

#### **TEMPLATE**

# **KEY PROJECT INFORMATION & VPA DESIGN DOCUMENT (PDD)**

PUBLICATION DATE 04.05.2022

VERSION v. 2.0

RELATED SUPPORT - Programme of Activity requirements

This document contains the following Sections

**Key Project Information** 

<u>Section A</u> – Description of project

<u>Section B</u> - Application of approved Gold Standard Methodology (ies) and/or demonstration of SDG Contributions

- 0 Duration and crediting period
- <u>0</u> Summary of Safeguarding Principles and Gender Sensitive Assessment
- <u>0</u> Summary of Local stakeholder consultation
- 0 Eligibility and inclusion criteria for VPAs inclusion

<u>Appendix 1</u> – Safeguarding Principles Assessment (mandatory)

<u>0</u> - Contact information of VPA Implementer (mandatory)

Appendix 3- LUF Additional Information

<u>0</u> - Summary of Approved Design Changes (VPA specific)

#### **KEY PROJECT INFORMATION**

Type of VPA	<ul><li>☑ Real case VPA</li><li>☐ Regular VPA</li></ul>
Scale of VPA  Note that a VPA can be of one scale.  Please select applicable scale accordingly.	□Microscale  ⊠Small scale  □Large scale
Title of corresponding real case VPA (if applicable)	N/A
GS ID of real case VPA (if applicable)	GS 12138
GS ID of VPA	GS 12138
Title of VPA	GS12118 Protect the Environment, Use Clean Cookstoves VPA-1
Time of First Submission Date	TBC
Date of Design Certification	TBC
Version number of the VPA-DD	1.0
Completion date of version	18/03/2023
Coordinating/managing entity	OffgridSun
VPA Implementer (s)	Inuka Youth Development Organization

	D1 / A
Project Participants and any communities	N/A
involved	
liivoived	
Host Country (ies)	United Republic of Tanzania
GS ID and Title of applicable Design	N/A
Certified VPA	,
GS ID and Title of applicable	N/A
	N/A
Performance Certified VPA	
Activity Requirements applied	□ Community Services Activities
	☐ Renewable Energy Activities
	$\square$ Land Use and Forestry Activities/Risks &
	Capacities
	□ N/A
Other Requirements applied	
Methodology (ies) applied and version	Reduced Emissions from Cooking and
number	Heating: TPDDTEC V 4.0
Product Requirements applied	□ GHG Emissions Reduction & Sequestration
	□ Renewable Energy Label
	□ N/A
VPA Cycle:	⊠ Regular
	□ Retroactive

**Table 1 – Estimated Sustainable Development Contributions** 

Sustainable	SDG Impact	<b>Estimated Annual</b>	Units or	
<b>Development Goals</b>	(defined in B.6.)	Average	Products	
Targeted				
13 Climate Action	Amount of GHG emissions	25 462	+CO20	
(mandatory)	avoided or sequestrated.	35,463	tCO2e	
15 Life on Land	Total non-renewable wood	10 572	ton	
15 Life Off Laffu	fuel saved.	18,573	ton	
	Percentage of households			
3 Good Health and	that observed reduction in	95%	Dorcontago	
Well-being	PM2.5and CO concentration	93%	Percentage	
	reductions			

#### **TEMPLATE- VPA Design Document**

	Average time saving		
5 Gender Equality	associated with cooking	0.5	Hours
	time and fuel collection		
8 Decent Work and	Total number of jobs	60	Number
Economic Growth	Total Hamber of Jobs	00	Number
1 No Poverty	Average household savings	504	USD/year
I NO FOVERLY	in expenditure on cooking	JU <del>1</del>	USD/ year

#### SECTION A. DESCRIPTION OF PROJECT

#### A.1. Purpose and general description of project

OffgridSun Srl and Inuka Youth Development Organization will distribute improved cookstoves (ICS) to reduce the use of fuelwood or charcoal in rural Tanzania. The project aims at reaching a total number of 10,000 households living in Tanga Region, Handeni District, within 10 villages located in the wards Kwachaga, Mazingara and Mkata. The villages are Kwachaga, Tuliani, Mkomba, Mpalagwe, Mazingara, Amani, Suwa, West Mkata, East Mkata na Manga. By the implementation of the project, traditional stoves will be replaced with the project stoves that have higher efficiency and the fuelwood consumption and related carbon emissions will be lessened.

The national penetration of ICS in Tanzania is only 5% that is even lower in rural regions of the country. Lack of agents in rural remote areas, long distances and poor road conditions, lack of finance for the producers who are small scale artisans are among the reasons for the low penetration. In order to overcome those challenges, the proposed project will distribute/ install cookstoves in rural Tanzania. The cookstoves will be sold at a subsidized affordable price to facilitate the access of the poorest families. Sensitization campaigns on clean cooking, tree planting and environmental conservation will be also provided to the targeted communities. Local youth and women will be trained to become local agents to sell the cookstoves within the villages. The income will be used to finance the project management and to purchase more project stoves to scale up the intervention.

#### A.1.1. Eligibility of the VPA under approved PoA

Table 2 Eligibility for VPA inclusion as per PoA requirements

No. Eligibility Criterion	Description/	Description of the VPA
	Required condition	in relation to the
		criteria,
		Means of Verification
		and Supporting
		evidence

			for inclusion
1	Geographic boundary	Each VPA shall be located within the boundaries of the PoA.	The VPA is located in Tanga region of United Republic of Tanzania
2	Double Counting	A unique numbering system will be adopted for each VPA. All ICS installed shall receive a unique number identifying to which VPA it belongs.	·
3	Exclusiveness of VPA	VPA shall not be previously: 1. Registered as a project activity with other offset schemes 2. Included as a VPA in any other registered PoA, or deregistered as a VPA of a PoA.	Confirmation by CME
4	Specification of Technology/ Measure	VPAs under the PoA shall distribute efficient ICS using firewood and charcoal. The capacity per unit is limited by 150kW as per the applied TPDDTEC methodology.	The type of stoves replaced and ICS implemented is described in Section B.4 below. Baseline and project Kitchen Performance Tests will be carried out.
5	Start date	The start date of any proposed VPA will be on or after the start date of PoA.	The date on which first ICS distributed will be recorded. Sales invoice or end-user agreement will be provided as a proof.
6	Applicability of methodologies	VPAs shall apply TPDDTEC (v 4.0).	The applicability of the methodology is

			demonstrated in Section B.2
7	Additionality	The additionality PoA is demonstrated as per GS4GG Community services activity requirements, Version 1.2 and GHG Emissions Reduction & Sequestration Product Requirements, Version 1.2.	The VPA is automatically additional. Please see Section B.5.
8	Public funding	Affirmation that there is no diversion of Official Development Assistance (ODA).	ODA declaration is provided.
9	Target group& Distribution Mechanism	Households will be the target group for VPAs.  ICSs will be installed by local VPA Implementers on a non-commercial basis.	User registration.
10	Sampling requirements	All requirements as mentioned in TPDDEC, version 4.0 or the Standard: Sampling and surveys for CDM project activities and programme of activities are applicable to VPAs.	Specifications of the sampling methods is defined in Section B.7.2. VPA Implementers will follow the management system described at the PoA-DD.
11	Compliance of the technology implemented	The capacity of each ICS will comply with the requirements of TPDDTEC methodology.	The VPA applies TPDDTEC (v4.0) (Section B.2)

12	SDG Outcomes	Each VPA shall conduct	Please see SDG outcomes
		SDG outcomes	assessment in Section B.6
		assessment and comply	
		with the SDG targets	
		identified in the PoA-DD.	
13	Stakeholder Consultation	A local stakeholders'	Local Stakeholder
		consultation meeting will	Consultation Meeting is
		be organized for Real	conducted for the first
		Case VPA.	VPA on 20/01/2023
14	VER Ownership	End users receiving ICSs	End-user contract
		under the specific VPA	between CME and the
		contractually cede their	user.
		rights to claim and own	
		emission reductions to the	
		CME of the PoA.	

### A.1.2. Legal ownership of products generated by the VPA and legal rights to alter use of resources required to service the project

The Verified Carbon Reductions (VER) generated by each stove belongs to the individual stove user. The purchase agreement entered between the stove user and the OffgridSun includes terms transferring the ownership of VERs from user to the Coordinating Managing Entity (CME). By the purchase of the stove, the user accepts to waive the carbon rights.

#### A.2. Location of VPA

> Tanga Region, Handeni District, within 10 villages located in the wards Kwachaga, Mazingara and Mkata. The villages are Kwachaga, Tuliani, Mkomba, Mpalagwe, Mazingara, Amani, Suwa, West Mkata, East Mkata and Manga.

#### A.3. Technologies and/or measures

Jiko Makini stove is made of metal with a ceramic liner inside. There are two handles on two sides and a metal top cover for the pot rest. A layer of sawdust and pumice mixture between the ceramic liner and metal outer surface provides high thermal efficiency. There is firewood intake door in the front and air intake at the back of the stove. The stove can be used by both firewood and charcoal. Thermal efficiencies are given for both fuel types in table below.

#### Stove specification

Technical Specifications – Jiko Makini Stove			
Thermal	efficiency	30.6 %	
(firewood)			
Thermal	efficiency	38.5%	
(charcoal)			
Portability		Portable	
Design		Single Pot	
Stove Life		3 years	
Size (stove)		Width: 35 cm	
		Height: 32 cm	

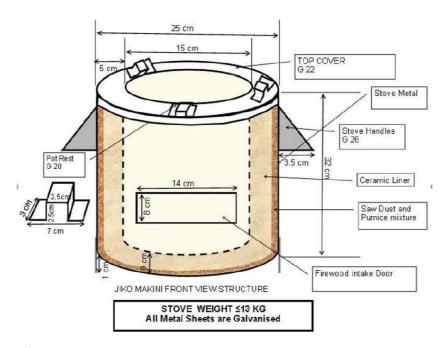


Figure 1 Jiko Makini Stove

The manufacturer is the Tanzanian company Envotec Services Limited, legally registered in Tanzania, which has experience in the production of cookstoves.

