Component project activity design document form

(Version 08.0.0)

Complete this form in accordance with the instructions attached at the end of this form.

BASIC INFORMATION	
Title of the VPA	
Scale of the VPA	☐ Large-scale ☒ Small-scale
Version number of the VPA-DD	1.0
Completion date of the VPA-DD	01/11/2017
Title and UNFCCC reference number of the registered CDM PoA	Efficient and Clean Cooking for Mozambican Low Income Households PoA
Title and reference number of the corresponding generic VPA	Efficient And Clean Cooking For Mozambican Low Income Households – George Dimitrov VPA 1
Coordinating/managing entity	South Pole Group
Host Party	Mozambique
Applied methodologies and standardized baselines	AMS-II.G (Energy efficiency measures in thermal applications of non-renewable biomass). Version 8.0.0
Sectoral scopes linked to the applied methodologies	3
Estimated amount of annual average GHG emission reductions	10,045.14 tCO_2e

SECTION A. Description of voluntary project activity (VPA)

A.1. General description of VPA

The purpose of this Small-Scale Project Activity (VPA) is the dissemination of improved cooking stoves (ICS) in the neighbourhood of 25 de Junho, Bagamoyo, George Dimitrov, Inhagoia, Inhagoia A, Nsalene, Magoanine A, Malhazine and Zimpeto (south) in Maputo, Mozambique. The Project Activity will replace conventional stoves using charcoal fuel with improved stoves using charcoal fuel.

Stoves disseminated under this VPA are portable devices serving domestic users. These ICS are more efficient in transferring heat from the fuel to the pot, thus saving fuel (charcoal) compared to the stoves currently used in Mozambique.

The replacement of traditional stoves by ICS reduces the amount of GHG emitted into the atmosphere. Verified Emission Reductions (VERs) are calculated following the version 08.0 of methodology AMS.II.G.

The proposed SSC-VPA is a voluntary action by the CME.

The SSC-VPA will have a maximum energy saving of less than or equal to 180 GWh/year, thus meeting the small-scale eligibility criteria. It will be developed and implemented by MozCarbon. This SSC-VPA is considered automatically additional as per the CDM TOOL21 Demonstration of additionality of small-scale project activities.

Contribution of the proposed SSC-VPA to sustainable development

Environmental benefits:

- *Air quality:* Users (especially women and children) will be exposed to fewer air pollutants through reduced emission of not only CO_2, but also carbon monoxide and particulate matter. Air pollution from cooking with solid fuel is a key risk factor for childhood pneumonia as well as many other respiratory, cardiovascular and ocular diseases. According to the "Emissions and Performance Test Protocol", with emissions measurements based on the stove testing protocol developed by Colorado State University (available at www.eecl.colostate.edu), the average CO emissions resulting from the ICS installation show an improvement above 60%, compared to a metal stove (charcoal stoves) or three stone fire (wood fuel stoves).
- *Biodiversity:* it will be improved as the programme reduces pressure on remaining forest reserves in Mozambique.

Social and Economic benefits:

- *Employment:* The programme will give rise to employment opportunities for new ICS technicians, stove promoters, office staff and other related jobs in Mozambique.
- *Livelihood of the poor:* The circumstances of poor families will be improved since the use of ICS reduce fuel consumption, providing financial savings.
- *Access to energy services:* The ICS require less fuel, which in many areas can be a scarce resource or very expensive to buy.
- *Human and institutional capacity:* is raised through business development component of the project. The programme as part of its promotion and advertising has facilitated capacity development among the employed staff through trainings and workshops

A.2. Location of VPA

>> The boundary of the proposed SSC-VPA is determined by the location of the individual households where the ICSs are distributed, but is limited to the territorial area of 25 de Junho,

Bagamoyo, George Dimitrov, Inhagoia, Inhagoia A, Nsalene, Magoanine A, Malhazine and Zimpeto (south) neighbourhoods in Maputo, Mozambique. The identification of each ICS distributed is possible through the information compiled during distribution and transferred to the PO. This information is checked by the PO through spot-checks, which consists on calls to the ICS users and household field visits, and stored securely in the Distribution and Monitoring Database and will be available at DOE at validation and verification.

