	Boundary and location of the VPA	The project activity is located within Burkina Faso	The VPA is located in the municipalities of Boussé, Niou, Toéghin and Sourgoubila in the province of Kourwéogo in Burkina Faso.
4	Micro-scale limit for VPAs	The VPA will remain under the limit of 10,000 tonnes of CO2e	The stoves installed in the VPA are expected to represent an annual CO2 reduction of less than 10,000 tonnes of CO2e.
5	Use of the baseline cookstove	The use of the baseline cookstove, as a backup or auxiliary technology, in parallel with the improved cookstove introduced by the project activity is permitted as longs as a mechanism is put into place to encourage the removal of the old cookstove and there is a definitive discontinuity of its	In the VPA, awareness workshops with stove users on the multiple advantages of the efficient F3PA cookstoves will be conducted before the construction of the new project cookstoves. In most cases the baseline stove will automatically be removed as the stones will be integrated in the new efficient F3PA cookstoves and as in the kitchen the fixed project stove will be constructed on the place of the baseline stove. The usage of a baseline

[11] Rapport sur les tests de performances énegétiques des Foyers trois pierres améliorés (F3PA) de l'association Tiipaalga, Laboratoire Biomasse Energie et Biocarburnat de 2IE, Ouagadougou, July 2015 (see document « *tiipaalga_Rapport de tests de performance énergétiques_F3PA_24_07_2015_VF.pdf* »)

[12] See document « *GS6152_GS6419_GS6420_Baseline survey_report* »

		use. The project documentation must provide a clear description of the approach chosen and the monitoring plan must provide a good understanding of the extent to which the baseline technology is still in use after the introduction of the improved technology (whether the existing baseline cookstove is not surrendered at the time of the introduction of the improved technology, or whether a new baseline cookstove is acquired and put to use by targeted end users during the project crediting period). The success of the mechanism put into place must therefore be monitored, and the approach must be adjusted if proven unsuccessful. If the baseline cookstove remains in used in parallel with the project cookstove, corresponding emissions must be accounted for as part of the project emissions.	cookstove will be limited to exceptional events, like celebrations, in case the household don't dispose of an efficient F3PA cookstove with size 20 (for big cooking pot sizes). The monitoring plan describes how to measure the usage of the baseline technology during crediting period of the VPA through the to be monitored parameter $DF_{b,Stove,y}$.
6	Avoiding Double Counting of Emissions Reductions	Each VPA will ensure double counting of emission reductions is avoided through a unique numbering or identification system for the disseminated stoves	When a household is included in the VPA, all traditional three stones cookstoves for domestic use used by the different wives (if polygamous) of one household will be replaced with project cookstoves. The project activity has set up a monitoring system whereby each wife of the household included in the project activity will be registered in a database with an unique serial number referring to this micro scale – VPA: GS1340-VPA-12-xxxx/y where xxxx is the number of the household (1 to 9999) and y is the number of the wife in the household.
7	VER ownership	End users receiving efficient woodstove under the specific VPA contractually cede their rights to claim and own emission reductions under the Gold Standard to PP.	Each wife of one household included in the project has signed a waiver for the transfer of credit to PP, which is the Association tiipaalga.

8	The Micro-scale-VPA-DD has been reviewed by the CME and submitted to the GS for inclusion into the PoA ;	The VPA implementer shall submit a Micro-scale-VPA-DD to the CME for each Micro-scale-VPA and with all underlying evidence.	N/A as the VPA implementer and CME are the same.
9	Non-Diversion of ODA	There will be no diversion of ODA for any of the proposed VPA's.	A declaration confirming that there is no public funding for this VPA is available for the project activity[13].
10	Avoiding Double Counting of Programme Activities	Each VPA will show that it is exclusive to the PoA and not registered as another project activity or VPA under another PoA.	This VPA is neither registered as a project activity with GS or any other standard or as a VPA of another PoA. The relevant online carbon registries (CDM, GS, VCS) have been checked to confirm that there are no other ICS projects in the Kourweogo province, where the project intervenes, hence no risk of double counting.
11	Local stakeholder consultation	Each VPA will conduct a local stakeholder consultation (LSC) in order to gain feedback from stakeholders representing the specific project areas. A single LSC meeting can be organised for several micro-scale project activities if approved by The Gold Standard Foundation.	The single Local Stakeholder Consultation meeting was held on 13/04/2017 for a group of 3 micro-scale VPA's (ie VPA-11, VPA-12 and VPA-13). The LSC report[14] includes a description of how local stakeholders were invited, a summary of the comments received, and an outline of how comments were taken into account. The arguments for organizing a single LSC for the 3 VPAs are (i) the 4 municipalities included in the 3 grouped VPA's are very close to each other (furthest distance of 80 km); (ii) the intention is to implement the 3 VPAs within the timeframe of 3 years; (iii) all 3 VPAs will apply the same distribution/implementation mechanism; (iv) the technology used in all 3 VPA's will be the same; and (v) the 4 municipalities where the VPA's will take place are characterized by very similar socio economic situations.
12	Start date of the VPA	The VPA shall not begin before the date of registration of the PoA	The VPA is foreseen to start in February 2018 [15], which is after the date of registration of the PoA.

[13] See document « *501-ER-T-ODA-Declaration-GS1340_VPA-12_GS6419_signed* »

[14] See LSC report « *101.1-T-SCR - PoA GS1340 - VPA-12 - tiipaalga - F3PA cookstoves in the Province Kourweogo* »

[15] The contract of the first household having received the F3PA efficient cookstove in this VPA will only be available in December 2018.

13	Environmental impact assessment	Each VPA will conduct an environmental impact assessment or provide by the Ministry of Environment a letter of exemption for the environmental impact assessment.	The Letter of exemption [16] for the environmental impact assessment has been provided by the Ministry in charge of the environment of Burkina Faso.
14	Target groups and distribution mechanisms	Target groups eligible under this PoA are rural or urban households. The mechanisms for distribution of efficient cookstoves under this PoA are direct distribution/installation, delivery, community sales events, direct sales or sales through commercial/retail outlets.	As described in the VPA-DD the target groups are rural households. The distribution mechanism of the efficient F3PA cookstoves is direct distribution and installation.
15	Prior consideration of the carbon revenues in case of retroactive VPA	In case of retroactive VPA, it shall be demonstrated that carbon finance was a decisive factor to implement the VPA.	N/A

A.3. Legal ownership of products generated by the project and legal rights to alter use of resources required to service the project

>> (Justify that project owner has full and uncontested legal ownership of the products that are generated under Gold Standard Certification and has legal rights concerning changes in use of resources required to service the Project for e.g water rights, where applicable.)

The project owner, Association tiipaalga, has full and uncontested legal ownership of the carbon credits that are generated under the Gold Standard Certification. Each end user included into the project will have to sign a waiver for the transfer of credit to the project, Association tiipaalga.

A.4. Location of project

A.4.1. Host Country

Burkina Faso

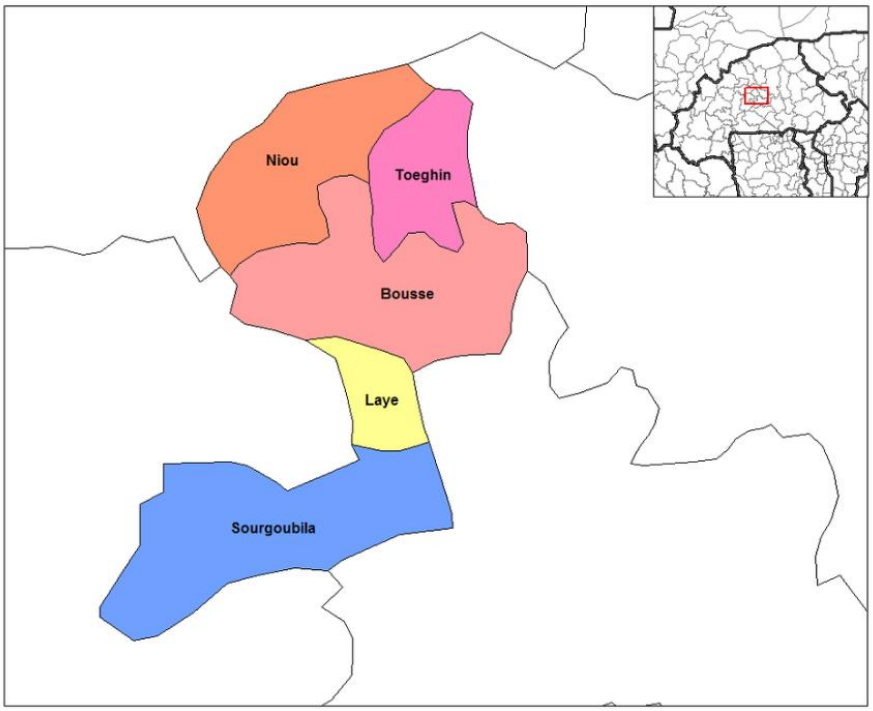
A.4.2. Region/State/Province etc.

Kourwéogo

A.4.3. City/Town/Community etc.

The project boundary of the current micro-scale VPA are 4 out of the 5 municipalities located in the province of Kourwéogo in the Plateau Central region, which are Boussé, Niou, Toéghin and Sourgoubila.

[16] See document « *Lettre Exemption EIE - Min. Env. BF*»



Location of the province of Kourwéogo with its 5 municipalities

A.4.4. Physical/Geographical location

>> (*Include information allowing the unique identification of this project.)*

Municipality	Latitude	Longitude
Boussé	12° 39' 38" N	1° 53' 32" E
Niou	12° 46' 08" N	1° 56' 11" E
Toéghin	12° 48' 58" N	1° 43' 35" E
Sourgoubila	12° 25' 03" N	1° 48' 25" E

A.5. Technologies and/or measures

>> *(Describe the technologies and measures to be employed and/or implemented by the project, including a list of the facilities, systems and equipment that will be installed and/or modified by the project. Include information essential to understand the purpose of the project and how it will contribute positively to three SDGs.)*

The micro-scale VPA involves assisting stove users in the rural province of Kourwéogo in the Plateau Centrale region of Burkina Faso to gain the skills required to build, use and maintain their own efficient F3PA cookstoves.

Description of the technology

The F3PA efficient cookstoves are made from mud mixtures with inexpensive locally-sourced materials: manure, straw, water, and clay (or soil coming from termite mound). These project stoves consist of a thick circular wall of mud surrounding and shielding a pot and have one entrance for the woodfuel directly beneath the pot. The pot itself is supported by three stones.

The F3PA efficient cookstoves are single pot stoves, which means that every cooking pot size has its specific size of cookstove. 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 diameter of cooking pots of size 2 and 15 varies between 22 cm and 42cm, which will influence the external diameter of project cookstoves. The average measures of the project cookstoves can be found in the table below. The distance between the cooking pot and the floor of the cookstove determines the size of the combustion chamber and thus influences the thermal efficiency of the project stove. If the combustion chamber is too small, the cooking pot will be surrounded with lots of flames and the consumption of wood will be higher. If the combustion chamber is too large, too much energy will be lost. The standard measure for the distance between the cooking pot and the floor of the cookstove of the F3PA promoted by tiipaalga will vary between 15 cm and 20 cm depending on the size of the cooking pot. The distance between the cooking pot and the wall of cookstove allows having good ventilation and functions as a stack. The standard measure for the distance between the cooking pot and the wall of the F3PA cookstove promoted by tiipaalga is about 3 cm. The women measure this distance with the thickness of their hand. The shape and measure of the wood entrance of the cookstove are also important features for the performance of the F3PA project cookstoves. If the entrance is too large, the energy loss will be high and the cookstove becomes fragile. If the entrance is too small, the supply of wood is hampered which could cause cracks and the air ventilation is not assured. The circular shape of the entrance diminishes cracks around the entrance and reinforces the resistance of the wall of the cookstove. The standard measure of the wood entrance of the F3PA promoted by tiipaalga will not exceed half the height of the cookstove.