#### A.4. Scale of the VPA

>> The project is small scale based on project scale defined under GS4GG Product Requirements. The aggregate energy savings of the project activity does not exceed the limit of small scale, equivalent of 180 GWh thermal per year in fuel input. Each ICS installed saves 0.011 GWh and 10,000 stoves are planned to be distributed; which is 110 GWh thermal energy savings per year. Thermal efficiency savings per stove is calculated as follows for dry and wet season separately:

$$TE_{savings,i,j} = B_{old,i,j} \times \left(1 - \frac{n_{old}}{n_{new}}\right) \times NCV_{biomass} \times f_{GWh}$$

#### A.5. Funding sources of VPA

The project will be implemented by the producer organization and Project Developer, OffgridSun; in cooperation with the local partner Inuka Youth Development Organization. The funding for the production of stoves will be provided by OffgridSun that will be legal owner of the VERs. No public funding or Official Development Assistance is involved.

## SECTION B. APPLICATION OF APPROVED GOLD STANDARD METHODOLOGY (IES) AND/OR DEMONSTRATION OF SDG CONTRIBUTIONS

#### **B.1.** Reference of approved methodology (ies)

GS Methodology: Technologies and Practices to Displace Decentralized Thermal Energy Consumption" (TPDDTEC) Version 4.0 (07/10/2021)

#### **B.2.** Applicability of methodology (ies)

TPDDTEC (V4.0) methodology defines the following applicability criteria:

2.2.1. Applicability Criteria	Justification
a. Project shall choose a technology	The VPAs will include Jiko Makini stove
design that has predictable performance	that hs 30.6% and 38.5% thermal
in that it is proven to be efficient and	efficiency for fuelwood and charcoal
durable under field conditions; for	respectively.
cookstoves, the rated thermal efficiency	
shall be at least 20%.	
b. The technology shall have continuous	The capacity of each stove will be below
useful energy output of less than 150kW	the 150kW limit. Please see the
per unit.	calculation below.
c. The project activity is implemented by	Individual households and institutions
a project developer and can include	are included collectively through VPAs
additional project participants. The	and no household act as project
individual households and institutions	participants.
may be represented collectively by	
community organizations, etc., but do	
not individually act as project	
participants.	
d. The project developer must design	The project cookstoves are sold with a
incentive mechanism(s), which should be	discounted price to promote the adoption
effective as fast as possible, for the	of clean cooking technologies. The users
elimination of inefficient baseline stoves	can cook with either firewood or
that are replaced by the project cooking	charcoal. Continued use of three stone
devices and describe the incentive	fire will be monitored during

mechanism(s) in the PDD/VPA-DD at the annual/biennial surveys and the time of validation. emissions related with the use will be accounted in the overall emission reduction amount. VPA Implementer will organize campaigns to make end-user aware about the benefits of continuous use of project technology and key product attributes. Each user will be informed about the e. To avoid double counting or double transfer of carbon rights and a carbon claiming, the project developer must: 1) clearly communicate its ownership credit waiver agreement will be signed between CME and the user. rights and intention of claiming the emission reductions resulting from the How the project generates carbon credits project activity to the following parties and what kind of project activities will be by contract or clear written assertions in financed by the revenue from carbon the transaction paperwork: all other credits are discussed in detail during the project participants; project technology Stakeholder Consultation Meeting as manufacturers; and retailers of the well. project technology or the renewable fuel The users who have already an operating in use; and; ICS will not be included in the 2) inform and notify the end users that programme. they cannot claim emission reductions from the project, and; 3) exclude from the project activity, cooking devices included in any other voluntary market or CDM project activity/PoA, and strive not to displace the cooking devices of another CDM or voluntary project/PoA. f. Project activities making use of solid Not Applicable fossil fuel in the project scenario or other improved fossil fuel cookstoves meeting

certain conditions may only claim

emission reductions for energy efficiency

improvement aspect and shall assume	
·	
the same baseline and project fuel for	
emission reduction calculations.	
g. Project activities making use of a new	Not Applicable
solid biomass feedstock in the project	
situation (e.g. switch to green charcoal	
or renewable biomass briquettes) must	
comply with relevant specific	
requirements for biomass related project	
activities, as defined in the latest version	
of the Community Services Activity	
Requirements. The specific requirements	
apply to both plantations established for	
the project activity and/or existing	
plantations that will supply biomass	
feedstock.	
h. Adequate evidence is supplied to	Efficient cookstoves distributed by the
demonstrate that indoor air pollution	Project lead to reduced indoor emissions
(IAP) levels are not worsened compared	and personal exposure to carbon
to the baseline, and greenhouse gases	monoxide (CO) and particles matter
emitted by the project fuel/stove	(PM2.5).
combination are estimated with	This will be demonstrated through
adequate precision.	monitoring surveys by interviewing with
	users.
2.3. Safeguards	Justification
1. The project shall not undermine or	The VPA complies with countries legal,
conflict with any national, sub-national	environmental, ecological and social
or local regulations or guidance for	regulations of United Republic of
thermal energy supply or fuel supply or	Tanzania.
use. The project shall document the	
national, regional and local regulatory	
framework for provision of thermal	
energy services of the type the project	
	1

2. If the expected technical life of the project technology is shorter that the crediting period, the project developer shall describe measures to ensure that end users are provided replacement technology of comparable or better technology or retrofitting essential parts with performance guarantee. If neither of the prior conditions can be demonstrated, no emission reductions can be claimed for the technology after its technical life has ended.

The project cook stoves has an average of 3 years of technical life.

The Project Proponents will check and replace the cookstoves that are end of their technical life or retrofit essential parts.

If no replacement or repair occurs, those stoves will be deemed as ineligible for emission reductions.

#### Step 1: Estimate the energy consumption in kWh

$$B_{new} = B_{old,i,j} \times \left(\frac{n_{old}}{n_{new}}\right) = 11.3 \frac{\text{kg}}{\text{day}} \times \left(\frac{0.1}{0.306}\right) = 3.69 \frac{\text{kg}}{\text{day}}$$

$$TE = 0.00369 \frac{\text{ton}}{\text{d}} \times 0.0156 \frac{\text{TJ}}{\text{ton}} \times 277,778 \frac{\text{kWh}}{\text{TJ}} = 16 \text{ kWh/d}$$

#### Step 2: Estimate energy output:

Average time spent by gender in Tanzania is shown in the figure below<sup>1</sup> as total hours spent daily that is 2.41hrs. Accounting that all cooking is done with the project stove and by women, the capacity of stove is 16 kWh/2.41h= 6.64 kW.

 $<sup>\</sup>label{lem:hambers} $$ $ h_{ttps://openknowledge.worldbank.org/bitstream/handle/10986/22521/Clean0and0impr000a0landscape0report.pdf?s $$ equence=1&isAllowed=y (Page:154) $$ $$$ 

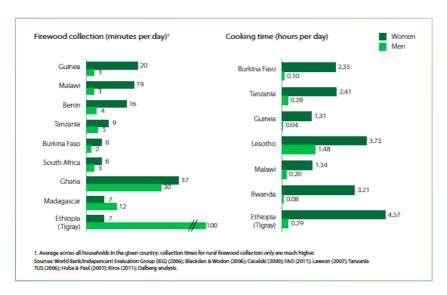


Figure 2 Firewood collection and cooking time by gender

#### Step 3: Estimate the useful thermal energy output:

Assuming the thermal efficiency of the stove is 30.6%; the useful output will be 6.93 kW \*0.306 = 2.03 kW for firewood.

#### **B.3. VPA boundary**

Sour	ce	GHGs	Inclu ded?	Justification/Explanation
		CO <sub>2</sub>	Yes	Major source of emissions
	Delivery of thermal	CH <sub>4</sub>	Yes	Important source of emissions
Baseline scenario	3,	N <sub>2</sub> O	Yes	Can be significant source of emissions for some fuels
SCe	Production of fuel,	CO <sub>2</sub>	No	Neglected for simplification
line	transport of fuel	CH <sub>4</sub>	No	Neglected for simplification
Base		N <sub>2</sub> O	No	Neglected for simplification
Ö		CO <sub>2</sub>	Yes	Major source of emissions
Project scenario	Delivery of thermal energy	CH <sub>4</sub>	Yes	Important source of emissions
Project	- '	N <sub>2</sub> O	Yes	Can be significant source of emissions for some fuels



$CO_2$	No	Neglected for simplification
CH <sub>4</sub>	No	Neglected for simplification
N <sub>2</sub> O	No	Neglected for simplification

#### B.4. Establishment and description of baseline scenario

>> As per the applied methodology, the project proponent must conduct the following baseline studies for each baseline scenario:

- Baseline non-renewable biomass (NRB) assessment, if biomass is one of the baseline fuels
- Baseline survey (BS) of target population characteristics
- Baseline performance field test (BFT) of fuel consumption (e.g. kitchen performance test (KPT) in case of cook stoves.

Findings of the performance field tests will be submitted pre-registration. A project estimation of expected baseline emissions is provided for listing of the project using available sources of information.

<u>Baseline non-renewable biomass (NRB) assessment</u> has been calculated by an independent study carried out as per "CDM Tool 30: calculation of the fraction of non-renewal biomass"; version 4.0. The fNRB value for Tanzania is predicted to as 0.91 and will be used in emission reduction calculations.

#### Baseline survey (BS) of target population characteristics

The baseline survey provides critical information on target population characteristics, baseline technology use, fuel consumption, leakage, and sustainable development indicators.

#### Baseline Survey Representativeness

The baseline survey requires in person interviews with a robust sample of end users without project technologies that are representative of end users targeted in the project activity.

#### Baseline Survey Sample Sizing

The baseline survey should be carried out for each baseline scenario using representative and random sampling, following these guidelines for minimum sample size:

- Group size <300: Minimum sample size 30 or population size, whichever is smaller
- Group size 300 to 1000: Minimum sample size 10% of group size
- Group size > 1000: Minimum sample size 100

146 households were interviewed during the survey.

#### Data to be collected

The data collected is specific to the characteristics of each baseline scenario and should be tailored accordingly. Information on the following needs to be gathered:

- 1. User follow up
- a. Address or location
- b. Mobile telephone number and/or landline telephone number (when possible)
- 2. End user characteristics
- a. Number of people served by baseline technology
- b. Typical baseline technology usage patterns and tasks (commercial, institutional, domestic, etc.)
- 3. Baseline technology and fuels
- a. Types of baseline technologies used and estimated frequency
- b. Types of fuels used and estimated quantities
- c. Seasonal variations in baseline technology and fuel use
- d. Sources of fuels; (purchased or hand-collected, etc) and prices paid or effort made (e.g. walking distances, persons collecting, opportunity cost)

The survey included questions about basic household characteristics including the number of people living in the household, source of income, purpose of cooking, the place of cooking, stove and fuel use before the project stove, and season variations of stove and fuel use patterns. Contact details of the participants are also recorded.