A.3. Technologies/measures

The VPA will be implemented using the version 8.0 of the approved methodology *AMS. II.G - Energy Efficiency Measures in Thermal Applications of Non-Renewable Biomass.* This category comprises appliances involving the efficiency improvements in the thermal applications of non-renewable biomass. Examples of these technologies and measures include the introduction of the improved cooking stoves.

Below are pictures of the stoves that are envisaged to be distributed and already distributed as part of the VPA. They include the Envirofit models CH2200 (charcoal), Econochar (charcoal), Rocket Works, Mbaula stove (a stove with a metal sheet or aluminium with clay based charcoal rest), Zavala stove (clay based charcoal stove) and ACE 1 cookstove.

1.1.1. **1.1.2.**

Figure 1 - Stoves to be used in the project

Operational and management plan

The PO will coordinate the activities to be undertaken under the PoA. The sampling plan and monitoring plan are to follow the outlines established in the PoA-DD, section I.7 and subsequent

relevant subsections. This includes training of staff involved in distribution activities. A detailed *Distribution Manual* developed by the PO will provide the stove promoters with instructions covering the various steps from ICS sales to data collection to after sales service.

1. As part of the inclusion of this SSC-VPA under the PoA, an agreement will be signed by the distributing organization representing its associated ICS technicians and the PO. The agreement will include specific provisions and declarations that confirm the SSC-VPA project implementers agree that their activity is being subscribed under the PoA.

2. Suitable training will be conducted for stove promoters willing to take part in the SSC-VPA to make them aware of the rules of the Gold Standard and SSC-PoA and their requirements in terms of distribution and data collection.

3. During the distribution programme, each stove promoter shall make sure that necessary data is obtained from the customer that will be using the ICS. This data will include:

    - Stove unique serial ID number (will identify the stove model)
    - Name of user
    - Location of stove (could be determined by a fixed address if applicable, or by using GPS data)
    - The phone number of the stove user
    - Installation date
    - Category of old stove which the ICS is replacing (see below for note on stove categories).

Users will also receive orientation from the stove promoter on how to clean and maintain the ICS.

4. The stove promoter will obtain the customer's approval to assign carbon rights to the PO.

5. The data is then transferred from the stove promoter to the PO, which will manage an electronic database, called the "Distribution and Monitoring Database". Prior to being entered into the Database, all records are screened by the PO together with cross-checks on the stove promoter installation records in order to confirm that the installation record is authentic and no double counting occurs. The PO will be responsible for maintaining such a database covering all VPAs within the PoA.

Note: The stove promoters are also responsible for recording the category of the "old" stove being replaced. The category of the old stove is defined as the combination of the stove type (conventional or improved[1]), and the type of fuel it used (wood or charcoal) prior to ICS installation. Stove promoters are responsible for excluding from the VPA any ICS which is replacing stoves using fossil fuels (such as kerosene and LPG) from emission reduction calculations. Stove promoters may install such ICS as part of their business, but these shall not be included for emission reduction calculation in the VPA. This is in accordance with the approved methodology AMS.II.G which is applicable only to users which were previously using biomass or non-renewable biomass fuels. ICS sales contracts shall be checked to ensure that users using non biomass fuel prior to the installation of the ICS will not be included in the Distribution and Monitoring Database and thus excluded from emission reduction calculations.

[1] The distinction between conventional and improved stoves is the same as that outlined in Methodology AMS II.G/Version 8.0.

The PO will also develop a *Monitoring Manual* designed to guide monitoring activities and will provide guidance and training to stove promoters that will carry out monitoring activities.

1. As outlined above, the PO keeps a record of all stoves it sells and the unique information linked to that stove.

2. The unique serial number provided to each stove eliminates any risk of double-counting between VPAs. The templates for the records are identical between stove promoters so that comparisons can be carried out easily and duplication becomes easy to detect. Stove promoters records are screened by the CME in order to confirm that the installation database is authentic and that no double-counting occurs.