Size of cooking pot	External diameter of pot (cm)	Distance between cooking pot and wall of cookstove (cm)	Distance between cooking pot and floor of cookstove (cm)	Height of wood entrance (cm)	Diameter of wood entrance (cm)	Height of F3PA cookstove (cm)	Diameter F3PA cookstove (cm)
2	22	3	15	12	12	34	34
3	25	3	15	13	13	37	37
4	27	3	15	18	18	42	42

5	29	3	15	18	19	45	45
6	31	3	17	19	19	47	47
7	32	3	17	20	20	50	48
8	34	3	17	22	20	53	52
10	37	3	20	23	22	55	54
12	40	3	20	25	23	57	60
15	42	3	20	27	25	64	65

Table: Dimensions of F3PA cookstoves promoted by tiipaalga

All F3PA stoves of different sizes have a specified efficiency of at least 20% poor[17].The efficient F3PA cookstove has a life span of five years, as the women take an active role to undertake any repairs that may be required in the future. Training and monitoring are provided by the leader women to the women how to maintain and repair their own mud made 3 stones efficient woodstoves. The Instructors will visit all F3PA stoves at least once a year and will also be available to assist the leader women and F3PA owners how to maintain and repair their stoves. The use of virtually unlimited, locally available, natural materials to construct the stove allows repairs to be conducted as required at little cost.

Distribution mechanism

A learning pyramid will be set up in order to have an efficient distribution mechanism of the efficient F3PA cookstoves across the households within the project boundary. This system will ensure that the required number of local women is trained to build, use and maintain their efficient F3PA cookstove. At the top of the pyramid one will find a project coordinator with University Degree profiles. He will manage a certain number of female animators and ensure they have the required level of training and skills to pass down their F3PA construction knowhow to the next level of the pyramid. The animators have the required on the ground knowledge and understanding of the context in the intervention zone. Each animator will manage and train a certain number of leader women (Monitrice endogène) in the various villages every year. These leader women are selected by the other women in the village and represent the more influential and knowledgeable members of the community who have the capacity to pass on their acquired understanding of F3PA construction skills. These leader women will thus educate and inform a specific quantity of women in the villages to in turn build, use and maintain their own efficient F3PA cookstoves. The efficient F3PA cookstoves have a strict construction protocol[18] with diagrammatic presentation material[19] to support the tiipaalga animator and the leader women on the ground and ensure that project stoves are systematically built in a similar manner.

All efficient F3PA cookstoves will be replaced after 5 years of operation with an efficient F3PA cookstove of similar efficiency after a large training program. If the efficient F3PA cookstove needs to be replaced before the 5 years of operation, the stove user is capable to construct a new efficient F3PA cookstove under supervision of the leader women. Quality control will be guaranteed by the animators.

A significant proportion of the households in the project area of the VPA are polygamous. Each wife of the household included in the carbon project must have at least two efficient F3PA 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 efficient F3PA cookstoves. This means that according the needs of the household an un-predetermined number of project cookstoves will be constructed and used at household level.

There are no efficient cookstoves in this zone. The current system used in the area of intervention is traditional cookstoves fuelled by wood.

Contribution to SDG

The project will help the host country Burkina Faso to meet SDG 3 - Good Health and Well-Being, since the usage of the efficient F3PA cookstove will reduce smoke and thus improve air quality.

[17] Rapport sur les tests de performances energétiques des Foyers Trois Pierres Améliorés (F3PA) de l'Association Tiipaalga, Laboratoire Biomasse Energie et Biocarburant de 2IE, Ouagadougou, July 2015 (see document « tiipaalga Rapport de tests de performances énergétiques_F3PA_24_07_2015_VF.pdf »)

[18] See document « Fiche technique de construction de F3PA_tiipaalga »

[19] See document « tiipaalga -Boite à images » and document « Guide d'animation_tiipaalga_vf »

The project will help the host country Burkina Faso to meet SDG 5 - Gender equality, since women will spend less time in collecting wood, which they can use for other activities or own purposes.

The project will help the host country Burkina Faso to meet SDG 7 - Affordable and clean energy, since the efficient F3PA cookstove is more than 50% more efficient than the traditional stoves used in the baseline scenario.

A.6. Scale of the project

>> (Define whether project is micro scale, small scale or others. Justify the scale referring to relevant activity requirement.)

The project is microscale as the stoves that will be used in this project are expected to represent an annual CO2 reduction of 10.000 tonnes of CO2e.

A.7. Funding sources of project

>> (Provide the public and private funding sources for the project. Confidential information need not be provided.)

Start-up finance for the project is provided by Fast Start Finance of Walloon Region of Belgium within the framework of sustainable development in partner countries of Wallonia. In addition, the Swiss NGO New Tree will provide additional finance to extend the project. Carbon finance will allow to monitor and replace all the project stoves at the end of its life time.

A.8. Assessment that project complies with 'gender sensitive' requirements

>> (Answer the four mandatory questions included under Step 1 to 3 in "Gold Standard Gender Equality Guidelines and Requirements" available here.)

Step 1

Question 1: Does the project reflect the key issues and requirements of gender-sensitive design and implementation as outlined in the gender policy? Explain how.

The Project takes into account gender roles and the abilities of women and men to participate in the decision/designs of the project activities. For example, the stakeholder consultation made in the project design phase included both women (45%) and men (55%) participating in the consultation meeting. Moreover, for example, the future public awareness sessions and trainings for the construction of F3PA efficient cookstoves will be planned and organized in the way to avoid any discrimination of women or other marginalized groups. In fact, the women's participation will be essential for guaranteeing the success in the dissemination of the F3PA efficient cookstoves.

In the overwhelming majority of households in Burkina Faso, fuel collection activities are handled by women. In fact, the reduction of fuel wood consumption will significantly reduce women's work load related to collection of fuel. It can be further expected that sexual harassment and violence happening during fuel collection may be reduced. Hence, largely women will benefit from the project activity.

Question 2: Does the project align with existing country policies, strategies and best practices? Explain how.

The Constitution of Burkina Faso[20] recognizes that the promotion of gender is a factor in achieving equality between men and women in Burkina Faso. In July 2009, the government adopted a National Gender Policy (PNG). The vision entails the construction of "a society free of all forms of inequality and inequities of gender, and which ensures, for all its citizens, the necessary safeguards for their social, cultural, political and economic development[21]. It will be ensured that the project is committed to equal gender rights following the National Gender Policy of Burkina Faso.

Step 2

[20] http://www.accpuf.org/images/pdf/cm/burkinafaso/031-tf-txt_const.pdf: page 2

[21] https://www.ilo.org/dyn/natlex/docs/SERIAL/90589/104519/F-957349365/BFA-90589.pdf: page 4

Question 3: Does the project address the questions raised in the Gold Standard Safeguarding Principles & Requirements document? Explain how.

All assessment questions related to all relevant safeguarding principles, amongst others principle 2 'Gender Equality and Women's Rights', have been responded. See Table in section D.1 of the PDD.

Step 3

Question 4: Does the project apply the Gold Standard Stakeholder Consultation & Engagement Procedure, Requirements & Guidelines

The project has followed the GS Stakeholder Consultation & Engagement Procedure, Requirements & Guidelines when carrying out the local stakeholder consultation. See the LSC report for more details.

SECTION B. Application of selected approved Gold Standard methodology

B.1. Reference of approved methodology

>> The Gold Standard Simplified Methodology for Efficient Cookstoves v1.0

B.2. Applicability of methodology

>> *(Justify the choice of the selected methodology(ies) by demonstrating that the project meets each applicability condition of the applied methodology(ies))*

The applicability conditions of the Gold Standard Simplified Methodology for Efficient Cookstoves are:

Methodology applicability requirement	Justification related to the project activity	Confirmation
This methodology is applicable to the micro-scale programmes and micro-scale activities introducing new wood fired cookstoves that reduce use of non-renewable fire wood or switch from non-renewable to renewable fire wood to meet thermal energy requirement for household cooking.	The project is a VPA of a micro-scale programme and introduces new wood fired cookstoves that reduce use of non-renewable fire wood. The targeted end-users are households which use a three stone open fire and are lacking access to improved cooking technology in the absence of this project activity. The introduced improved cookstove technology is the F3PA efficient cookstove, which has successfully been introduced in other provinces of Burkina Faso, ie Bam and Lorum.	Yes
A project proponent implements the activity or programme of activities. The individual households and institutions do not act as project proponents.	Tiipaalga Association with technical support of CO2logic will implement the project. No institutions will be involved in the project. The individual households do not act as project proponent.	Yes
This methodology is applicable, *i. If the baseline fuel is only fire wood; and* *ii. If the baseline stove 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; and*	According the baseline survey[22] realized in the project boundary fire wood is the main baseline fuel. During the dry season 93% of the surveyed households use only fire wood and remaining 7% fire wood and stems (as agricultural residues), whereas during the wet season 98% only fire wood and 2% fire wood and stems.	Yes

[22] See document « *GS6152_GS6419_GS6420_Baseline survey_report* »

iii. If the project stove is single pot or multi pot portable or in-situ cook stoves with specified efficiency of at least 20%.	Almost all surveyed households (98%) use the traditional three stone fire as baseline stove and are not satisfied with their current cookstove. The project stove is the F3PA[23] efficient cookstove, which is a single pot and in-situ cookstove. The F3PA efficient cookstove may have different sizes according the used cooking pot, ie sizes 2, 3, 4, 5, 6, 7, 8, 10, 12 and 15. All F3PA stoves of different sizes have a specified efficiency of at least 20%[24].	
The project boundary can be clearly identified, and the cookstoves counted in the proposed project activity are not included in another voluntary market or CDM project activity (i.e. no double counting takes place). The project proponent must have a mechanism in place together with appropriate mitigation measures to prevent double counting.	The project activity is implemented in the province Kourweogo located in Burkina Faso. Details about the project location are provided in section A.4 of this document. The unique identification including GPS coordinates of each household where all traditional three stones cookstoves for domestic use used by all the different wives within the household (if polygamous) have been replaced with project stoves, will be recorded in AKVO[25]. Moreover, the relevant online carbon registries (CDM, GS, VCS) have been checked to confirm that there are no other ICS projects in the Kourweogo province, where the project intervenes, hence no risk of double counting.	Yes
The project proponent must clearly communicate that the entity is claiming ownership rights and selling of the emission reductions resulting from the project activity. This must be communicated to the efficient cookstoves producers, retailers and end users by contract or clear written assertions in the transaction paperwork.	The ownership and selling rights of the emission reductions resulting from the project activity are clearly defined, defining the Association tiipaalga as the entity claiming ownership rights of and selling the emission reductions resulting from the project activity. The transfer of carbon credit ownership from end-users to the project owner the Association tiipaalga will a signed carbon waiver.	Yes
The use of the baseline cookstove as a backup or auxiliary technology in parallel with the improved cookstove introduced by the project activity is permitted as long as a mechanism is put into place to encourage the removal of the old cookstove (e.g. discounted price for the improved cookstove) and the definitive discontinuity of its use. The project documentation must provide a clear description	During the implementation of the project activity awareness workshops with stove users will be conducted on the multiple advantages of the efficient F3PA cookstoves before the construction of the new project cookstoves. In most cases the baseline stove will automatically be removed as the stones will be integrated in the new efficient F3PA cookstoves and as in	Yes

[23] F3PA: Foyer trois (03) Pierres Améliorés in French or Three Stones Improved Cookstoves

[24] Rapport sur les tests de performances energétiques des Foyers Trois Pierres Améliorés (F3PA) de l'Association Tiipaalga, Laboratoire Biomasse Energie et Biocarburant de 2IE, Ouagadougou, July 2015 (see document « *tiipaalga Rapport de tests de performances énergétiques_F3PA_24_07_2015_VF.pdf* »)

[25] www.AKVO.org

of the approach chosen and the monitoring plan must allow for a good understanding of the extent to which the baseline technology is still in use after the introduction of the improved technology, whether the existing baseline cookstove is not surrendered at the time of the introduction of the improved technology, or whether a new baseline cookstove is acquired and put to use by targeted end users during the project crediting period. The success of the mechanism put into place must therefore be monitored, and the approach must be adjusted if proven unsuccessful. If the baseline cookstove remains in use in parallel with the project cookstove, corresponding emissions must of course be accounted for as part of the project emissions.	the kitchen the fixed project stove will be constructed on the place of the baseline stove. The usage of a baseline cookstove will be limited to exceptional events, like celebrations, in case the household don't dispose of an efficient F3PA cookstove with size 20 (for big cooking pot sizes). The monitoring plan describes how to measure the usage of the baseline technology during crediting period of the project activity.	