#### Results:

The data collection for the baseline survey of the project "Tunza Mazingira tumia jiko banifu" has been performed from the 13rd to the 17th of January 2023 by Inuka and OffgridSun staff.

A total of 10 villages, dislocated in 3 wards, have been included in the data collection. The picture below shows the targeted project intervention area with the three wards of Mkata, Mazingara and KwaChaga presented.

#### 38.000 38.500 0.000 TANGA REGION MKATA, MAZINGARA AND KWACHAGA WARDS 5.000 4.000 4.000 8.000 8.000 0 25 50 75 100125 km 36.000 40.000 32,000 37.000 38.000 40.000 .000 HANDENI DISTRICT -5.000 -5,000 -6.000 25 50 75 100 km 20 60 70 km -6.000 37.000 38.000 39.000 40.000 37,750 38,000 38.250 38.500

#### LOCATION MAP FOR THE PROJECT INTERVENTION AREA

Figure 3 Project Area

Here below a table summarizing the name of the targeted wards and villages and the number of interviews which have been collected in region.

Table 3 Sample Size		Гab	le	3	Sai	m	ple	Size
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WARD NAME	VILLAGE NAME	NUMBER	OF
		INTERVIEWS	
Mkata	Mkata East	17	
	Mkata west	19	
	Manga	13	

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Mazingara	Mazingara	19
	Amani	10
	Suwa	11
KwaChaga	Kwachaga Tuliani	17
	Kwachaga Komkole	12
	Mpalagwe	14
	Mkomba	15
TOTAL		146

All the respondents were female and primary cook in the family. The main source of income is farming and live livestock with a high percentage (94%). All the households cook for the household and only 10% said they do it for commercial purposes. The average family size is 7.15 persons and average of 5-6 children in each house.













Figure 4 Baseline Survey

Most of the families interviewed used the three stone fire as primary stove to cooking dry season (99.3%) and in rainy season (93.2%). 23% of the respondents were also using improved charcoal cookstoves as secondary stoves. Two types have been identified; one made of mud and another made of metal. (Figure X below). The use is limited to rainy season when no firewood could be collected, and cooking is done inside.





Figure 5 Charcoal stove found to be used in the baseline.

Improved clay charcoal stoves or Morogoro Stoves were introduced by Morogoro Fuel Wood Stove Project in 1985. The stove reduced charcoal consumption by 45% but the setback of stove was its durability. Most last a few months before breaking. Metal charcoal stoves or Dodoma Stoves were sold in Dodoma, Tanga, Arusha and Dar es Salaam regions. Being rather bulky and

heavy, the stoves have a high cost and production complications. The thermal efficiency is estimated to be  $36\%^2$ .

96.6% of the households use firewood for cooking in dry season while its share drops to 79.5% in rainy season. The share of both firewood and charcoal users increases from 2.7% in dry season to 15.1% in rainy season. The only charcoal users remain as low as 5.5% in rainy season while it is 0.7% in dry season.

80% of the users collect firewood in dry season when it is abundant while this drops to 65% in rainy season. Still 27% of the respondents said that they are not able to buy or collect fuel for their cooking needs.

#### Baseline performance field test (BFT) of fuel consumption

As per the methodology, the baseline Kitchen Performance Test (KPT) should include a sample of end-users without project technologies that are representative of the end users targeted in the project activity. The baseline survey and baseline KPT can be conducted concurrently with the same end users. Any sampling methods can be used.

In cases of paired and independent sampling, there are two valid options for the statistical analysis:

- 90/30 rule: When the sample size is large enough to satisfy the 90/30 rule, i.e.
  the endpoints of the 90% confidence interval lie within +/- 30% of the
  estimated mean, overall emission reductions can be calculated on the basis of
  the estimated MEAN annual emission reduction per unit or MEAN fuel annual
  savings per unit.
- 90% confidence rule (Lower bound of the one-sided 90% confidence interval).
   When the result obtained does not satisfy 90/30 precision, the emission or fuel saving result is not the mean (or average) test result, but a lower value, i.e. the LOWER BOUND of the one-sided 90% confidence interval.

 $<sup>^2\</sup> https://www.compete-bioafrica.net/events/events2/hamburg/Session\%202/S2-5-COMPETE-REImpact-Hamburg-Sawe-090630.pdf$ 

Paired sampling for KPT – sampling the same users before and after beginning use of a new cookstove – will be performed. Among the over 100 end users in the baseline survey, 30 households with similar socioeconomic and demographic characteristics with targeted population will be selected to perform baseline KPTs. The households did not use the project stove prior to the tests. Each will be provided a stove afterwards.

#### **B.5.** Demonstration of additionality

Specify the methodology, activity requirement or product requirement that establishes deemed additionality for the proposed project (including the version number and the specific paragraph, if applicable).

As per GS4GG Community services activity requirements, Version 1.2, Para 4.1.9: Projects that meet any of the following criteria are considered as deemed additional and therefore are not required to prove Financial Additionality at the time of Design Certification:

- (a) Positive list (Annex B of this document)
- (b) Projects located in LDC, SIDS, LLDC
- (c) Microscale projects

Describe how the proposed VPA meets the criteria for deemed additionality.

The proposed VPA is located in Tanzania; that fall under the category of LDC.

The project also complies with the requirement 1.1.3 of Annex B: Project activities solely composed of isolated units where the users of the technology/measure are households or communities or institutions and where each unit results in <= 600 MWh (1.8 GWh<sub>th</sub>)of energy savings per year or <=600 tonnes of emission reductions per

year. This will be demonstrated for each
VPA separately.

#### B.5.1. Prior Consideration

The project is applying under regular project cycle and demonstration of prior consideration is not required.

#### B.5.2. Ongoing Financial Need

N/A

#### **B.6.** Sustainable Development Goals (SDG) outcomes

Relevant Target/Indicator for each of the three SDGs

Sustainable Development	Most relevant t SDG Target	SDG Impact
Goals		
Targeted		Indicator (Proposed or SDG Indicator)
13 Climate Action (mandatory)	13.2 Integrate climate change measures into national policies, strategies and planning	Amount of GHG emissions avoided or sequestrated.
15 Life on Land	15.1. By 2020, ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains and drylands, in line with obligations under international agreements	Total non-renewable wood fuel saved.

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	Percentage of households that observed improvement in indoor air pollution
5 Gender Equality	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	Average time saving associated with cooking time and fuel collection
	8.5. By 2030, achieve full and productive cemployment and decent work for all women and men, including for young people and persons with disabilities, and equal pay for work of equal value	Total number of jobs
1 No Poverty	1.1 By 2030, eradicate extreme poverty for all people everywhere, currently measured as people living on less than \$1.25 a day.	Average household savings on cooking.

## B.6.1. Explanation of methodological choices/approaches for estimating the SDG Impact

## >> SDG 13: Take urgent action to combat climate change and its impacts Parameter: Emission reductions achieved by fuelwood savings at household level

As per TPDDTEC (V4.0) methodology, when the baseline fuel and the project fuel are the same and the baseline emission factor and project emission are considered the same, the overall GHG reductions achieved by the project activity in year y are calculated by Method 1 as follows:

$$\mathsf{ER}_{\mathsf{y}} = \sum_{\mathsf{b},\mathsf{p}} \left( \mathsf{N}_{\mathsf{b},\mathsf{p},\mathsf{y}} * \mathsf{U}_{\mathsf{p},\mathsf{y}} * \mathsf{SFS}_{\mathsf{p},\mathsf{b},\mathsf{y}} * \mathsf{NCV}_{\mathsf{b},\mathsf{fuel}} * \left( \mathsf{f}_{\mathsf{NRB},\mathsf{b},\mathsf{y}} * \mathsf{EF}_{\mathsf{b},\mathsf{f},\mathsf{CO2}} + \mathsf{EF}_{\mathsf{b},\mathsf{f},\mathsf{nonCO2}} \right) \right) - \sum_{\mathsf{LE}_{\mathsf{p},\mathsf{y}}} \mathsf{EF}_{\mathsf{b},\mathsf{f},\mathsf{CO2}} + \mathsf{EF}_{\mathsf{b},\mathsf{f},\mathsf{nonCO2}} + \mathsf{EF}_{\mathsf$$

Where;

ER<sub>v</sub> Emission reduction for total project activity in year y (tCO<sub>2</sub>e/yr)

 $\Sigma_{b,p}$  Sum over all relevant baseline b/project p pairs

 $N_{b,p,y}$  Number of project technology-days included in the project database for baseline scenario/ project scenario p pair in year y (days)

 $U_{p,y}$  Cumulative usage rate for technologies in project scenario p in year y (fraction)

SFS<sub>p,b,y</sub> Specific fuel savings for an individual project technology of baseline b/project p pair in year y (mass or volume units/ technology\*day)

 $NCV_{b,fuel}$  Net calorific value of the fuel that is substituted or reduced in baseline b (TJ/mass or volume units)

 $f_{NRB,b,y}$  Fractional non-renewability status of woody biomass fuel during year y (fraction). For biomass, it is the fraction of woody biomass that can be established as non-renewable. This parameter is omitted when f is a fossil fuel.

EF<sub>b.f.CO2</sub> CO<sub>2</sub> emission factor from use of fuel f (tCO<sub>2</sub>/TJ)

 $EF_{b,f,nonCO2}$  Non-CO<sub>2</sub> emission factor arising from use of fuel f, when the baseline fuel f is biomass or charcoal (tCO<sub>2</sub>e/TJ). This parameter is omitted when f is a fossil fuel.

 $\Sigma LE_{p,y}$  Leakage for project scenario p in year y (tCO<sub>2</sub>e/yr)

Number of project devices commissioned  $(N_y)$  will be monitored through database and monitoring surveys. The project-technology days  $(N_{b,p,y})$  will be calculated as multiplying the number of project devices with number of operational days.

Annual usage surveys will be conducted to determine the usage rate of project devices  $(U_{p,y})$ . Sampling will be done for each age group of project population and weighted average will be calculated.

Quantity of fuel consumed in baseline scenario and project scenario will be determined by Kitchen Performance Tests (KPT). Specific fuel savings for a single stove (SFS $_{p,b,y}$ ) will be calculated based on the results. The project scenario assumes that firewood will be used during the dry season and a mixture of firewood and charcoal will be used in wet season.

Fraction of non-renewable biomass ( $f_{NRB,b,y}$ ) is determined as using ex-ante option at the validation stage and will be fixed as 0.91 for the crediting period.

For emission factors for fossil fuels displaced by the project stoves ( $EF_{b,f,CO2}$  and  $EF_{b,f,nonCO2}$ ) and net calorific value of the non-renewable woody biomass ( $NCV_{b,fuel}$ ), default values will be applied; i.e. 112 tCO2/TJ, 8.692tCO2/TJ and 0.0156 TJ/tonne respectively.

#### <u>Leakage (</u>ΣLE<sub>p,y</sub>)

The project proponent should investigate the following potential sources of leakage:

- a. The displaced baseline technologies are reused outside the project boundary in place of lower emitting technology or in a manner suggesting more usage than would have occurred in the absence of the project.
  - The project aims to displace traditional three stones stove that is already widely used in rural Tanzania. It is unlikely that the households using more efficient stoves outside the project boundaries would switch back to the old and inefficient way of cooking.
- b. Members of the population who do not participate in the project, and previously used lower emitting energy sources, instead use the non- renewable biomass or fossil fuels saved under the project activity.
  - 79.1% of the households rely on fuelwood in rural Tanzania as per 2019/2020 Energy Access and Use Situation Survey II Report issued by National Bureau of Statistics and Rural Energy Agency. Only 4% of the population has been reported

to have access to clean cooking services in the country 2020<sup>3</sup>. No possible leakage is foreseen due to this case.

c. The project significantly reduces the NRB fraction within an area where other GHG mitigation project activities account for NRB fraction in their baseline scenario.

Firewood is collected from forest by the majority of rural population. No significant impact is expected in NRB fraction in other areas. On the other hand, forest cover in Tanzania has been constantly dropping during the last 20 years. Due to the increasing demand on fuelwood, Tanzania lost 2.86 Mha of tree cover between 2001 to 2020, equivalent to a 11% decrease in tree cover and 970Mt of  $CO_2e$  emissions since  $2000^4$ .

d. The project population compensates for loss of the space heating effect of inefficient technology by adopting some other form of heating or by retaining some use of inefficient technology.

Because of the nature of traditional baseline stoves in Tanzania – including three stone fires and traditional charcoal stoves – it is not possible to ensure that these are disposed of. 21.1% of the respondents stated they use their cookstoves for space heating in rainy season. Project surveys will account this potential for leakage.

e. By virtue of promotion and marketing of a new technology with high efficiency, the project stimulates substitution with this technology by households who commonly used a technology with relatively lower emissions.

This option is not considered as a potential source of leakage as the majority of targeted households use fuelwood and three stone fire for cooking.

<sup>&</sup>lt;sup>3</sup> https://trackingsdg7.esmap.org/country/united-republic-tanzania

<sup>&</sup>lt;sup>4</sup> Global Forest Watch Web page (https://www.globalforestwatch.org/dashboards/country/TZA/)

## SDG 15. Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss

Parameter: Total non-renewable fuelwood saved

Project database and monitoring survey will be used to calculate total quantity of wood fuel saved by the project compared to baseline scenario.

#### SDG 3. Ensure healthy lives and promote well-being for all at all ages

Parameter: Percentage of households that observed reduction in PM2.5and CO concentration reductions

The beneficiaries of project stoves will be asked to evaluate any improvement in their health conditions compared to baseline situation during the household survey. By reduction of smoke due to the usage of project stoves, respiratory diseases such as itchy eyes or coughing are expected to lessen.

#### SDG 5. Achieve gender equality and empower all women and girls

Parameter: Time saving associated with cooking time and fuel collection

Average time spent by females in Tanzania is 2.41hrs daily. During the household survey, questions about time spent on cooking and fuelwood collection will be asked to women in order to understand whether using project stoves saves time. Percentage of households who reported time savings equal to or more than 0.5 hours will be accounted.

### SDG 8. Promote inclusive and sustainable economic growth, employment and decent work for all

Parameter: Total number of jobs

Number and type of jobs created will be recorded with employment status and duration. Training will be provided to the distributors and promoters on sale of cookstoves. Each distributor will report the sales volume to the project proponents monthly.

#### **SDG 1. Zero Poverty**

Parameter: Average household savings at cooking

Total non-renewable wood fuel saved will be multiplied by the price of 10 kg bag sold in the market. For ex-ante calculations, it is assumed to be USD 2.00/ bag; therefore 0.2 USD per kg.

#### B.6.2. Data and parameters fixed ex ante

#### **SDG13**

Data/parameter	Baseline scenario survey results
Unit	N/A
Description	Report of the results of the baseline scenario survey
Source of data	Baseline Survey Results
Value(s) applied	Please see ER Calculations Excel Sheet
Choice of data or	The survey was undertaken as per the GS guidelines
Measurement methods	(TPDDTEC Survey Questiannaires)
and procedures	
Purpose of data	Calculation of emission reductions
Additional comment	

Data/parameter	Project Technology Description	
Unit	N/A	
Description	The detailed description of the project technology shall include as a minimum:  Manufacturer name, product name (if applicable), technology type, capacity characteristics, continuous useful energy output demonstration, rated thermal efficiency Any performance certifications from National Standards body or certification body recognised by national standards body also shall be provided	
Source of data	Technical Specifications provided by the Manufacturer	
Value(s) applied	Please see Section A.3. above.	

Choice of data or	Manufacturer Specification as per the applied
Measurement methods	methodology
and procedures	
Purpose of data	Calculation of emission reductions
Additional comment	

Data/parameter	Expected technical life of project technology
Unit	years
Description	The expected technical life of an individual project technology shall be defined in the PDD.
Source of data	Technical Specifications provided by the Manufacturer
Value(s) applied	3 years
Choice of data or	Manufacturer Specification as per the applied
Measurement methods	methodology
and procedures	
Purpose of data	Calculation of emission reductions
Additional comment	

Data/parameter	Avoidance of double counting or double claiming among project participants
Unit	N/A
Description	Evidence of avoidance of double counting or double claiming with other parties directly involved with the project or programme.
Source of data	Written assertions with the project developer of the
	ownership rights and intention of selling the emission
	reductions resulting from the project activity directed at
	or signed with all the applicable parties of the following:
	<ul> <li>all other project participants;</li> <li>project technology producers; and</li> <li>retailers of the project technology or the renewable fuel.</li> </ul>

Value(s) applied	N/A
Choice of data or	Memorandum of Understanding will be signed with the
Measurement methods	Project Participants.
and procedures	
Purpose of data	Avoidance of double-counting
Additional comment	

Data/parameter	Avoidance of double counting or double claiming with other mitigation actions
Unit	N/A
Description	Review and analysis of mitigation actions in other voluntary market or UNFCCC/compliance mechanisms
Source of data	Publicly available information from Gold Standard and other voluntary standards, at a minimum Verra and any recognized national or regional standards in the project location, and UNFCCC CDM project & PoA database.
Value(s) applied	N/A
Choice of data or	Official data
Measurement methods	
and procedures	
Purpose of data	Avoidance of double-counting
Additional comment	

Data/parameter	Regulatory framework for provision of thermal energy services
Unit	N/A
Description	Evidence that the project does not undermine or conflict with any national, sub-national or local regulations or guidance for thermal energy supply/devices or fuel supply or use.
Source of data	National, sub-national and local regulations or guidance for provision of thermal energy services/devices of the

	type the project provides in the project boundary, including any tariff requirements.
Value(s) applied	N/A
Choice of data or	Official data
Measurement methods	
and procedures	
Purpose of data	Compliance with national regulatory framework
Additional comment	

Data/parameter	EF <sub>b,f,,CO2</sub>
Unit	tCO2/TJ
Description	CO2 emission factor arising from use of fuels in baseline scenario
Source of data	Technologies and Practices to Displace Decentralized
	Thermal Energy Consumption" version 4.0
Value(s) applied	112
Choice of data or	Default value
Measurement methods	
and procedures	
Purpose of data	Calculation of emission reductions
Additional comment	

Data/parameter	EF <sub>b,f,non-CO2</sub>
Unit	tCO2/TJ
Description	Non-CO2 emission factor arising from use of fuels in baseline scenario
Source of data	Technologies and Practices to Displace Decentralized Thermal Energy Consumption" version 4.0
Value(s) applied	9.46

Choice of data or	Default value
Measurement methods	
and procedures	
Purpose of data	Calculation of emission reductions
Additional comment	

Data/parameter	$NCV_{b,fuel}$
Unit	TJ/tonne
Description	Net calorific value of fuels used in the baseline
Source of data	Technologies and Practices to Displace Decentralized
	Thermal Energy Consumption" version 4.0
Value(s) applied	0.0156
Choice of data or	Default value
Measurement methods	
and procedures	
Purpose of data	Calculation of emission reductions
Additional comment	N/A

#### B.6.3. Ex ante estimation of SDG Impact

**SDG 13:** Take urgent action to combat climate change and its impacts

Parameter: Emission reductions achieved by fuelwood savings at household level

Ex-ante calculation for a project stove by using the parameter values fixed ex-ante and the preliminary values defined for monitored parameters in B.7.1 is demonstrated as follows:

Parameter	Unit	Data Source	Dry Season	Wet Season
$N_{b,p,y}$	Days	Project database	165	182

Parameter	Unit	Data Source	Dry Season	Wet Season
U <sub>p,y</sub>	Fraction	Estimated	0.9	0.9
SFS <sub>p,b,y</sub>	t/hh/da y	Ex-ante estimation for fuelwood Field perfomance test results (KPT)	9.9	11.3
NCV <sub>b,fuel</sub>	TJ/t	Default value for firewood	0.0156	
f <sub>NRB,b,y</sub>	Fraction	NRB Report	0.91	
EF <sub>b,f,CO2</sub>	tCO2e/ TJ	Default value for firewood	112	
EF <sub>b,f,nonCO2</sub>	tCO2e/ TJ	Default value for firewood 9.46		
ΣLE <sub>p,y</sub>	tCO2e	Assumed to be zero as per the methodology 0		
ER	tCO2e	Calculated	1.72	2.22

$$ER_y = \sum_{b,p} (N_{p,y} * U_{p,y} * P_{p,b,y} * NCV_{b,fuel} * (f_{NRB,b,y} * EF_{fuel,CO2} + EF_{fuel,nonCO2}) - \sum_{b,p} (I_{p,y} * I_{p,p} * I$$

Emission reductions achieved per project stove is calculated as **3.94 tCO2**e per year.