B.3. Project boundary

>> (Present a flow diagram of the project boundary, physically delineating the project, based on the description provided in section A.5 above.)

The project boundary is the physical, geographical site of baseline and project cookstoves and fuel collection area, in other words the physical location of the households using the efficient F3PA cookstoves after implementation of the project activity in the province of Kourweogo and the fuel collection area as the locations from where households source their biomass used for domestic cooking.

The target area are the locations of the households using the efficient F3PA cookstoves after implementation of the project activity, where the usage of the open three stone fire as baseline cookstove is prevalent and uniform.

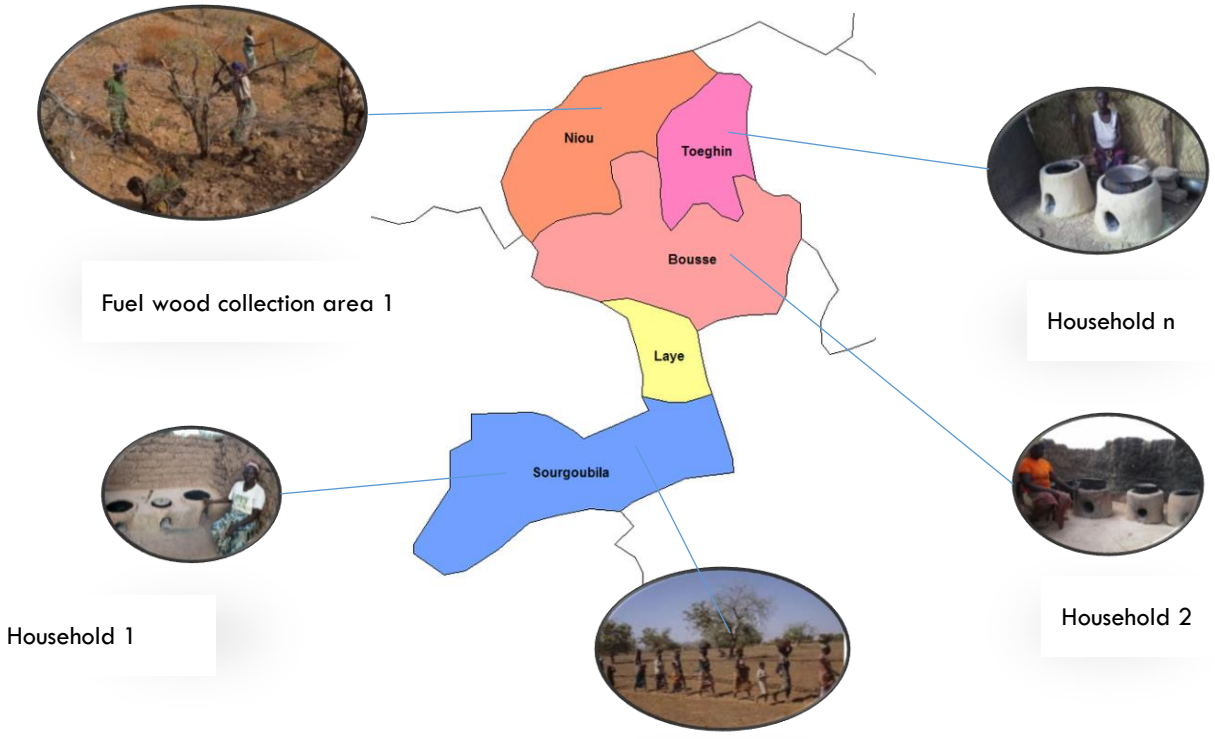


Diagram: Project boundary and target area of the project activity in the 4 municipalities Boussé, Toeghin, Niou and Sourgoubila in Kourweogo province

Source		GHGs	Included?	Justification/Explanation
Baseline scenario	Heat delivery	CO_2	Yes	Important source of emissions as CO2 is emitted any time biomass or fossil fuels are burned.
		CH_4	Yes	Important source of emissions released during partial or incomplete combustion of biomass during domestic cooking.
		N_2O	Yes	Important source of emissions released during partial or incomplete combustion of biomass during domestic cooking.
Project scenario	Heat delivery	CO_2	Yes	Important source of emissions as CO2 is emitted any time biomass or fossil fuels are burned.
		CH_4	Yes	Important source of emissions released during partial or incomplete combustion of biomass during domestic cooking.
		N_2O	Yes	Important source of emissions released during partial or incomplete combustion of biomass during domestic cooking.

B.4. Establishment and description of baseline scenario

>> (Explain how the baseline scenario is established in accordance with guidelines provided in GS4GG Principles & Requirements and the selected methodology(ies). In case suppressed demand baseline is used then same should be explained and justified.)

In accordance with the methodology, the baseline scenario is non-renewable fire wood consumption to meet thermal energy requirement for household cooking. The Baseline Survey[26] realized in the project boundary, shows that fire wood is the main baseline fuel. During the dry season 93% of the surveyed households use only fire wood and remaining 7% fire wood and stems (as agricultural residues), whereas during the wet season 98% only fire wood and 2% fire wood and stems. The same report shows that almost all surveyed households (98%) use the traditional three stone fire as baseline stove and are not satisfied with their current cookstove.

The concept of suppressed demand is not applied.

B.5. Demonstration of additionality

>> (If the proposed project is not a type of project that is deemed additional, as stated below, then follow guidelines in section 3.5.1 of GS4GG Principles & Requirements to demonstrate additionality.)

The table below is only applicable if the proposed project is deemed additional, as defined by the applied approved methodology or activity requirement or product requirement.

Specify the methodology or activity requirement or product requirement that establish deemed additionality for the proposed project (including the version number and the specific paragraph, if applicable).	Gold Standard for the Global Goals Renewable Energy Activity Requirements, Version 1, July 2017 2.5.3 Microscale Micro scale projects that meet any one of the criteria defined below (and meet the eligibility requirements) shall be deemed additional: (a) The project is located in a Least Developed Country (LDC), Small Island Developing States (SIDS) or Land Locked Developing Country (LLDC)
Describe how the proposed project meets the criteria for deemed additionality.	The project activity is located in Burkina Faso, which is an LDC, therefore the activity is automatically deemed additional.

[26] See document « *GS6152_GS6419_GS6420_Baseline survey_report* »

B.6. Sustainable Development Goals (SDG) outcomes

B.6.1. Relevant target for each of the three SDGs

>> (Specify the relevant SDG target for each of three SDGs addressed by the project. Refer most recent version of targets here .)

SDG	Chosen SDG target	Indicator defined for the project	Justification information
Goal 3 – Good health and well being	3.9. By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination.	Proportion of households perceiving less often smoke levels, incidence of coughing, incidence of respiratory illness, incidence of itchy eyes.	Prior to the implementation of the project activity, traditional stoves were used for domestic cooking having a negative impact on air quality. Access to improved cookstoves will reduce the smoke levels, incidence of coughing, incidence of respiratory illness, incidence of itchy eyes.
Goal 4 – Quality education	4.3. By 2030, ensure equal access for all women and men to affordable and quality technical, vocational and tertiary education, including university.	Number of trainings initiatives for staff involved in the programme Number of workshops carried out for women	The personnel involved in the project will receive quality training to undertake various roles within the project. The leader women (Monitrice Endogène) will receive appropriate training for the construction of the F3PA efficient cookstoves in order to guarantee that the construction of the project cookstoves meet the quality standards.
Goal 5 - Gender	5.4. Recognize and value unpaid care and domestic work through the provision of public services, infrastructure and social protection policies and the promotion of shared responsibility within the household and the family as nationally appropriate.	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	The project will enable women to reduce time spent on such work as cooking and wood collection. This will enable them to have more time for other activities of choice apart from the domestic work. This supports the empowerment of the women.
Goal 7 - Affordable and clean energy	7.1 By 2030, ensure universal access to affordable, reliable and modern energy services	Number of F3PA efficient cookstoves disseminated	Access to energy efficient cook stoves which reduce fuel wood consumption will

			support the reduction in consumption of fuel wood.
Goal 13 – Climate Action	13.5 Promote mechanisms for raising capacity for effective climate change-related planning and management in least developed countries and small island developing States, including focusing on women, youth and local and marginalized communities	Number of tCO_2e reduced by the project	The project will allow the reduction of GHG emissions due to less fuelwood consumption.

B.6.2. Explanation of methodological choices/approaches for estimating the SDG outcome

>> (Explain how the methodological steps in the selected methodology(ies) or proposed approach for calculating baseline and project outcomes are applied. Clearly state which equations will be used in calculating net benefit.)

a) 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)

Baseline: during monitoring survey the smoke level perceived by the stove user will be compared between the baseline scenario before the implementation of the F3PA efficient cookstove and the project scenario since the implementation of the F3PA efficient cookstove.

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

Baseline: during monitoring survey the incidence of coughing perceived by the stove user will be compared between the baseline scenario before the implementation of the F3PA efficient cookstove and the project scenario since the implementation of the F3PA efficient cookstove.

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)

Baseline: during monitoring survey the incidence of respiratory illness will be compared between the baseline scenario before the implementation of the F3PA efficient cookstove and the project scenario since the implementation of the F3PA efficient cookstove.

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)

Baseline: during monitoring survey the incidence of itchy eyes perceived by stove users will be compared between the baseline scenario before the implementation of the F3PA efficient cookstove and the project scenario since the implementation of the F3PA efficient cookstove.

b) 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

Baseline: no training initiatives have been organized for the staff members assigned to the project

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

Baseline: no workshops have been organized for women in the project boundary

c) 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)

Baseline: during monitoring survey the amount of time spent on fuel collection perceived by stove users will be compared between the baseline scenario before the implementation of the F3PA efficient cookstove and the project scenario since the implementation of the F3PA efficient cookstove.

Activities carried out by women during saved time:

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)

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)

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)

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)

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)

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)

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)

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)

Baseline: during monitoring survey the amount of money spent on wood fuel collection purchase by stove users will be compared between the baseline scenario before the implementation of the F3PA efficient cookstove and the project scenario since the implementation of the F3PA efficient cookstove.

Usage of saved money by women:

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)

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)

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)

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)

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)

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)

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)

d) SDG 7, Affordable and clean energy

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

Baseline: no F3PA efficient cookstoves were disseminated yet in the baseline scenario

e) SDG 13, Climate Action

The baseline scenario is considered by default fixed
In the project activity, cookstoves are installed at the start of the project activity or installed progressively, the baseline is considered by-default fixed until the end of the cookstoves (introduced in the project activity) useful life or the registered crediting period, whichever occurs earlier. If the project cookstove is replaced with a cookstove of similar efficiency prior to the end of the crediting period, the original baseline shall be applicable till the end of the replaced cookstoves useful life or the registered crediting period, whichever occurs earlier.

Only one project scenario is considered
The project scenario is the adoption of the efficient F3PA cookstove by end users in the target area of the municipalities of Bouusé, Niou, Sourboubila and Toeghin in the province of Kourweogo, defined as the project boundary of the VPA.
Only one type of efficient cookstove will be installed, which is the efficient F3PA cookstove. Most households in the project boundary are composed of one husband with several wives. Each wife in a household will have at least two efficient F3PA cookstoves according the local cooking requirement. All the traditional three stone cookstoves for domestic use used by the wives within the household in the VPA will be replaced by efficient F3PA cookstoves. Ten different sizes (2, 3, 4, 5, 6, 7, 8, 10, 12 and 15) are regularly used and will be taken account. The determination of quantity of fire wood consumed in the baseline is at household level. For this reason, the number of households will be monitored instead of project cookstoves to determine the emissions reductions. The efficient F3PA cookstoves installed at a household can have different sizes according the cooking habit within the household. If the efficiency of these F3PA cookstoves with different sizes differs, the lowest value will be taken as reference value for the efficiency of the cookstove being used in the project scenario to calculate the emission reductions.

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

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

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

<u>Determination of quantity of biomass saved (P_y):</u>
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% is used as 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"[27] 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

Calculation of leakage
As defined under The Gold Standard Simplified Methodology for Efficient Cookstoves, the net emission reductions (ERy) for a micro-scale program 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.

B.6.3. Data and parameters fixed ex ante for monitoring contribution to each of the three SDGs

(Include a compilation of information on the data and parameters that are not monitored during the crediting period but are determined before the design certification and remain fixed throughout the crediting period like IPCC defaults and other methodology defaults. Copy this table for each piece of data and parameter.)

Relevant SDG Indicator	**SDG 13, Climate Action**
Data/parameter	**$EF_{b,fuel,CO2}$**
Unit	tCO_2/ton of firewood

[27] INSD, recensement général de la population et de l'habitation de 2006, juillet 2008, Ministère de l'Economie et des Finances, p49 (tableau 15), 52 pages (Document « *Resultats_definitifs_RGPH_2006_with EN translation* »)

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 comment	

Relevant SDG Indicator	**SDG 13, Climate Action**
Data/parameter:	**EFb,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)	0.530 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	

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
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	

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[28]

[28] 2IE Ouagadougou, Laboratoire Biomasse Energie et Biocarburant, Rapport sur les tests de performances énergétiques des foyers trois pierres améliorés (F3PA) de l'association Tiipaalga

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 $\eta_{p,y}$ 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
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 using data from the latest population census in 2006 of the National Institute for Statistics and Demography[29]. 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)	Ex ante: • 3.32 for the whole project boundary Ex post: • 3.24 for the municipality of Boussé • 3.27 for the municipality of Niou • 3.45 for the municipality of Sourgoubila • 3.33 for the municipality of Toeghin

[29] INSD, recensement général de la population et de l'habitation de 2006, juillet 2008, Ministère de l'Economie et des Finances, p49 (tableau 15), 52 pages. (Document « *Resultats_definitifs_RGPH_2006_with EN translation* »)

<table>
<tr><td>Choice of data or measurement methods and procedures</td><td>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[30]. This means that the used value can be considered as conservative to calculate the CO2 reduction emissions.</td></tr>
<tr><td>Purpose of data</td><td>Calculation of emission reductions</td></tr>
<tr><td>Additional comments</td><td>The average household size across the four municipalities of the project boundary is 6.65, whereas for the municipalities Boussé 6.49, Niou 6.53, Sourgoubila 6.91 and Toeghin 6.67:

<table>
<tr><th>Municipality</th><th># HH</th><th># persons</th><th>#pers/HH</th><th>$B_{b,y}$</th></tr>
<tr><td>Boussé</td><td>6,682</td><td>43,352</td><td>6.49</td><td>3.24</td></tr>
<tr><td>Niou</td><td>4,133</td><td>26,998</td><td>6.53</td><td>3.27</td></tr>
<tr><td>Sourgoubila</td><td>5,654</td><td>39,044</td><td>6.91</td><td>3.45</td></tr>
<tr><td>Toeghin</td><td>2,475</td><td>16,500</td><td>6.67</td><td>3.33</td></tr>
<tr><td>Total</td><td>18,944</td><td>125,894</td><td>6.65</td><td>3.32</td></tr>
</table>

Based on the minimum service level of 0.5 tonnes per capita per year the average annual consumption of firewood per household is estimated at 3.32 tonnes/year for the total project boundary and more specifically for the municipality of Boussé 3.32 tonnes/year, for Niou 3.27 tonnes/year, for Sourgoubila 3.45 tonnes/year and for Toeghin 3.33 tonnes/year.</td></tr>
</table>

B.6.4. Ex ante estimation of outcomes linked to each of the three SDGs

>> (Provide a transparent ex ante calculation of baseline and project outcomes (or, where applicable, direct calculation of net benefit) during the crediting period, applying all relevant equations provided in the selected methodology(ies) or as per proposed approach. For data or parameters available before design certification, use values contained in the table in section B.6.3 above. For data/parameters not available before design certification and monitored during the crediting period, use estimates contained in the table in section B.7.1 below)

Ex-ante calculations related to the outcome for SDG 13

The transparent ex-ante calculations of the outcome for SDG 13 (i.e. CO2e reductions) are provided in a separate Excel Spreadsheet uploaded to GS Registry. For data/parameters available at the time of design certification, values contained in section B.6.3 and for data/parameters only available after monitoring the estimates contained in section B.7.1 have been used.

Ex-ante calculations related to the outcomes of SDG 3

Smoke level reduction = it is estimated that more than 90% of the stove user respondents will perceive less smoke since the implementation of F3PA efficient cookstoves

Incidence of coughing reduction = it is estimated that more than 90% of the stove user respondents will perceive less incidence of coughing since the implementation of F3PA efficient cookstoves

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

Incidence of respiratory illness reduction = it is estimated that more than 90% of the stove user respondents will perceive less incidence of respiratory illnesses since the implementation of F3PA efficient cookstoves

Incidence of itchy eyes reduction = it is estimated that more than 90% of the stove user respondents will perceive less incidence of itchy eyes since the implementation of F3PA efficient cookstoves

Ex-ante calculations related to the outcomes of SDG 4

Number of trainings initiatives for staff involved in the programme = it is estimated that at least one training will be organized for the staff

Number of workshops carried out for women = it is estimated that at least 20 workshops will have been organized for women

Ex-ante calculations related to the outcomes of SDG 5

Proportion of stove users perceiving reduced amount of time spent on fuel collection = it is estimated that more than 90% of the stove user respondents will perceive a reduced amount of time spent on fuel collection

Proportion of stove users perceiving reduced amount of money spent on wood fuel purchase = it is estimated that more than 90% of the stove user respondents will perceive a reduced amount of money spent on wood fuel purchase

Ex-ante calculations related to the outcomes of SDG 7

Number of F3PA efficient cookstoves disseminated = It is estimated that 3100 households will have been included in the project and each household will have at least 2 F3PA efficient cookstoves, which makes 6,200 disseminated F3PA efficient cookstoves

B.6.5. Summary of ex ante estimates of each SDG outcome

Ex-ante estimation of SDG 13 Outcome

Year	Emission reduction (tCO2e/year)	Leakage adjustment (tCO2e/year)	Net Emission Reduction (tCO2e/year)
2019	10,389	519	9,870
2020	10,302	515	9,787
2021	10,212	511	9,702
2022	10,121	506	9,615
2023	10,028	501	9,527
2024	10,389	519	9,870
2025	10,302	515	9,787
Total	71,744	3,587	68,157
Total number of crediting years	7		
Annual average over the crediting period	10,249	512	9,737

Ex-ante estimation of SDG 3 Outcome

Smoke level reduction

Year	Baseline estimate	Project estimate	Net benefit
2019	N/A	N/A	>90%
2020	N/A	N/A	>90%
2021	N/A	N/A	>90%
2022	N/A	N/A	>90%
2023	N/A	N/A	>90%
2024	N/A	N/A	>90%
2025	N/A	N/A	>90%
Total	N/A	N/A	>90%
Total number of crediting years	*7*		
Annual average over the crediting period	N/A	N/A	>90%

Incidence of coughing reduction

Year	Baseline estimate	Project estimate	Net benefit
2019	N/A	N/A	>90%
2020	N/A	N/A	>90%
2021	N/A	N/A	>90%
2022	N/A	N/A	>90%
2023	N/A	N/A	>90%
2024	N/A	N/A	>90%
2025	N/A	N/A	>90%
Total	N/A	N/A	>90%
Total number of crediting years	*7*		
Annual average over the crediting period	N/A	N/A	>90%

Incidence of respiratory illness reduction

Year	Baseline estimate	Project estimate	Net benefit
2019	N/A	N/A	>90%
2020	N/A	N/A	>90%
2021	N/A	N/A	>90%
2022	N/A	N/A	>90%
2023	N/A	N/A	>90%
2024	N/A	N/A	>90%
2025	N/A	N/A	>90%
Total	N/A	N/A	>90%
Total number of crediting years	*7*		
Annual average over the crediting period	N/A	N/A	>90%

Incidence of itchy eyes reduction

Year	Baseline estimate	Project estimate	Net benefit
2019	N/A	N/A	>90%
2020	N/A	N/A	>90%
2021	N/A	N/A	>90%
2022	N/A	N/A	>90%
2023	N/A	N/A	>90%
2024	N/A	N/A	>90%
2025	N/A	N/A	>90%
Total	N/A	N/A	>90%
Total number of crediting years	*7*		
Annual average over the crediting period	N/A	N/A	>90%

Ex-ante estimation of SDG 4 outcome

Number of trainings initiatives for staff involved in the programme

Year	Baseline estimate	Project estimate	Net benefit
2019	0	1	1
2020	0	1	1
2021	0	1	1
2022	0	1	1
2023	0	1	1
2024	0	1	1
2025	0	1	1
Total	0	*7*	*7*
Total number of crediting years	*7*		
Annual average over the crediting period	0	1	1

Number of workshops carried out for women

Year	Baseline estimate	Project estimate	Net benefit
2019	0	20	20
2020	0	20	20
2021	0	20	20
2022	0	20	20
2023	0	20	20
2024	0	20	20
2025	0	20	20
Total	0	140	140
Total number of crediting years	*7*		

Annual average over the crediting period	0	20	20

Ex-ante estimation of SDG 5 outcome

Proportion of stove users perceiving reduced amount of time spent on fuel collection

Year	Baseline estimate	Project estimate	Net benefit
2019	N/A	N/A	>90%
2020	N/A	N/A	>90%
2021	N/A	N/A	>90%
2022	N/A	N/A	>90%
2023	N/A	N/A	>90%
2024	N/A	N/A	>90%
2025	N/A	N/A	>90%
Total	N/A	N/A	>90%
Total number of crediting years	*7*		
Annual average over the crediting period	N/A	N/A	>90%

Proportion of stove users perceiving reduced amount of money spent on wood fuel purchase

Year	Baseline estimate	Project estimate	Net benefit
2019	N/A	N/A	>90%
2020	N/A	N/A	>90%
2021	N/A	N/A	>90%
2022	N/A	N/A	>90%
2023	N/A	N/A	>90%
2024	N/A	N/A	>90%
2025	N/A	N/A	>90%
Total	N/A	N/A	>90%
Total number of crediting years	*7*		
Annual average over the crediting period	N/A	N/A	>90%

Ex-ante estimation of SDG *7* outcome

Number of F3PA efficient cookstoves disseminated

Year	Baseline estimate	Project estimate	Net benefit
2019	0	6200	6200
2020	0	6200	6200
2021	0	6200	6200
2022	0	6200	6200
2023	0	6200	6200

2024	0	6200	6200
2025	0	6200	6200
Total	0	6200	6200
Total number of crediting years	*7*		
Annual average over the crediting period	0	6200	6200