**SDG 15.** Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss

Parameter: Total non-renewable fuelwood saved

Amount of firewood saved will be calculated by SFS parameter.

#### SDG 3. Ensure healthy lives and promote well-being for all at all ages

Parameter: Percentage of households that observed reduction in PM2.5and CO concentration reductions

No calculation is applicable, the results of the household survey will be used.

#### SDG 5. Achieve gender equality and empower all women and girls

Parameter: Percentage of households with average time saving associated with cooking time and fuel collection

No calculation is applicable, the results of the household survey will be used.

## SDG 8. Promote inclusive and sustainable economic growth, employment and decent work for all

Parameter: Total number of jobs

Project database and training records will used to predict the number of employment.

#### **SDG 1. Zero Poverty**

Parameter: Average household savings at cooking

Total number of non-renewable fuelwood saved will be multiplied by the average fuelwood price in the market.

One household saves 2,520 kg fuelwood annually on average, multiplied by 0.2 USD/kg, equals 504 USD savings per year.

#### B.6.4. Summary of ex ante estimates of each SDG outcome

**SDG 13** 

Year	Baseline estimate (tCO2e)	Project estimate (tCO2e)	Net benefit (tCO2e)
2024	28.873	9.171	19.701
2025	57.746	18.342	39.403
2026	57.746	18.342	39.403
2027	57.746	18.342	39.403
2028	57.746	18.342	39.403
Total	259,858	82,540	177,313
Total number of crediting years	5 years		
Annual average over the crediting period	51,972	16,508	35,463

#### **SDG 15**

Year	Baseline estimate (tonnes/year)	Project estimate (tonnes/year)	Net benefit (tonnes/year)
2024	15.122	4.803	10.319
2025	30.244	9.606	20.637
2026	30.244	9.606	20.637
2027	30.244	9.606	20.637
2028	30.244	9.606	20.637
Total	136,096	43,229	92,647
Total number of crediting years	5 years		
Annual average over the crediting period	27,219	8,646	18,573

The total number of project stoves operational is assumed to be 9,000 as per the assumed usage rate.

#### SDG<sub>3</sub>

95% of the households are expected to experience less indoor air pollution due to reduced PM2.5and CO concentrations.

#### SDG 5

95% of all users of the project stoves are expected to save at least half an hour from cooking activities.

#### SDG 8

At least 140 jobs will be created for manufacturing, distribution and sale support of the project cookstoves. The project is going to involve 60 distributors (local businesses) who will sell the cookstoves and 60 promoters who will have the role of promoting the cookstoves among the population. All these people will get a commission on the sale of the cookstoves.

About 20 people will be involved for the production of stoves.

#### SDG 1

Each household will save USD 504 per year on average over the crediting period; each household will save 2,520 USD in total during the 5 years of crediting period.

# **B.7.** Monitoring plan

#### Data and parameters to be monitored B.7.1.

### **SDG 13**

Data / Parameter	Avoidance of double counting or double claiming among project technology end users
Unit	NA
Description	Evidence of avoidance of double counting or double claiming with project technology end users
Source of data	Carbon title waiver forms signed by end users
Value(s) applied	NA
Measurement methods	Each user will be asked to sign the carbon title waiver
and procedures	before purchasing the cookstove with a discounted
	price.
Monitoring frequency	Continuously
QA/QC procedures	Cross check using general internet search and search of public records of Gold Standard and other voluntary market and UNFCCC mechanisms
Purpose of data	
Additional comment	N/A

Data / Parameter	Presence of stove stacking
Unit	NA
Description	Descriptive statistics of the presence and usage practices of baseline- and other non-project-technology by project technology end users
Source of data	Usage survey
Value(s) applied	NA
Measurement methods and procedures	By formulating questions and/or collecting evidences to determine the frequency of usage of both the project devices and baseline devices
Monitoring frequency	Annual
QA/QC procedures	The calculation of $SFS_{p,b,y}$ , $SFC_{p,y}$ , $SE_{b,y,CO2}$ and/or $SE_{b,y,non-CO2}$ shall be cross-checked with the observed presence of stove stacking. Ensure any stove stacking is considered so that emission reductions are calculated

	only from real reduction of, or replacement of, baseline fuel use.
Purpose of data	
Additional comment	N/A

Data / Parameter	fNRB
Unit	Percentage
Description	Fractional non-renewability status of woody biomass fuel during year $y$ , in case the baseline fuel is biomass or charcoal
Source of data	fNRB calculation sheet
Value(s) applied	91%
Measurement methods and procedures	Calculated as per "Tool 30: calculation of the fraction of non-renewal biomass"; version 4.0
Monitoring frequency	Fixed by baseline study for a given crediting period
QA/QC procedures	Transparent data analysis and reporting
Purpose of data	Calculation of baseline emissions
Additional comment	N/A

Data / Parameter	P <sub>b,y</sub>
Unit	kg/hh/day
Description	Quantity of fuel that is consumed in baseline scenario b
	during year y
Source of data	Baseline performance field test
Value(s) applied	9.9 kg/hh/day in dry season
	11.3 kg/hh/day in wet season
Measurement methods	Determined by the baseline KPT carried out sampling
and procedures	the households without the project stove from targeted
	population.

	For paired sampling, the sample size of stove users shall
	be chosen for a 90/30 precision (90% confidence
	interval+ and 30% margin of error). In cases where the
	result indicates that 90/30 precision is not achieved, the
	lower limit of 30% confidence interval of the parameter
	value will be chosen as an alternative to repeating the
	survey efforts to achieve the 90/30 precision.
Monitoring frequency	At least once every two years (biennial)

QA/QC procedures	Transparent data analysis and reporting, the latest protocol for Kitchen Performance Test <sup>5</sup> will applied.
Purpose of data	Calculation of emission reductions
Additional comment	The baseline is fixed ex-ante during the crediting period
	as the project is targeting non-industrial application. A
	single baseline fuel consumption parameter is weighted
	to be representative of baseline technologies being
	compared for project crediting.

Data / Parameter	$P_{p,y}$
Unit	kg/hh/day
Description	Quantity of fuel that is consumed in project scenario p during year y
Source of data	Project performance filed tests
Value(s) applied	3.24 kg/hh/day in dry season
	3.51 kg/hh/day in wet season
Measurement methods	The latest protocol for Kitchen Performance Test <sup>6</sup> will be
and procedures	applied. The sample size of stove users shall be chosen for a 90/30 precision (90% confidence interval+ and 30% margin of error). In cases where the result indicates that 90/30 precision is not achieved, the lower limit of 30% confidence interval of the parameter value will be chosen as an alternative to repeating the survey efforts to achieve the 90/30 precision.
Monitoring frequency	At least once every two years (biennial)
QA/QC procedures	Transparent data analysis and reporting

 $<sup>^{5}\</sup> https://www.cleancookingalliance.org/binary-data/DOCUMENT/file/000/000/604-1.pdf$ 

 $<sup>^{6}\</sup> https://www.cleancookingalliance.org/binary-data/DOCUMENT/file/000/000/604-1.pdf$ 

Purpose of data	Calculation of emission reductions
Additional comment	A single project fuel consumption parameter is weighted
	to be representative of the quantity of project
	technologies of each age being credited in a given
	project scenario

# **SDG 13 and SDG 15**

Data / Parameter	SFS <sub>b,p,y</sub>
Unit	ton*day
Description	Specific fuel savings for an individual project technology of baseline b/project p pair in year y
Source of data	Calculated from $P_{b,y}$ , $P_{p,y}$ and other information to obtain the savings in the required units
Value(s) applied	18,573 (assumed)
Measurement methods and procedures	Calculated
Monitoring frequency	Biennially
QA/QC procedures	Cross-check with proportional efficiency of baseline and project technology.
Purpose of data	Calculation of emission reductions
Additional comment	N/A

Data / Parameter	$U_{p,y}$
Unit	Percentage
Description	Weighted average usage rate in project scenario p during year y
Source of data	Usage Survey
Value(s) applied	90% (assumed)
Measurement methods	The proportion of sampled ICS found to be in operation
and procedures	during each monitoring period will be applied to the total

	number of stoves accounted for emission reductions.  Minimum 100 samples will be surveyed. Separate samples of at least 30 shall be taken for each age group of project population and weighted average factor for overall project population shall be used.
Monitoring frequency	Annually
QA/QC procedures	The unique reference number of each stove shall be logged in the monitoring database showing the total number of stoves. Data from the sampling plan will be collected in each monitoring period by trained project staff and applied in the emissions reduction calculations. Internal cross-checks by the project developer or project implementer will be undertaken as QC
Purpose of data	Calculation of emission reductions
Additional comment	N/A

Data / Parameter	$N_{b,p,y}$	
Unit	days	
Description	Number of project technology-days included in the	
	project database for baseline b/project p pair in year y	
Source of data	Calculated from the Project database as the sum of the	
	number of project technology units times the calendar	
	days during the year y that they were present at the	
	end user locations	
Value(s) applied	NA	
Measurement methods	Calculated	
and procedures		
Monitoring frequency	Annually	
QA/QC procedures	Cross check the results of the usage survey with the	
	contents of the project database to confirm whether the	
	project technology units surveyed are present at end	

	user locations as expected, or not. If there is	
	discrepancy, this must be explained or corrected.	
Purpose of data		
Additional comment	N/A	

Data / Parameter	LE <sub>p,y</sub>
Unit	tCO₂e per year
Description	Leakage in project scenario p during year y
Source of data	Baseline and monitoring surveys
Value(s) applied	0
Measurement methods	Measured through baseline surveys and monitoring
and procedures	surveys
Monitoring frequency	Biennially
QA/QC procedures	Transparent data analysis and reporting
Purpose of data	Calculation of leakage emissions
Additional comment	