B.7. Monitoring plan

B.7.1. Data and parameters to be monitored

Relevant SDG Indicator	**SDG 3, Good health and well-being**
Data / Parameter	**Smoke level reduction** **Incidence of coughing reduction** **Incidence of respiratory illness reduction** **Incidence of itchy eyes reduction**
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 surveys
Value(s) applied	90% 90% 90% 90%
Measurement methods and procedures	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 will be analyzed in the monitoring report and raw data of the Monitoring surveys will be 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/Safeguarding Principle	**SDG 4, Quality Education**
Data / Parameter	**Number of trainings initiatives for staff involved in the programme**
Unit	Number
Description	Number of trainings initiatives for staff involved in the programme in order to increase their performance in the programme
Source of data	Reports regarding the training initiatives
Value(s) applied	1
Measurement methods and procedures	The list of training initiatives during the corresponding monitoring period

Monitoring frequency	Annual
QA/QC procedures	The data will be analyzed in the reports regarding the training initiatives, which will be made available for review.
Purpose of data	Calculation of the parameter "Number of trainings initiatives for staff involved in the programme"
Additional comment	N/A

Relevant SDG Indicator/Safeguarding Principle	**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
Value(s) applied	20
Measurement methods and procedures	The list of workshops carried out for women during the corresponding monitoring period
Monitoring frequency	Annual
QA/QC procedures	The data will be analyzed in the reports regarding the workshops carried out for women, which will be made available for review.
Purpose of data	Calculation of the parameter "Number of workshops carried out for women"
Additional comment	N/A

Relevant SDG Indicator/Safeguarding Principle	**SDG 5, Gender equality**
Data / Parameter	**Proportion of stove users perceiving reduced amount of time spent on wood fuel collection and/or reduced amount of money spent on wood fuel purchase** Various activities which women spend after saving time required for collecting fuel wood: (i) Domestic $tasks_p$; (ii) Income generating $activities_p$; (iii) Field $labour_p$; (iv) $Gardening_p$; (v) Participation to a literacy $program_p$; (vi) Community $work_p$; (vii) Religious $activities_p$. Various expenses which women do after saving money required for the purchase of wood: (i) School $fees_p$; (ii) Purchase of medical $drugs_p$; (iii) Purchase of $food_p$; (iv) Investment for field $crops_p$; (v) Purchase of $equipments_p$; (vi) Income generating $activities_p$; (vii) $Savings_p$.
Unit	Fraction

Description	Proportion of stove users perceiving reduced time spent on wood fuel collection since the implementation of the F3PA efficient cookstoves Domestic tasks$_p$ = Proportion of stove users using their saved time to do domestic tasks Income generating activities$_p$ = Proportion of stove users using their saved time to do income generating activities Field labour$_p$ = Proportion of stove users using their saved time to do field labour Gardening$_p$ = Proportion of stove users using their saved time to do gardening Participation to a literacy program$_p$ = Proportion of stove users using their saved time to participate to a literacy program Community work$_p$ = Proportion of stove users using their saved time to do community work Religious activities$_p$ = Proportion of stove users using their saved time to do religious activities Proportion of stove users perceiving reduced money spent on wood fuel purchase since the implementation of the F3PA efficient cookstoves School fees$_p$: Proportion of stove users using their saved money to school fees; Purchase of medical drugs$_p$: Proportion of stove users using their saved money to purchase of medical drugs; Purchase of food$_p$: Proportion of stove users using their saved money to Investment for field crops$_p$: Proportion of stove users using their saved money to investments for field crops; Purchase of equipments$_p$: Proportion of stove users using their saved money to purchase of equipments; Income generating activities$_p$: Proportion of stove users using their saved money to income generating activities; Savings$_p$: Proportion of stove users using their saved money to savings.
Source of data	Monitoring surveys
Value(s) applied	Proportion of stove users perceiving reduced time spent on wood fuel collection since the implementation of the F3PA efficient cookstoves = 90% Proportion of stove users perceiving reduced money spent on wood fuel purchase since the implementation of the F3PA efficient cookstoves = 90%
Measurement methods and procedures	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, they spent more, less time to collect the wood or the situation has not changed. In case of purchase wood fuel, the end users are asked they spent more, less money on the purchase of wood fuel or the situation has not changed.
Monitoring frequency	Annual
QA/QC procedures	The data will be analyzed in the monitoring report and raw data of the Monitoring surveys will be 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 reduced amount of money spent on wood fuel purchase"
Additional comment	N/A

Relevant SDG Indicator/Safeguarding Principle	**SDG 7, Affordable and clean energy**
Data / Parameter	**Number of F3PA efficient cookstoves disseminated**

Unit	Number
Description	Number of F3PA efficient cookstoves included in the project database for project scenario p
Source of data	Project database
Value(s) applied	6,200
Measurement methods and procedures	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 will be analyzed in the monitoring report and Project database will be made available for review.
Purpose of data	Calculation of the parameter "Number of F3PA efficient cookstoves disseminated"
Additional comment	It is foreseen that each household will have at least two F3PA efficient cookstoves.

Relevant SDG Indicator/Safeguarding Principle	**SDG 13, Climate Action**
Data / Parameter	$U_{p,i}$
Unit	Percentage
Description	Usage rate in project scenario p during year i
Source of data	Annual usage/monitoring survey
Value(s) applied	95%
Measurement methods and procedures	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	N/A

Relevant SDG Indicator/Safeguarding Principle	**SDG 13, Climate Action**
Data / Parameter	$N_{p,i}$
Unit	Number of households included in the project (Units), based on days of usage of age group i during the corresponding 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
Value(s) applied	3,100
Measurement methods and procedures	For the determination of the number of usage days at household level for age group I 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 I during the corresponding monitoring period related to one year.

Monitoring frequency	Annual
QA/QC procedures	Transparent data analysis and reporting
Purpose of data	Calculation of emission reductions
Additional comment	N/A

Relevant SDG Indicator/Safeguarding Principle	**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
Value(s) applied	Default value: 0.99 i.e., 1 % efficiency loss per year
Measurement methods and procedures	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/Safeguarding Principle	**SDG 13, Climate Action**
Data / Parameter	**$DF_{b,stove,i}$**
Unit	Percentage
Description	Discount factor to account for the baseline stove use in project scenario p during year i
Source of data	Monitoring surveys
Value(s) applied	5%
Measurement methods and procedures	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	N/A

B.7.2. Sampling plan

>> (If data and parameters monitored in section B.7.1 above are to be determined by a sampling approach, provide a description of the sampling plan.)

As described in the PoA-DD cross sampling across a group of VPA's is allowed if the VPA's are homogeneous relative to the parameters of interest. Cross sampling of households will be applied across the following VPAs of PoA 1340: VPA-11 (GS6152), VPA-12 (GS6419) and VPA-13 (GS6420).
The parameters which need to be monitored through surveys for the 3 VPA's are (i) $U_{p,y}$ Usage rate in project scenario p during year y; (ii) DF_{η} Discount factor to account for efficiency loss of project stoves; and (iii) $DF_{b,stove,y}$

Discount factor to account for the baseline stove use in project scenario p during the year y. The 3 VPA's included are assumed to be homogeneous with respect to the three parameters for the following reasons:

i. the 4 municipalities included in the 3 VPAs are very close to each other (furthest distance of 80 km). The total surface of the province Kourwéogo where all 4 municipalities of the project boundary are located, is 1,588 km2;

ii. the intention is to implement the 3 VPAs within the timeframe of 3 years;

iii. all 3 VPAs will apply the same distribution/implementation mechanism. The distribution/implementation mechanism involves training local women in the rural zones to fabricate these stoves themselves using local material. Each efficient cookstove will be built according to a strict construction protocol. The efficient cookstove construction instructions are published in the training material provided and all levels of the distribution process will be trained to have full knowledge of this construction criterion. This innovative distribution system includes a tight collaboration with women associations. The construction protocol required to train the local rural inhabitants will give them the skills they require to build their own personally fabricated standardized efficient F3PA cookstove under the supervision of tiipaalga and how to use and maintain it;

iv. the technology used in all 3 VPA's will be the same, the standardized efficient F3PA cookstove or the mud made 3 stones efficient cookstove constructed according a strict construction protocol. In all 3 VPA's the household will have the choice between different sizes according their needs. As all levels of the distribution mechanism are trained to construct according the strict construction protocol, the efficiency will be identical;

v. the 4 municipalities where the 3 VPA's will take place are characterized by very similar socio-economic conditions. One way to measure the socio-economic conditions is the Human Development Index (HDI) reported by UNDP. The HDI is a composite statistic of life expectancy, education, and income indices used to rank countries or regions according human development. The province of Kourwéogo has a HDI of 0.25 (below the average HDI of 0.34 for Burkina Faso, which in itself is below the average of Sub-Saharan Africa of 0.45 and well below the average HDI of 0.89 of the developed countries).

Since the three parameters of interest are assumed to be the same in each VPA at the time of sampling survey during the monitoring period, a single survey with cross sampling of households can be undertaken using a single random sampling plan. The populations of all 3 VPAs are combined 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. Only the households recorded in the database will be part of the project activity.

To successfully conduct a usage survey, the minimum household sample size of each age-group should be in line with 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.

The method of selecting households for the sample list for the monitoring survey will be random. All random selections will be stored for the crediting period and an additional two years, which allow traceability of the selection.

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 will be performed by user interviews. Only persons older than 18 years will be interviewed.

B.7.3. Other elements of monitoring plan

>>

Initial Data Collection

The initial data collection serves as the foundation of the project monitoring plan. Each stove is built by the user in collaboration with a local leader woman selected by the women in the villages, and who is trained by the tiipaalga Association.

The mud made 3 stones efficient woodstove or efficient F3PA cookstoves have a strict construction protocol[31] with diagrammatic presentation material[32] to support the tiipaalga trainer and the leader women on the ground and ensure that project stoves are systematically built in a similar manner. They will also train stove users/owners on how to use and maintain the efficient cookstoves and educate on hygienic usage and on the threat of climate change and health hazards related to the old cooking system.

Some of the households in the project area of the VPA 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 this micro scale - VPA 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 this micro scale – VPA.

The following information will be 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;

The data collected by tiipaalga and their team on the ground will be uploaded to a central database online. The collection of each component is briefly described below.

As there is only one project scenario the project database doesn't need to be differentiated into different sections.

Unique VPA ID- number of each wife of the household
Each wife of the household will receive a unique serial number. The syntax of the unique serial number is defined as GS1340-VPA-12-xxxx/y where (i) GS1340 is the Gold Standard number of the PoA "Efficient cookstoves in Burkina Faso" to which the VPA belongs, (ii) VPA-12 is the number of the VPA of the PoA, (iii) xxxx is the number of the household from 1 to 9999 and (iv) y is the number of the wife in the household from 1 to 9.

Type and size of appliance
In this VPA one type of appliance will be deployed, which is the mud made 3 stones efficient woodstove. However different sizes of cookstoves can be constructed at the level of the households depending on their cooking habits and size of household.

GPS
After the installation of all project cookstoves within a household, a tiipaalga team member will register the GPS coordinates of the household.

Name/Address/national ID Number/Mobile Number/Picture of wife with her project cookstoves
Each wife of the household participating in the project will use at least two project cookstoves. The unique VPA ID-number will identify the household and the wife included in the VPA-12. To ensure further traceability

[31] See document « Fiche technique de construction de F3PA_tiipaalga »

[32] See document « tiipaalga -Boite à images » and document « Guide d'animation_tiipaalga_vf »

personal information of the stove recipient will be recorded. Due to the fact that rural households in project locations do not have an official address, location data may be limited to the name of the village. In addition to the GPS location and the village name, a picture of each stove user with her project cookstoves will be taken. If available and if the concerned person wants to share, the national ID number and mobile phone number of the husband and each wife of the household will be collected. tiipaalga will strive to obtain as much unique information regarding the household and each wife of the household as possible.

Stove Construction Date
The construction date of each stove will be recorded by tiipaalga during the initial data collection. The construction date will be uploaded to the electronic database containing the previously described stove information.

The contract concerning the transfer of carbon rights between the user and the tiipaalga Association will be signed by the stove user after construction and positioning in the kitchen of at least two efficient cookstoves per wife of each household. The hardcopies of the contracts will be archived electronically at the office of tiipaalga. A household for which all of this data has been collected for each wife of the household and uploaded to the electronic database is deemed to have completed the initial data collection. The virtual copy of the stove and household information will be stored for the crediting period and an additional two years.

Monitoring Plan

In accordance with the Gold Standard Simplified Methodology for Efficient Cookstoves, the following data will be monitored over the crediting period of the project activity:

i. Usage rate in project scenario p during year y $U_{p,y}$ (%)
ii. Number of project cookstoves credited (units), $N_{p,y}$
iii. Discount factor to account for efficiency loss of project cookstoves DF_n
iv. Discount factor to account for the baseline stove use in project scenario p during the year y, DF_p, stove y

Monitoring consists of checking of a representative sample for each age-group of project cookstoves installed for each wife of a household included in the VPA, once every year (annually) to ensure that project cookstoves are still operating by carrying out the usage survey.

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

Usage rate in project scenario p during year y $U_{p,y}$ (%)

From the monitoring survey, a usage rate parameter (%) is derived from each age group of project cookstove installed for each wife of a household included in the VPA.

During the survey the project cookstove will be checked if it is in useable condition. If the project cookstove is not in useable condition, the household to which the project cookstove belongs will be excluded from the project database for the whole crediting year and subsequent years. The household will be included again after repairing or replacing it with new cookstove with similar efficiency. Guidance provided in Annex B of the methodology 'The Gold Standard Simplified Methodology for Efficient Cookstoves' will be followed to evaluate the condition of the cookstoves.

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 'useable condition'.

Number of households credited (units), $N_{p,y}$

This is the number of households from the project database based on the number of usage days per age group.

Discount factor to account for efficiency loss of project cookstoves DF_n

The default value of 1% efficiency loss per year can be used if the stove is found in good condition during annual survey.

For each year, the stoves of the age-group x-y should be physically verified. In the case of progressive installations, stove of age-group 0-1 shall also be physically verified each year through a random sampling approach.

During annual surveys, if it is found that the project cookstoves of some households are not in working conditions, the proportionate population of households should be excluded from the project database, until these cookstoves are repaired or 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 year from the previous issuance.

Discount factor to account for the baseline stove use in project scenario p during the year y, DF_p, stove y

This parameter will be determined based on 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.

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.

Database records

Electronic database(s) will be operated and maintained by the Association tiipaalga with the technical support of CO2logic to ensure completeness and accuracy of monitoring information.
Project database[33]:

- Unique VPA ID-number of each wife of the household;
- Type and size of appliance (ex. F3PA – size 2);
- GPS Coordinates of the household;
- Name/Address/national ID Number/Mobile Number/Picture of wife with her project cookstoves;
- Stove Construction Date;
- Status of stoves owned by the wife: used, unused, destroyed or replaced

The information in this database will be updated continuously.
Sample database:

- Unique ID-number of the household
- Household profile
- Fuel consumption pattern post project implementation per wife of the household with unique VPA-ID-number:
    - Cooking device
    - Place for cooking
    - Type of fuel and fuel consumption

The information in this database will be updated for every monitoring period. Data will be collected with Smart phones and transferred to the electronic database.

Monitoring Report

One single monitoring report will be written for the group of 3 VPA's at the end of every verification period and submitted to the Gold Standard Foundation. The report will indicate how the monitoring data has been

[33] The record keeping system should collect as many information as necessary to facilitate the verification of the VERs. At the current point of time the list of information seems ideal but may be extended or condensed. The collection of all the items is therefore not mandatory and additional information may be collected as well.

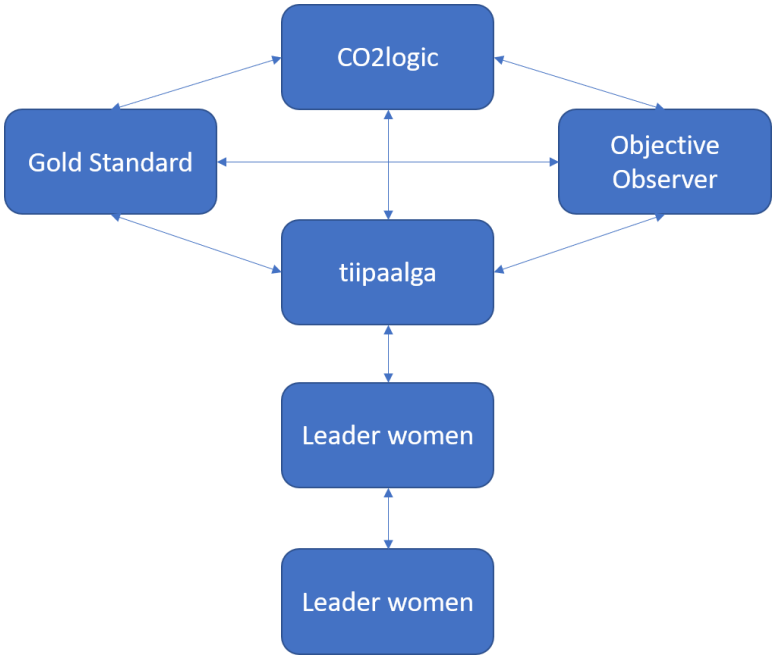
collected and show detailed, conservative calculations of the emissions reductions for the verification period and project in question.

The initial and monitoring data for each verification period stored in the electronic database will serve as the backbone of the monitoring report. The report will contain extensive tables comparing the initial data collected during project implementation with the monitoring data. This allows for quick confirmation that the project cookstoves of each wife of the household in question are still operational.

Along with any other information required for project verification, the monitoring report will list any households deemed to have unoperational project cookstoves along with information regarding the repair or replacement of the project cookstove in question. For replaced project cookstoves, the initial data collection process will be repeated and uploaded to the electronic database.

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. tiipaalga will act as the managing entity of the project and be responsible for communication with the Gold Standard Foundation and the Objective Observer. A diagram of responsibilities is shown here below.



tiipaalga employees train leader woman who are selected by the women in the villages, in 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 with in collaboration with the leader women will perform quality checks and collect the initial stove data described earlier.

The collected data will be transferred electronically from the project site to the tiipaalga office. The initial project data will be processed and uploaded to the central electronic database accessible by tiipaalga and the Gold Standard Foundation and CO2logic. CO2logic will perform quality checks.

For project monitoring the tiipaalga trainer in collaboration with the leader women will revisit the project site to monitor a representative sample of the project activity. Monitoring data will be collected and processed in the way the initial data was collected and processed.

tiipaalga Association with technical assistance of CO2logic will provide training to parties involved in the monitoring plan to assure accuracy and completeness of data recorded. The trainings will be conducted at the time when it is most appropriate during the project implementation phase.

SECTION C. Duration and crediting period

C.1. Duration of project

C.1.1. Start date of project

>> (Specify start date of the project, in the format of DD/MM/YYYY. Describe how this date has been determined as per the definition of start date provided in section 3.4.3 of GS4GG Principles & Requirements document and provide evidence to support this date.)

The start date of the project is 01/01/2019[34], which is the date on which the first F3PA efficient cookstoves are disseminated in the project activity..

C.1.2. Expected operational lifetime of project

>> (Specify in years)

21 years

C.2. Crediting period of project

7 years (7 years and twice renewable)

C.2.1. Start date of crediting period

>> (Specify in dd/mm/yyyy. This can be start of project operation or two years prior to the date of Project Design Certification, whichever is later.)

01/01/2019[35]

C.2.2. Total length of crediting period

>> (Specify the total length of crediting period sought in line with GS4GG Principles & Requirements or relevant activity requirements.)

21 years (7 years and twice renewable)[36].

[34] The PP may decide later on to postpone the starting date of the project. In this case, GS Secretariat would be informed accordingly.

[35] The PP may decide later on to postpone the starting date of the crediting period of the project. In this case, GS Secretariat would be informed accordingly.

[36] Rule update : For PoAs any VPA submitted within the first crediting period (i.e. 7 years) of the PoA shall be allowed to use the same 7 year, twice renewal model. The PoA "Efficient cookstoves in Burkina Faso" is still in its first crediting period.

SECTION D. Safeguarding principles assessment

D.1. Analysis of social, economic and environmental impacts

>> (Refer the GS4GG Safeguarding Principles and Requirements document for detailed guidance on carrying out this assessment.)

Safeguarding principles	Assessment questions	Assessment of relevance to the project (Yes/potentially/no)	Justification	Mitigation measure (if required)
3.1 Human Rights	1. The Project Developer and the Project shall respect internationally proclaimed human rights and shall not be complicit in violence or human rights abuses of any kind as defined in the Universal Declaration of Human Rights.	No	The project is implemented under the laws of the Republic of Burkina Faso and doesn't lead to violations of human rights in any way. In addition, the Republic of Burkina Faso has acceded to the Human Rights Convention under the United Nations on 4th of January 1999[37].	N/A
	2. The Project shall not discriminate with regards to participation and inclusion.		All households located within the project boundary that wish to have the F3PA efficient cookstove, are able to do so and there is not any form of discrimination or exclusion to participate in the project.	N/A
3.2 Gender Equality and Women's Rights Requirement 1	Is there a possibility that the Project might reduce or put at risk women's access to or control of resources, entitlements and benefits?	No	The project has been developed in order to provide important benefits for women, which are the most important stove users.	N/A
	Is there a possibility that the Project can adversely affect men and women in marginalised or vulnerable communities (e.g., potential increased burden on women or social isolation of men)?	No	In the contrary is beneficial and accessible for all members of the community.	N/A

[37] https://treaties.un.org/pages/ViewDetails.aspx?src=TREATY&mtdsg_no=IV-4&chapter=4&clang=_en

	Is there a possibility that the Project might not take into account gender roles and the abilities of women or men to participate in the decisions/designs of the project's activities (such as lack of time, child care duties, low literacy or educational levels, or societal discrimination)?	No	The roles, habits and planning of community members are taken into account during the implementation of project activities. This means that most activities or community meetings are organized after harvesting periods and mainly in dry season (January till May).	N/A
	Does the Project take into account gender roles and the abilities of women or men to benefit from the Project's activities (e.g., Does the project criteria ensure that it includes minority groups or landless peoples)?	No	The design of the project activity considers gender roles and the abilities of women and men to participate and benefit from the project activities. All members of the community can freely participate to the project and have access to the efficient F3PA project cookstove.	N/A
	Does the Project design contribute to an increase in women's workload that adds to their care responsibilities or that prevents them from engaging in other activities?	No	On the contrary, the project reduces women's workload as the efficient F3PA project cookstove consumes less wood and thus women spend less time in search of wood.	N/A
	Would the Project potentially reproduce or further deepen discrimination against women based on gender, for instance, regarding their full participation in design and implementation or access to opportunities and benefits?	No	The project is beneficial for the role of women in the household and offers opportunities to the women to improve their living conditions.	N/A
	Is there a likelihood that the proposed Project would expose women and girls to further risks or hazards?	No	It's not either likely that the project activity would expose women or girls to further risks or hazards.	N/A
Requirement 2	2. The Project shall not directly or indirectly lead to/contribute to adverse impacts on gender equality and/or the situation of women. Specifically, this shall include (not exhaustive):	No	The Project will not directly or indirectly lead or contribute to adverse impacts on gender equality or the situation of women.	N/A