# SDG 3

Data / Parameter	Percentage of households that observed reduction in PM2.5and CO concentration reductions	
Unit	Percentage	
Description	Percentage of households who perceived reduced indoor air pollution	
Source of data	Household Survey	
Value(s) applied	95%	
Measurement methods and procedures	The households will be asked questions about their perception of reduced smoke during cooking in the project survey	
Monitoring frequency	At least once every two years (biennial)	

QA/QC procedures	The data will be stored at least two years after the end of crediting period or last issuance of carbon credits, whichever is later.
Purpose of data	Demonstration of contribution to SDG 3
Additional comment	

# SDG 5

Data / Parameter	Percentage of households with average time saving associated with cooking time and fuel collection	
Unit	Percentage	
Description	Percentage of households who saved at least 0.5 hrs from cooking activities.	
Source of data	Household Survey	
Value(s) applied	95%	
Measurement methods and procedures	The households will be asked questions about their perception of reduced time spent for cooking in the project survey	
Monitoring frequency	At least once every two years (biennial)	
QA/QC procedures	The data will be stored at least two years after the end of crediting period or last issuance of carbon credits, whichever is later.	
Purpose of data	Demonstration of contribution to SDG 5	
Additional comment		

# SDG 8

Data / Parameter	Total number of jobs	
Unit	Number	
Description	Total number of jobs created by the project	
Source of data	Training records and Project Database	
Value(s) applied	140	

Measurement methods and procedures	The project aims to employ at least 140 people for the production, distribution and sales of stoves.
	Measured by training records and project database will
Monitoring frequency	At least once every two years (biennial)
QA/QC procedures	Each distributor and promoter will receive trainings about the stove sale and will report the sales volume to the project owner each month. The number of active distributors will be cross-checked from project database and the commission records they have earned.
Purpose of data	Demonstration of contribution to SDG 8
Additional comment	At least 50% of the promoters will be women.

# SDG 1

Data / Parameter	Average household savings at cooking	
Unit	USD/yr	
Description	Average household savings at cooking due to the use of less fuelwood.	
Source of data	Project Database	
Value(s) applied	USD 496	
Measurement methods and procedures	Measured by project database on the basis of number of stoves sold.	
	The number of operational stoves will be adjusted as per the usage rate determined during usage survey.	
Monitoring frequency	At least once every two years (biennial)	
QA/QC procedures	The data will be stored at least two years after the end of crediting period or last issuance of carbon credits, whichever is later.	
Purpose of data	Demonstration of contribution to SDG 1	
Additional comment		

# B.7.2. Sampling plan

The sampling frame is the project boundaries, including the houses where the stoves have been installed. The target population are the households in rural Zambia. The end users who received the Project stoves will be recorded to the sales database.

To ensure a random selection of ICS, random number generators shall be applied. Each ICS in the target population is uniquely identifiable by its unique ID number. Each ICS can thus be allocated a Sample Selection Number in each monitoring period, starting at 1 and increasing up to the total number of ICS in the Database for that pre-defined sampling frame. Applying the random number generators, the ICS can then be randomly chosen from the defined population up to the required sample size.

### **Baseline Survey:**

For baseline survey, samples will be randomly selected among households without the project technology. The minimum sample size required by the methodology is 100 for population over 1000.

#### **Kitchen Performance Test:**

The sampling method for  $P_{b,y}$  and  $P_{p,y}$  is Paired Sampling or sampling the same users before and after beginning use of the project stove. Sample size must be sufficient to ensure the confidence/precision level of 90/30 for quantity of fuelwood consumed in baseline and project scenario. The minimum sample size recommended by the methodology is 20 for KPTs.

The baseline KPT will be performed with 30 samples that will be randomly selected among the over 100 end users in baseline survey. The KPT will be performed on houses with similar socioeconomic characteristics as the target population. After baseline KPT is finalized, the households will be provided with the project stoves for the purpose of the test. The project KPT will be run after allowing sufficient time to the subjects to get used to the project stoves.

Subsequent sampling for updating Pp,y will be done by stratified sampling method per stove ages. The registered stoves will be grouped by age and location from the project database. The sample size updating KPT will comply with 90/30 confidence/precision required by the methodology.

### **Usage Rate:**

For  $U_{p,y}$ , stratified random sampling method per stove ages will be followed. Sample size for usage rate is minimum 100 for group sizes larger than 1,000 with at least 30 samples for the stoves of each age being credited. This will require a sample size ranging from 100 to 150 (30 samples for each vintage out of 5 ages) throughout the crediting period.

In order to ensure conservativeness, participants in a usage survey with stoves in the first year of use (age0-1) will have stoves that have been in use on average longer than 0.5 years. For stoves in the second year of use (age1-2), the usage survey will be conducted with stoves that have been in use on average at least 1.5 years, and so on.

### **Monitoring Surveys:**

The monitoring survey investigates changes over time in the project scenario by surveying end-users with project technology on an annual basis. Annual trends in end user characteristics such as stove use, fuel consumption and seasonal variations are predicted during the survey. Whether the baseline technology is still in use will be checked and recorded as well.

### B.7.3. Other elements of monitoring plan

>> The Monitoring Plan applied involves a number of key elements that ensure high-quality, unbiased and reliable information regarding the performance of the project in terms of implementation and outcomes, and for the purposes of calculating Verified Emission Reductions (VERs) on the basis of the amount of non-renewable biomass saved by the ICS in the project activity. The key elements are the following:

- Data collection procedures
- Distribution and Monitoring Database
- Spot Checking of ICS (ongoing)
- Sample Plan for the Monitoring Survey
- Data Quality, Consistency and Duplication Checks
- Monitoring Reporting

Below is the description of the steps in monitoring plan.

- 1. Registration of stove: Project Implementer will collect/receive the necessary information requested in the Registration process from the user. Means of collecting this information may be through a hard copy form or ICTs by project implementer's staff, retailers, end-users or partner organization's staff, or through the use of SMS. Project Implementers' staff shall double check the accuracy of information provided, and request for field staff additional clarifications if needed. Following information will be recorded:
  - Serial Number
  - Contact details of the user
  - Date of installation
  - GPS Coordinates
  - Number of stoves

Project Implementer plans to apply a distribution system which will perform door to door sale rather than selling stoves in shops in order to record GPS coordinates of users. Every beneficiary of an ICS will sign a user agreement (paper and/or electronic version) with Project Developer. A unique serial number will be allocated to each stove and the number is indicated on the user agreement.

- 2. Data logged into database: Project Implementer's trained staff will input the data in the database either manually (if data collected using hard copy form) or this will be automatically input if data was collected using ICTs or SMS. Project Implementer staff shall double check the information included on the database and check for duplications. Any duplicate information shall be investigated and errors corrected or excluded from the database if it is a true duplicate entry.
- 3. **Spot- checking (continuously):** Project Implementer field staff will randomly select households included in the database and visit them to cross-check the information on the database with the factual evidence in the field. Any inconsistencies found (eg. change in the address of a user) will be updated on the database, and in the case ICS are found to be no longer in use, they will be clearly marked as such and excluded from emission reductions calculations.
- 4. **Monitoring:** Project Implementer will follow the requirements as per methodology requirements to collect the necessary information for a monitoring report.

5. **Preparation of monitoring report:** Project Implementers or Project Developer will prepare the final monitoring report to be provided to the verifier VVB for verification of emission reductions.

Project Developer will coordinate and manage Project Implementer and assist them in implementing each element of the monitoring plan.

### **Biennial Project FT Update:**

The PFT update is an extension of the project KPT and done biennially. The test provides a fuel consumption assessment representative of project technologies currently in use and predicts any changes in the project scenario over time as project stove age and new customers are added.

### **Annual Monitoring and Usage Surveys:**

According to the methodology, end users can be surveyed at any time(s) throughout the year with care taken to collect information pertaining to seasonal variations in stove and fuel use patterns. Monitoring surveys can be conducted with usage survey participants that are currently using the project stove. Visual inspection of the premises to see if the project stoves are operational and in use and interview with end user will be done during the survey.

### SECTION C. DURATION AND CREDITING PERIOD

# C.1.1.1 Duration of project

C.1.2. Start date of VPA

The distribution of the stoves is estimated to start on 01/12/2023

C.1.3. Expected operational lifetime of VPA

15 years

# C.1.3.1 Crediting period of project

C.1.4. Start date of crediting period

01/01/2024

C.1.5. Total length of crediting period

5 years renewable twice, 15 years of total crediting period.

# SECTION D. SUMMARY OF SAFEGUARDING PRINCIPLES AND GENDER SENSITIVE ASSESSMENT

# D.1.1.1 Safeguarding Principles that will be monitored

A completed Safeguarding Principles Assessment is in <u>Appendix 1</u>, ongoing monitoring is summarised below.

Principles	Mitigation Measures added to the Monitoring Plan
Principle x.y	

# **D.1.1.2** Assessment that project complies with GS4GG Gender Sensitive requirements

requirements	·	
Question 1 - Explain how the project	The project is gender sensitive and	
reflects the key issues and requirements	considers gender aspect in all phases.	
of Gender Sensitive design and	Women and young girls are responsible	
implementation as outlined in the	for cooking and fetching firewood in rural	
Gender Policy?	Tanzania. The project will lessen time	
	spent for cooking activities for women	
	and girls.	
Question 2 - Explain how the project	National Strategy for Gender	
aligns with existing country policies,	Development- Tanzania (2000) states	
strategies and best practices	poverty and work overload for girls and	
	women at household level continue to be	
	major obstacles which cause drop-out of	
	both girls and boys in school and training	
	institutions. The women also has limited	
	participation to economic activities due	

	to work overload particularly in rural areas <sup>7</sup> .
	Women and girls being the main energy producers in a family; they are burdened with the responsibility to source energy options for the daily needs of their families. The project cookstoves will save time for women to join educational or economic activities.
Question 3 - Is an Expert required for the Gender Safeguarding Principles & Requirements?	Gender issues raised by Gold Standard Safeguarding principles are all addressed under the Safeguarding Principles Assessment in Appendix.1. No risks have been foreseen by the stakeholders and project developer.
Question 4 - Is an Expert required to assist with Gender issues at the Stakeholder Consultation?	As per Stakeholder Consultation Requirements, the project developer invites all stakeholders to give feedback on the design and the implementation of the project. During the consultation process, particular importance is given to the equal participation of women. Gender related organizations who actively work in rural areas have been invited to the meeting.