	Sexual harassment and/or any forms of violence against women - address the multiple risks of gender-based violence, including sexual exploitation or human trafficking.			
	Slavery, imprisonment, physical and mental drudgery, punishment or coercion of women and girls.	No	The Project will not directly or indirectly lead or contribute to adverse impacts on gender equality or the situation of women and not to lead to any risk of contributing issues like slavery, imprisonment, drudgery or coercion of women and girls.	N/A
	Restriction of women's rights or access to resources (natural or economic).	No	The project will not restrict women's rights or access to natural resources.	N/A
	Recognise women's ownership rights regardless of marital status – adopt project measures where possible to support to women's access to inherit and own land, homes, and other assets or natural resources.	No	The project will not have any impact on women's ownership rights to inherit and own land, homes and other assets.	N/A
Requirement 3	**3.** Projects shall apply the principles of non discrimination, equal treatment, and equal pay for equal work, specifically: Where appropriate for the implementation of a Project, paid, volunteer work or community contributions will be organised to provide the conditions for equitable participation of men and women in the identified tasks/activities.	No	The Project applies the principles of non discrimination and equal treatment.	N/A
	Introduce conditions that ensure the participation of women or men in Project activities and benefits based on pregnancy, maternity/paternity leave, or marital status.	No	For any other eventual paid or volunteer work the principle of the equal pay for equal work will be applied and organized in way	N/A

			to provide the conditions for equitable participation of men and women.	
	Ensure that these conditions do not limit the access of women or men, as the case may be, to Project participation and benefits.	No	Project activities are planned in way that the participation of both women and men is guaranteed. There are no limitations on participation or benefiting from the Project depending on the pregnancy, maternity/paternity leave or marital status.	N/A
Requirement 4	4. The Project shall refer to the country's national gender strategy or equivalent national commitment to aid in assessing gender risks.	No	The Project will not include any specific gender related risks. Burkina Faso has ratified the Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW) of 1987[38].	N/A
Requirement 5	5. Based on the Preliminary Review assessment of Requirement 1, above, Gold Standard may require that the Project seek the input of an Expert Stakeholder and to include their recommendations in the Project design.	No	Not applicable	N/A
3.3 Community Health, Safety and Working Conditions	1. The Project shall avoid community exposure to increased health risks and shall not adversely affect the health of the workers and the community.	No	The project activity doesn't expose the community to increased health risks and is not adversely affecting the health of workers and the community. More in general the Association tiipaalga follows the national regulations of Burkina Faso on health, safety working conditions.	N/A

ls.aspx?src=TREATY&mtdsg_no=IV-8&chapter=4&lang=en

3.4 Cultural Heritage, Indigenous Peoples, Displacement and Resettlement *3.4.1 Sites of Cultural and Historical Heritage*	Does the Project Area include sites, structures, or objects with historical, cultural, artistic, traditional or religious values or intangible forms of culture (e.g., knowledge, innovations, or practices)?	No	The efficient F3PA project cookstoves will not critically alter cooking practices. So it has no impact on cultural heritage.	N/A
3.4 Cultural Heritage, Indigenous Peoples, Displacement and Resettlement *3.4.2 Forced Eviction and Displacement*	Does the Project require or cause the physical or economic relocation of peoples (temporary or permanent, full or partial)?	No	The project does not lead to relocation of people.	N/A
3.4 Cultural Heritage, Indigenous Peoples, Displacement and Resettlement *3.4.3 Land Tenure and Other Rights*	Does the Project require any change to land tenure arrangements and/or other rights?	No	The project doesn't require any change inland tenure arrangements and/or other rights.	N/A
3.4 Cultural Heritage, Indigenous Peoples, Displacement and Resettlement *3.4.4 Indigenous Peoples*	Are indigenous peoples present in or within the area of influence of the Project and/or is the Project located on land/territory claimed by indigenous peoples?	No	There are no indigenous people (referring as distinct collectives) present in the project area.	N/A
3.5 Corruption	1. The Project shall not involve, be complicit in or inadvertently contribute to or reinforce corruption or corrupt Projects.	No	The Project doesn't involve, be complicit in or inadvertently contribute to or reinforce corruption or corrupt Projects. The project is implemented on the ground by the Association tiipaalga. The ethical codes of the Association tiipaalga is against corruption. Moreover, Burkina Faso has	N/A

			ratified the UN Convention against Corruption[39].	
3.6 Economic Impacts *3.6.1 Labour Rights*	1. The Project Developer shall ensure that there is no forced labour and that all employment is in compliance with national labour and occupational health and safety laws, with obligations under international law, and consistency with the principles and standards embodied in the International Labour Organization (ILO) fundamental conventions. Where these are contradictory and a breach of one or other cannot be avoided, then guidance shall be sought from Gold Standard.	No	The project does not involve and is not complicit in any form of forced or compulsory labour. All labour is voluntary and the Association tiipaalga does not engage in any form of forced, compulsory or child labour. There won't be any form of labour discrimination. Labour conditions for workers will be safe. Burkina Faso is member state of the International Labour Organization (ILO)[40]. The country bases its legal regulations on the ratified ILO conventions[41].	N/A
	2. Workers shall be able to establish and join labour organisations.	No	All the stakeholders involved in the project are totally free to associate with whomever they want.	N/A
	3. Working agreements with all individual workers shall be documented and implemented. These shall at minimum comprise: (a) Working hours (must not exceed 48 hours per week on a regular basis), AND (b) Duties and tasks, AND (c) Remuneration (must include provision for payment of overtime), AND (d) Modalities on health insurance, AND	No	The working agreements with the individual workers are documented and implemented and the minimum requirements stated in section 3.6.1. of GS4GG Safeguarding Principles & Requirements (version 1.1) are respected whenever applicable.	N/A

[39] https://treaties.un.org/Pages/ViewDetails.aspx?src=IND&mtdsg_no=XVIII-14&chapter=18&clang=_en

[40] http://www.ilo.org/public/english/standards/relm/country.htm

[41] http://www.ilo.org/global/standards/introduction-to-international-labour-standards/conventions-and-recommendations/lang--en/index.htm

	(e) Modalities on termination of the contract with provision for voluntary resignation by employee, AND (f) Provision for annual leave of not less than 10 days per year, not including sick and casual leave.			
	4. The Project Developer shall justify that the employment model applied is locally and culturally appropriate.	No	The employment model applied is locally and culturally appropriate.	N/A
	5. Child labour, as defined by the ILO Minimum Age Convention is not allowed. The Project Developer shall use adequate and verifiable mechanisms for age verification in recruitment procedures. Exceptions are children for work on their families' property as long as: (a) Their compulsory schooling (minimum of 6 schooling years) is not hindered, AND (b) The tasks they perform do not harm their physical and mental development, AND (c) The opinions and recommendations of an Expert Stakeholder shall be sought and demonstrated as being included in the Project design.	No	Moreover, all the possible staff hired by the Tiipaalga has a minimum age of 18. Burkina Faso has ratified ILO Conventions 138 (Minimum Age Convention) and 182 (Worst Forms of Child Labour Convention).[42]	N/A
	6. The Project Developer shall ensure the use of appropriate equipment, training of workers, documentation and reporting of accidents and incidents, and emergency preparedness and response measures.	No	All the works will be made by using appropriate equipment, training of workers, documentation and reporting of accidents and incidents, and emergency preparedness and response measures.	N/A

[42] https://www.ilo.org/dyn/normlex/en/f?p=1000:11200:0::NO:11200:P11200_COUNTRY_ID:102981

3.6 Economic Impacts *3.6.2 Negative Economic Consequences*	**1.** The Project Developer shall demonstrate the financial sustainability of the Projects implemented, also including those that will occur beyond the Project Certification period.	No	Project activity related costs, like e.g. for construction and maintenance of F3PA efficient cookstoves, monitoring etc are covered with climate finance and carbon finance. The use of the F3PA efficient cookstoves is accessible to everybody and therefore the project benefits can be considered socially-inclusive.	N/A
	2. The Projects shall consider economic impacts and demonstrate a consideration of potential risks to the local economy and how these have been taken into account in Project design, implementation, operation and after the Project. Particular focus shall be given to vulnerable and marginalised social groups in targeted communities and that benefits are socially-inclusive and sustainable.	No	There are not expected any direct economic impact or potential risks to the local economy.	N/A
4.1 Climate and Energy *4.1.1 Emissions*	Will the Project increase greenhouse gas emissions over the Baseline Scenario?	No	On the contrary, the project will reduce greenhouse gas emissions over the baseline scenario.	N/A
4.1 Climate and Energy *4.1.2 Energy Supply*	Will the Project use energy from a local grid or power supply (i.e., not connected to a national or regional grid) or fuel resource (such as wood, biomass) that provides for other local users?	No	On the contrary, the objective of the project is to reduce the consumption of wood.	N/A
4.2 Water *4.2.1 Impact on Natural Water Patterns/Flows*	Will the Project affect the natural or pre-existing pattern of watercourses, ground-water and/or the watershed(s) such as high seasonal flow variability, flooding potential, lack of aquatic connectivity or water scarcity?	No	The efficient F3PA project cookstoves will lead to decreased deforestation, decreased soil erosion and thus decreased sedimentation in lakes and rivers, and increased infiltration of water in the soil.	N/A

4.2 Water *4.2.2 Erosion and/or Water Body Instability*	1. Could the Project directly or indirectly cause additional erosion and/or water body instability or disrupt the natural pattern of erosion? If 'Yes' or 'Potentially' proceed to question 2. 2. Is the Project's area of influence susceptible to excessive erosion and/or water body instability?	No	The efficient F3PA project cookstoves will lead to decreased deforestation, decreased soil erosion and thus decreased sedimentation in lakes and rivers, and increased infiltration of water in the soil.	N/A
4.3 Environment, ecology and land use *4.3.1 Landscape Modification and Soil*	Does the Project involve the use of land and soil for production of crops or other products?	No	The Project doesn't use land and soil for the production of crops or other products.	N/A
4.3 Environment, ecology and land use *4.3.2 Vulnerability to Natural Disaster*	Will the Project be susceptible to or lead to increased vulnerability to wind, earthquakes, subsidence, landslides, erosion, flooding, drought or other extreme climatic conditions?	No	The Project will not be susceptible to or lead to increased vulnerability to wind, earthquakes, subsidence, landslides, erosion, flooding, drought or other extreme climatic conditions.	N/A
4.3 Environment, ecology and land use *4.3.3 Genetic Resources*	Could the Project be negatively impacted by the use of genetically modified organisms or GMOs (e.g., contamination, collection and/or harvesting, commercial development)?	No	The Project doesn't lead to the use of genetically modified organisms.	N/A
4.3 Environment, ecology and land use *4.3.4 Release of pollutants*	Could the Project potentially result in the release of pollutants to the environment?	No	The Project doesn't result in the release of pollutants to the environment.	N/A
4.3 Environment, ecology and land use *4.3.5 Hazardous and Non-hazardous Waste*	Will the Project involve the manufacture, trade, release, and/ or use of hazardous and non-hazardous chemicals and/or materials?	No	The Project doesn't involve the manufacture, trade, release, and/ or use of hazardous and non-hazardous chemicals and/or materials.	N/A

4.3 Environment, ecology and land use *4.3.6 Pesticides & Fertilisers*	Will the Project involve the application of pesticides and/or fertilisers?	No	The Project doesn't involve the application of pesticides and/or fertilisers.	N/A
4.3 Environment, ecology and land use *4.3.7 Harvesting of Forests*	Will the Project involve the harvesting of forests?	No	The Project doesn't involve the harvesting of forests.	N/A
4.3 Environment, ecology and land use *4.3.8 Food*	Does the Project modify the quantity or nutritional quality of food available such as through crop regime alteration or export or economic incentives?	No	The Project doens't modify the quantity or nutritional quality of food.	N/A
4.3 Environment, ecology and land use *4.3.9 Animal husbandry*	Will the Project involve animal husbandry?	No	The Project doesn't involve animal husbandry.	N/A
4.3 Environment, ecology and land use *4.3.10 High Conservation Value Areas and Critical Habitats*	Does the Project physically affect or alter largely intact or High Conservation Value (HCV) ecosystems, critical habitats, landscapes, key biodiversity areas or sites identified?	No	The introduction and usage of improved cook stoves will not physically affect or alter largely intact or HCV ecosystems, critical landscapes or key biodiversity areas or sites in the region.	N/A
4.3 Environment, ecology and land use *4.3.11 Endangered Species*	1. Are there any endangered species identified as potentially being present within the Project boundary (including those that may route through the area)?	No	The project does not have a negative impact on biodiversity and endangered species. No construction is foreseen, and no additional resource extraction will happen.	N/A
4.3 Environment, ecology and land use *4.3.11 Endangered Species*	2. Does the Project potentially impact other areas where endangered species may be present through transboundary affects?	No	No transboundary effects from the project can be expected since the focus is on the dissemination of the F3PA efficient cook	N/A

			stoves on household level and does not influence any resources which could have transboundary effects.	

SECTION E. Local stakeholder consultation

E.1. Solicitation of comments from stakeholders

>> (Describe how stakeholder consultation was conducted in accordance with GS4GG Stakeholder Procedure Requirements and Guidelines.)

A local consultation meeting has been conducted in Ouagadougou on Thursday, April 13th of 2017. Several means were used to invite people.

Individuals, who couldn't attend the local stakeholder consultation meeting, were able to comment the non-technical summary of the program via mail, email or telephone. The stakeholders who didn't reply to the invitation were reminded on the meeting via telephone.

E.2. Summary of comments received

>> (Provide a summary of key comments received during the consultation process.)

The table below provides an overview of the comments received during the consultation process.

Stakeholder comment	Was comment taken into account (Yes/ No)?	Explanation (Why? How?)
SAWADOGO Z. Nicolas *Mayor of the municipality of Boussé* How will the Endogenous Monitors (ME) be identified during the implementation of the project? What strategy will be used to choose and train these MEs? How will Tiipaalga ensure the integration of all stakeholders in the villages?	Yes	When tiipaalga Association starts with the dissemination of the F3PA efficient cookstove in a village, tiipaalga Association will first contact the Village Development Committee (CVD) and the resource persons in each intervention zone. Then, by mutual agreement, a general assembly is scheduled within the village during which Tiipaalga technicians explain the entire process in an interactive way. Ultimately the people decide to accept or decline the program. On acceptance a date is set, by mutual agreement, for a specific info session during which only women are invited (in the F3PA-project case). In this session, the Tiipaalga technicians propose the women to select, among themselves, certain women as Endogenous Monitors, who continue the role of Tiipaalga technicians in the districts.
SAWADOGO Z. Nicolas *Mayor of the municipality of Boussé* Why is there no tree planting activity planned in the project that would support the impact of the reduction and consumption of firewood in the municipality?	No	This activity has not been taken into account of the project due to limited resources. Nevertheless it has been explained that the primary activities of tiipaalga Association are Assisted Natural Regeneration (RNA) through the defence (MED) and practice of agroecology. In addition to these activities concerning the restoration of the vegetal cover Tiipaalga has made a commitment to implement actions to reduce the consumption of wood through three-stone efficient cook stoves, like this project "F3PA cookstoves in the Province of Kourweogo".
SAWADOGO Z. Nicolas *Mayor of the municipality of Boussé* Why not distribute to more than 9,000 households or even 10,000 households?	Yes	During the LSC was mentioned that the figure of 9,000 households was not a maximum number beyond which the Association tiipaalga could no longer build stoves. This is a minimum number to be reached by the VPA to qualify for carbon credits. In practice, this number could even exceed 10'000 households, because as long as the women wish, new F3PAs can be build. This growth could be realized by working with a strategy based on MEs.
SAWADOGO Z. Nicolas *Mayor of the municipality of Boussé* How will the reduction of greenhouse gas emissions be	Yes	There is regulated carbon market with the Clean Development Mechanism of UNFCCC, where the price is set through the market. There is also the Voluntary Carbon Market where the price is set 'Over-the-Counter', which means that the price is negotiated per transaction between the seller and the buyer. The Association tiipaalga chose to engage in the voluntary

transformed into carbon credit and the carbon credit into cash?		market, hence the choice of registering its PoA and VPAs at the Gold Standard. Voluntary emission reductions are issued after verification of a yearly monitoring report. Based on parameters determined during a survey the saved wood can be determined, which allows to calculate the emission reductions. After issuance the credits will be made available on the carbon account of the Tiipaalga Association. Tiipaalga can than valorise these credits by selling them to buyers like companies that want to offset their CO2 emissions.
SAWADOGO Z. Nicolas *Mayor of the municipality of Boussé* Why not install F3PAs in kitchens in order to avoid renewing F3PAs every 5 years?	No	Stove users are free to build their F3PA inside their homes, as well as outdoors. The Association tiipaalga does not impose anything concerning the location of the F3PA efficient cookstove. The stove can independently of the location easily achieve a lifetime of 5 years if proper maintenance is provided.
ZOETIYENGA Colette *General Secretariat of the Ministry of Environment, Green Economy and Climate Change (SG/MEEVCC)* Is it foreseen that stove users will get part of the carbon revenues, like a benefit sharing of 30% for the stove users and the remaining 70% for the tiipaalga Association.	No	Regarding the possibility of paying women who have built an F3PA, Tiipaalga has been very clear on this issue. It will not be possible to give money to every woman who has built an F3PA, because carbon credit funds are used to deploy the project in the field and monitor its implementation. However, micro-credit actions for women's income-generating activities will be taken into account to support the women's spare time that will be created with the use of F3PAs. Another NGO representative explained to the participants the stakes of the carbon projects in terms of costs and available resources and the fact that the costs of selling carbon credits hardly cover the implementation costs of the project.
DOMO Sanata Director of Provencial Directorate of Environment, Green Economy and Climate Change of Kourwéogo (DPEEVCC/KWG) The Director emphasized the positive effects of the project and its long-term impacts on women's health, on ecology, on the environment in general. Therefore, he congratulates Tiipaalga for the initiative to integrate the global carbon market through this project, because in his experience very few organisations and projects have been able to integrate that market in Africa and especially in Burkina Faso. Finally, he recommends Tiipaalga to establish a working partnership with the Forest Investment Program (PIF) to reach a higher potential for carbon financing.	Yes	Possible partnership with the Forest Investment Program (PIF) will be investigated in order to expand further the carbon project.
TAPSOBA Jonas *Secretary of the Association of Seed bearers of the municipality of Toeghin* Is there a possibility to use other materials that are more resistant than clay?	No	There are several types of improved stoves, but the tiipaalga Association has kept the current model because all necessary materials for its construction are found for free on site in the villages. Tiipaalga Association thinks that if women have to buy improved cook stoves, it will be very difficult for them to do so, because they have many other vital priorities such as health, nutrition and schooling of children.

KABORE Colette *Climate Change cell* *Permanent Secretariat of the National Council for Sustainable Development (SP/CNDD)* Is it possible to take also into account the energy concerns of the dolo-makers and restaurant owners in the project? In addition how will the project be monitored considering the large numbers of households involved in the project?	No	The PoA of the Tiipaalga Association takes only into account domestic cook stoves, strictly used for household cooking. The stoves used for commercial activities like dolo-preparation are can't be included in the Tiipaalga PoA. Nevertheless another PoA has been established by SNV exclusively reserved for these types of activities. Monitoring and evaluation is a very important element of the set-up of a carbon project. The Association tiipaalga uses the AKVO Flow tool to collect mobile data on the field. Different persons of Tiipaalga manage the monitoring and evaluation component from data collection surveys and data treatment to monitoring the stove's quality in the field.
TANOH Tchiné Séverin *Researcher at International Institute of Water and Environment (2IE)* This project is built on experience of the 10 VPAs that are being implemented by Tiipaalga in Bam province. However, it is not clear that the socio-cultural factors of Kourwéogo are the same as those of the province of Bam. So, it is suggested to compare data collected in Kourwéogo with Bam. This could ensure that the project will be conducted in the same enabling environment as in the province of Bam.	Yes	Data will indeed be compared between the two projects in order to analyze similarities and differences between the two regions and possibly adapt the approach to local conditions.
SAWADROGO Idrisa *Mayor of the municipality of Toeghin* The mayor believes that the Tiipaalga Association does not communicate enough about its actions. He congratulated the actions proposed in the project and proposed to have a more extensive communication with the local authorities.	Yes	The tiipaalga Association has the intention to communicate more with the local authorities. Nevertheless it must be said that the implementation schedule is often very tight, which means that the technicians do not always have enough time to wait for the administrative procedure before starting certain activities.
SOULI O. Antoine *1st deputy of the mayor of the municipality of Sourgoubila* Will each household receive 1 stove or every woman in a household will have her own stove(s)?	Yes	The project design foresees that each woman has at least 2 F3PA efficient cookstoves. If a wife within a household does not have an F3PA even if all the other wives of the household have their own F3PA efficient cookstove, the household cannot be counted among the 9,000 households of the project because this household does not exclusively use F3PA for all cooking needs.
TAPSOBA Alexis *Provencial Directorate of Agriculture and Hydraulic*	No	This activity has not been taken into account of the project due to limited resources. Nevertheless it has been explained that the primary activities of tiipaalga Association are Assisted Natural Regeneration (RNA) through the defence (MED) and

Development (DPAAH) of Kourwéogo Is it not necessary to add to the wood saving activities (in the F3PA project) some restoration activities? Is it not necessary to add to the project some tree planting activities as well?		practice of agroecology. In addition to these activities concerning the restoration of the vegetal cover Tiipaalga has made a commitment to implement actions to reduce the consumption of wood through three-stone efficient cook stoves, like this project "F3PA cookstoves in the Province of Kourweogo".
PALM Kalifa *Researcher at the Institute of Research in Applied Sciences and Technologies / National Center for Scientific and Technological Research (IRSAT/CMRST)* It should be noted that a ton of CO2 cannot match a ton of wood as the presenters seemed to say.	Yes	The emission reduction calculations will take into account the conversion of 1 ton of saved biomass wood into carbon and thus CO2 equivalents.

E.3. Report on consideration of comments received

>> (Describe how the comments have been addressed by providing a clarification to the stakeholder or by altering the design of the project or by proposing to monitor any anticipated negative impacts etc.)

The clarifications to the stakeholders is provided in the table above. All the questions raised by the stakeholders during the consultation have been discussed with the participants and project developers and answered. As no major negative comment has been suggested, the sustainable development indicators will not be revisited.

The stakeholder's comments did not lead to major changes in the project design; this is probably due to the fact that the project has been designed in partnership with the local communities from the beginning.

As part of the Stakeholder Feedback Round the LSC report along with the PDD has been sent to all participants and invitees by email or by letter. To enable the stakeholders a better understanding, the meeting minutes and the presentation showed during the local stakeholder consultation has been provided in French. Additionally, the Local Stakeholder Consultation report along with PDD will be made available at office of tiipaalga Association in Ouagadougou, Burkina Faso. It will be ensured that stakeholders have at least two months to provide their comments. The Stakeholder Feedback Round will end on May, 6, 2019.

Appendix 1. Contact information of project participants

Organization name	Association tiipaalga
Registration number with relevant authority	2006- 206/MATD/ SG/ DGLPAP/ DOASOC du 2 Mai 2006
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	Founder
Salutation	Mrs
Last name	Kaguembèga-Müller
Middle name	Margrith
First name	Franziska and President
Department	
Mobile	+226 76 47 89 13
Direct fax	
Direct tel.	
Personal e-mail	franziska.kaguembega@tiipaalga.org

Organization name	CO2logic NV/SA
Registration number with relevant authority	BE 0886147359
Street/P.O. Box	Rue d'Accolay 15-17
Building	
City	Brussels
State/Region	
Postcode	1000
Country	Belgium
Telephone	+32 497053136
Fax	
E-mail	info@co2logic.com
Website	www.co2logic.com
Contact person	Herman Noppen
Title	Project Director
Salutation	Mr.
Last name	Noppen
Middle name	

First name	Herman
Department	
Mobile	+32 497053136
Direct fax	
Direct tel.	
Personal e-mail	herman@co2logic.com

Appendix 2. Summary of post registration design changes