 $<sup>^7\</sup> https://www.tanzania.go.tz/egov_uploads/documents/Tanzania_National_Strategy_for_Gender_Development_sw.pdf$ 

# SECTION E. SUMMARY OF LOCAL STAKEHOLDER CONSULTATION

The below is a summary of the 2 step GS4GG Consultation for monitoring purposes. Please refer to the separate Stakeholder Consultation Report for a complete report on the initial consultation and stakeholder feedback round.

### **E.1.1.1** Summary of stakeholder mitigation measures

No negative comments were received that require alteration of project activity. Some of the respondents stated that the cookstoves in bigger sizes should be offered to the users. This has already been discussed and will be considered at later stages of implementation.

**E.1.1.2** Final continuous input / grievance mechanism

Method	Include all details of Chosen Method (s) so that they may be understood and, where relevant, used by readers.
Continuous Input / Grievance Expression Process Book (mandatory)	The process books will be available at the INUKA YOUTH DEVELOPMENT ORGANIZATION office
GS Contact (mandatory)	help@goldstandard.org
Other	Tel (Tanzania): +255682701460  Tel (Italy): +39 351 614 2230  projects@offgridsun.com

# SECTION F. Eligibility and inclusion criteria for VPAs inclusion

>>

The below table shall be completed for all VPAs.

The CME shall provide clear description on how eligibility criteria set at real case VPAs are complied with for each real case and regular VPAs submitted for inclusion.

The CME shall not change the eligibility criteria and required condition set at real case VPAs. At the time of inclusion of regular VPAs, the CME shall only describe how the regular VPAs comply with the eligibility criterion.

No.	Eligibility Criterion	Description/ Required condition	Description of the VPA in relation to the criteria, Means of Verification and Supporting evidence for inclusion
1	Geographic boundary	Each VPA shall be located within the boundaries of the PoA.	The VPA is located in Tanga region of United Republic of Tanzania
2	Double Counting	A unique numbering system will be adopted for each VPA. All ICS installed shall receive a unique number identifying to which VPA it belongs.	•
3	Exclusiveness of VPA	VPA shall not be previously: 1. Registered as a project activity with other offset schemes 2.	Confirmation by CME

		Included as a VPA in any other registered PoA, or deregistered as a VPA of a PoA.	
4	Specification of Technology/ Measure	VPAs under the PoA shall distribute efficient ICS using firewood and charcoal. The capacity per unit is limited by 150kW as per the applied TPDDTEC methodology.	The type of stoves replaced and ICS implemented is described in Section B.4 below. Baseline and project Kitchen Performance Tests will be carried out.
5	Start date	The start date of any proposed VPA will be on or after the start date of PoA.	The date on which first ICS distributed will be recorded. Sales invoice or end-user agreement will be provided as a proof.
6	Applicability of methodologies	VPAs shall apply TPDDTEC (v 4.0).	The applicability of the methodology is demonstrated in Section B.2
7	Additionality	The additionality PoA is demonstrated as per GS4GG Community services activity requirements, Version 1.2 and GHG Emissions Reduction & Sequestration Product Requirements, Version 1.2.	The VPA is automatically additional. Please see Section B.5.
8	Public funding	Affirmation that there is no diversion of Official Development Assistance (ODA).	ODA declaration is provided.

9	Target group& Distribution Mechanism	Households will be the target group for VPAs. ICSs will be installed by local VPA Implementers on a non-commercial basis.	User registration.
10	Sampling requirements	All requirements as mentioned in TPDDEC, version 4.0 or the Standard: Sampling and surveys for CDM project activities and programme of activities are applicable to VPAs.	Specifications of the sampling methods is defined in Section B.7.2. VPA Implementers will follow the management system described at the PoA-DD.
11	Compliance of the technology implemented	The capacity of each ICS will comply with the requirements of TPDDTEC methodology.	The VPA applies TPDDTEC (v4.0) (Section B.2)
12	SDG Outcomes	Each VPA shall conduct SDG outcomes assessment and comply with the SDG targets identified in the PoA-DD.	Please see SDG outcomes assessment in Section B.6
13	Stakeholder Consultation	A local stakeholders' consultation meeting will be organized for Real Case VPA.	Local Stakeholder Consultation Meeting is conducted for the first VPA on 20/01/2023
14	VER Ownership	End users receiving ICSs under the specific VPA contractually cede their rights to claim and own emission reductions to the CME of the PoA.	End-user contract between CME and the user.

# **APPENDIX 1 - SAFEGUARDING PRINCIPLES ASSESSMENT**

Complete the Assessment below and copy all Mitigation Measures for each Principle into <u>SECTION D</u> above. Please refer to the instructions in the <u>Guide to Completing</u> this Form below.

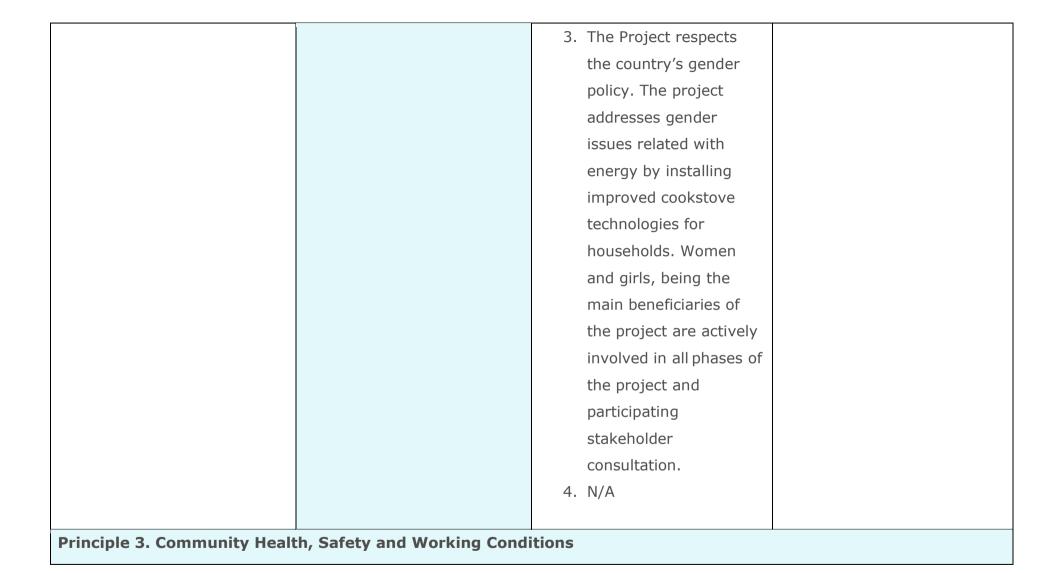
Assessment Questions/ Requirements	Justification of Relevance (Yes/potentially/no)	How Project will achieve Requirements through design, management or risk mitigation.	Mitigation Measures added to the Monitoring Plan (if required)
Principle 1. Human Rights	'		,
1. The Project Developer	No	1. The United Republic of	N/A
and the Project shall		Tanzania is a member	
respect internationally		of the United Nations	
proclaimed human rights		and the African Union.	
and shall not be		It has ratified many UN	
complicit in violence or		Human Rights	
human rights abuses of		Conventions and thus	
any kind as defined in		has made binding	
the Universal Declaration		international	
of Human Rights		commitments to adhere	
		to the standards laid	

0 7 0 1 1 1			
2. The Project shall not		down in these universal	
discriminate with		human rights	
regards to participation		documents. <sup>8</sup> The	
and inclusion		project will be	
		implemented under the	
		national laws and will	
		not lead to violations of	
		human rights in any	
		kind.	
		2. There is no limitation to	
		the participation to the	
		project.	
Principle 2. Gender Equality			
1. The Project shall not	No	1. The project aims to	N/A
directly or indirectly lead		decrease the burden on	
to/contribute to adverse		women in the most	

 $<sup>^8\</sup> http://www.claiminghumanrights.org/urtanzania.html?\&L=ofefghqitmbv%2F%25$ 

- impacts on gender equality and/or the situation of women
- Projects shall apply the principles of nondiscrimination, equal treatment, and equal pay for equal work
- 3. The Project shall refer to the country's national gender strategy or equivalent national commitment to aid in assessing gender risks
- (where required)
   Summary of opinions
   and recommendations of
   an Expert Stakeholder(s)

- vulnerable communities by reducing fuel wood consumption. The time spending for fuel wood collection and cooking will reduce. The women will have more time for other activities. The risk of being exposed to gender-based violence will decrease as well.
- 2. Both women and men will have equal access to the project stoves and other benefits. The project will provide job opportunities. Principles of equal treatment, equal pay for equal work will be strictly followed.



1. The Project shall avoid	No	The cookstoves will be	
community exposure to		produced by EnvoTec Services	
increased health risks		Limited, established in 1998	
and shall not adversely		and has been working on	
affect the health of the		stove technologies to date.	
workers and the		The company works in	
community		collaboration with various	
		institutions, including Ministry	
		of Energy and Minerals, Rural	
		Energy Agency, Tanzania	
		Bureau of Standards, ISO and	
		Global Alliance for Clean	
		Cookstoves.	

The company follows the

Occupational Health and

Safety Act 2003<sup>9</sup> and assures

requirements in The

<sup>&</sup>lt;sup>9</sup> https://procedures.tic.go.tz/media/OSHA%20ACT,%202003.pdf

		safe workplace during manufacturing of the stoves.	
Principle 4.1 Sites of Cultura	l and Historical Heritage		
Does the Project Area include	No	The project does not involve	
sites, structures, or objects		and is not complicit in the	
with historical, cultural,		alteration, damage or removal	
artistic, traditional or religious		of any critical cultural	
values or intangible forms of		heritage.	
culture?			
>>			
Principle 4.2 Forced Eviction	and Displacement		
Does the Project require or	No	The project does not require	
cause the physical or economic		or cause the involuntary	
relocation of peoples		relocation of people.	
(temporary or permanent, full			
or partial)?			
>>			
Principle 4.3 Land Tenure an	d Other Rights		

Does the Project require any	No	The project does not require	
change, or have any		any change to land tenure	
uncertainties related to land		arrangements and/or other	
tenure arrangements and/or		rights such as resource access	
access rights, usage rights or		rights, community-based	
land ownership?		property rights and customary	
>>		rights.	
Principle 4.4 Indigeneous pe	ople		
Are indigenous peoples	No	No indigenous people will be	
present in or within the area of		affected by the project	
influence of the Project and/or		implementation.	
is the Project located on			
land/territory claimed by			
indigenous peoples?			
Principle 5. Corruption			
1. The Project shall not	No	The Prevention and	
involve, be complicit in		Combating of Corruption Act	
or inadvertently			
contribute to or			

	reinforce corruption or		<sup>10</sup> describes corruption and	
	corrupt Projects		related offences. The project	
			participants will act in line	
			with the provisions and not be	
			involved, complicit or	
			contribute towards corruption.	
Prin	ciple 6.1 Labour Rights			
1.	The Project Developer	No	1. Tanzania ratified ILO	
	shall ensure that all		N°87 Freedom of	
	employment is in		Association and	
	compliance with national		Protection of the Right	
	labour occupational		to organize convention	
	health and safety laws		in 2000 <sup>11</sup> . The project	
	and with the principles		participants will employ	
	and standards embodied		all workers in	
			accordance with all	

 $<sup>^{10}</sup>$  https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&cad=rja&uact=8&ved=2ahUKEwj8\_Y-YtqL3AhXXSvEDHQNVCDQQFnoECAMQAQ&url=https%3A%2F%2Fwww.fiu.go.tz%2Fpcca.pdf&usg=AOvVaw0Udwcn7cTfFaLzQk7QsA4Z  $^{11}$  https://www.ilo.org/dyn/normlex/en/f?p=1000:11200:0::NO:11200:P11200\_COUNTRY\_ID:103476

i	n the ILO fundamental	applicable national
C	conventions	laws.
2. \	Workers shall be able to	2. Tanana i a natifica di III O
6	establish and join labour	2. Tanzania ratified ILO
C	organisations	N°98 Right to organise
3. \	Norking agreements	and collective
V	with all individual	bargaining convention
V	workers shall be	in 1962. The project
C	documented and	participants will not
i	mplemented and	restrict any workers
i	nclude:	from establishing and
a)	Working hours (must	joining labour
	not exceed 48 hours	organisations.
	per week on a regular	3. Tanzania ratified ILO
	basis), AND	N°29 Forced Labour
b)	Duties and tasks, AND	Convention in 1962. All
c)	Remuneration (must	permanent workers will
	include provision for	be provided with
	payment of overtime),	individual work
	AND	agreements, including
d)	Modalities on health	working hours,
	insurance, AND	

- 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. No child labour is allowed (Exceptions for children working on their families' property requires an <a href="Expert">Expert</a>
  Stakeholder opinion)
- 5. The Project Developer shall ensure the use of appropriate equipment, training of workers, documentation and

- description of duties and tasks, remuneration, health insurance, termination of the contract, annual leave.
- 4. Tanzania ratified ILO
  N°182 Worst Form of
  Child Labour
  Convention in 2001 and
  ILO N°138 Minimum
  Age Convention in
  1998. The project
  participants do not
  engage in any form of
  child labour.
- 5. The project participants will assure safe working environment, machinery and

reporting of accidents		appropriate equipment	
and incidents, and		used during the	
emergency		manufacturing.	
preparedness and			
response measures			
District C 2 Noveling France			
Principle 6.2 Negative Econo	omic Consequences		
1. Does the project cause	No	No risks are foreseen in terms	
negative economic		of negative consequences for	
consequences during		local economy. The project	
and after project		will be financially sustainable	
implementation?		through the sale of	
		cookstoves and carbon	
>>		finance. The project will also	
		create jobs for local people.	
		ar adda yara tar tarah pagpiar	
Principle 7.1 Emissions			
Will the Project increase	No	The project will not lead to	
greenhouse gas emissions		any increase in greenhouse	
over the Baseline Scenario?		gas emissions. The project	
>>		stoves will rather reduce	
		emissions due to the	

		increased thermal efficiency	
		compared to the baseline	
		stoves.	
Principle 7.2 Energy Supply	L	1	
Will the Project use energy	No	The project does not utilize	
from a local grid or power		any form of energy supply	
supply (i.e., not connected to		that is also being used by	
a national or regional grid) or		other users.	
fuel resource (such as wood,			
biomass) that provides for			
other local users?			
>>			
Principle 8.1 Impact on Natural Water Patterns/Flows			
Will the Project affect the	No	The project does not use any	
natural or pre-existing pattern		water.	
of watercourses, ground-water			
and/or the watershed(s) such			
as high seasonal flow			
variability, flooding potential,			

lack of aquatic connectivity or water scarcity?		
Principle 8.2 Erosion and/or	Water Body Instability	
Could the Project directly or indirectly cause additional erosion and/or water body instability or disrupt the natural pattern of erosion?  Is the Project's area of influence susceptible to excessive erosion and/or water body instability?	No	The project will disseminate efficient cookstoves to households. No damage is foreseen for nature of soil or water bodies. No, the project's area of influence is limited to households and their cooking practices. No excessive erosion and/or water body instability expected.
Principle 9.1 Landscape Modification and Soil		
Does the Project involve the use of land and soil for production of crops or other products?	No	The project will disseminate efficient cookstoves to households. No use of land or soil is applicable.

>>			
Principle 9.2 Vulnerability to	Principle 9.2 Vulnerability to Natural Disaster		
Will the Project be susceptible	No	The project will disseminate	
to or lead to increased		efficient cookstoves to	
vulnerability to wind,		households. No such risk is	
earthquakes, subsidence,		foreseen.	
landslides, erosion, flooding,			
drought or other extreme			
climatic conditions?			
>>			
Principle 9.3 Genetic Resource	ces		
Could the Project be negatively	No	Not relevant	
impacted by or involve			
genetically modified organisms			
or GMOs (e.g., contamination,			
collection and/or harvesting,			
commercial development, or			
take place in facilities or farms			
that include GMOs in their			
processes and production)?			

>>			
Principle 9.4 Release of pollutants			
Could the Project potentially	No	The project will disseminate	
result in the release of		efficient cookstoves to	
pollutants to the environment?		households. Indoor air	
>>		pollution in houses will be	
		reduced compared to the	
		baseline stoves.	
Principle 9.5 Hazardous and	Non-hazardous Waste		
Will the Project involve the	No	Not relevant	
manufacture, trade, release,			
and/ or use of hazardous and			
non-hazardous chemicals			
and/or materials?			
>>			
Principle 9.6 Pesticides & Fertilisers			
Will the Project involve the	No	Not relevant	
application of pesticides and/or			
fertilisers?			

>>				
Principle 9.7 Harvesting of F	Principle 9.7 Harvesting of Forests			
Will the Project involve the	No	The project aims to reduce		
harvesting of forests?		firewood consumption by		
>>		installing highly efficient		
		cookstoves. This will reduce		
		the harvest rate of forests.		
Principle 9.8 Food				
Does the Project modify the	No	Not relevant		
quantity or nutritional quality				
of food available such as				
through crop regime alteration				
or export or economic				
incentives?				
>>				
Principle 9.9 Animal husbandry				
Will the Project involve animal	No	Not relevant		
husbandry?				
>>				

Principle 9.10 High Conservation Value Areas and Critical Habitats			
Does the Project physically	No	Implementation of the project	
affect or alter largely intact or		will have a positive impact on	
High Conservation Value (HCV)		forests; thus, to conservation	
ecosystems, critical habitats,		of HCV ecosystems, critical	
landscapes, key biodiversity		habitats, landscapes, key	
areas or sites identified?		biodiversity areas or other	
>>		sites, by reducing the	
		firewood harvesting.	
Principle 9.11 Endangered S	pecies	I.	L
Are there any endangered	No	Not relevant.	
species identified as potentially			
being present within the			
Project boundary (including			
those that may route through			
the area)?			
AND/OR			
Does the Project potentially			
impact other areas where			

endangered species may be		
present through transboundary		
affects?		
>>		

# **APPENDIX 2- CONTACT INFORMATION OF VPA IMPLEMENTER**

Organization name	Inuka Youth Development Organization
Registration number	
with relevant	
authority	
Street/P.O. Box	P.O. Box 356
Building	
City	Handeni
State/Region	Tanga
Postcode	
Country	United Republic of Tanzania
Telephone	
E-mail	inukayouth2021@gmail.com
Website	
Contact person	Charles Mafaru
Title	
Salutation	Mr
Last name	Mafaru
Middle name	
First name	Charles
Department	
Mobile	+255 682 701 460
Direct tel.	
Personal e-mail	inukayouth2021@gmail.com

# **APPENDIX 3-LUF ADDITIONAL INFORMATION**

Risk of change to the Project Area during Project Certification Period:	
Risk of change to the Project activities during Project Certification Period:	
Land-use history and current status of Project Area:	
Socio-Economic history:	
Forest management applied (past and future)	
Forest characteristics (including main tree species planted)	
Main social impacts (risks and benefits)	
Main environmental impacts (risks and benefits)	
Financial structure	
Infrastructure (roads/houses etc):	
Water bodies:	

Sites with
special significance for indigenous p
eople and local communities resulting from the
Stakeholder Consultation:

Where indigenous people and local
communities are situated:

Where indigenous people and local
communities have legal rights,
customary rights or sites with special
cultural, ecological, economic, religious
or spiritual significance:

# APPENDIX 4-SUMMARY OF APPROVED DESIGN CHANGES

Please refer to <u>Design Changes Requirements</u> for more information on procedures governing Design Changes

# **Revision History**

Version	Date	Remarks
2.0	4 May 2022	
1.1	7 October 2020	Hyperlinked section summary to enable quick access to key
		sections
		Improved clarity on Key Project Information
		Inclusion criteria table added
		Gender sensitive requirements added
		Prior consideration (1 yr rule) and Ongoing Financial Need
		added
		Safeguard Principles Assessment as annex and a new section
		to include applicable safeguards for clarity
		Improved Clarity on SDG contribution/SDG Impact term used
		throughout
		Clarity on Stakeholder Consultation information required
		Provision of an accompanying Guide to help the user
		understand detailed rules and requirements
1.0	10 July 2017	Initial adoption