3. The values of the emission reduction parameters required for ex-post measurement - checking if project stoves are operational and in use (SOF), checking if there is any ongoing use of old stoves, and checking the efficiency of project stoves (η_{new}) - will be obtained from sampling of the ICS installations as described in Section B.5. below.

4. Sampling will be undertaken in line with the Sampling Plan to be developed by the CME, meeting the requirements of AMS II.G V08.0 and the most recent version of the "General guidelines for sampling and surveys for small scale CDM project activities".

5. The party carrying out the monitoring will transfer the monitoring data to the PO who will check it and then enter it into the Distribution and Monitoring Database.

A.4. Coordinating/managing entity

1.1.3. >> The entity responsible for the proposed SSC-VPA is MozCarbon Initiatives. Mozcarbon is a registered Project Participant. South Pole Group is the CME.

A.5. Parties and CPA implementers

Parties involved	Project participants	Indicate if the Party involved wishes to be considered as project participant (Yes/No)
Austria	Austrian Development Agency	No
Colombia	South Pole Group (private entity)	Yes (CME)
Finland	Ministry of Foreign Affairs (public entity)	No
Finland	KPMG Finland	No
Germany	GIZ (public entity)	No
Italy	AVSI (private entity)	Yes
Mozambique (Host party)	MozCarbon (private entity)	Yes (PO)
United Kingdom	Department for International Development	No

A.6. Public funding of CPA

1.1.4. This project received the Energy and Environment Partnership (EEP S&EA) grant, funded by the Governments of Finland, Austria, and United Kingdom and coordinated by KPMG Finland. The access to the EEP grant allowed for starting the first phase of the cookstoves project by helping to cover for the ICS importation costs.

1.1.5. The German Corporation for International Cooperation (GIZ) supported the monitoring and marketing.

1.1.6. In the case that any sources of public funding from Parties included in Annex I are received for a specific VPA to be included under the PoA, the VPA-DD will specify the sources of such funding. Furthermore, it shall provide an affirmation that such funding does not result in a diversion of official development assistance, is separate from, and is not counted towards the financial obligations of those Parties.

A.7. History of CPA

This is the first VPA of the programme that consists on the distribution of ICS in the neighbourhoods of 25 de Junho, Bagamoyo, George Dimitrov, Inhagoia, Inhagoia A, Nsalene, Magoanine A, Malhazine and Zimpeto (south) in Maputo, Mozambique.

1.1.7.

A.8. Debundling

The Methodological Tool for Assessment of debundling for small-scale project activities v4.0 states in the paragraph 10 that the project activity can qualify to use simplified modalities and procedures for small-scale CDM project activities if it fulfils the thresholds defined in the decision 1/CMP.2, paragraph 28 line b). It states that a Type II project activities or those relating to improvements in energy efficiency which reduce energy consumption, on the supply and/or demand side, shall be limited to those with a maximum output of 60 GWh per year, or an appropriate equivalent, in this case 180 GHh_t per year.

Therefore, the project qualifies to use simplified modalities and procedures for small-scale CDM project activities.

SECTION B. Application of selected methodologies and standardized baselines

B.1. Reference to methodologies and standardized baselines

>> This PoA applies the methodology AMS-II.G v.8.0: Energy Efficiency Measures in Thermal Applications of Non-Renewable Biomass Version 03, Sectoral Scope 03.

The PoA is considered automatically additional under the CDM TOOL21 Demonstration of additionality of small-scale project activities.

There is no standardized baseline for cookstoves projects in Mozambique.

B.2. Project boundary, sources and greenhouse gases (GHGs)

The project boundary is limited to the territorial area of 25 de Junho, Bagamoyo, George Dimitrov, Inhagoia, Inhagoia A, Nsalene, Magoanine A, Malhazine and Zimpeto (south) neighbourhoods in Maputo, Mozambique.

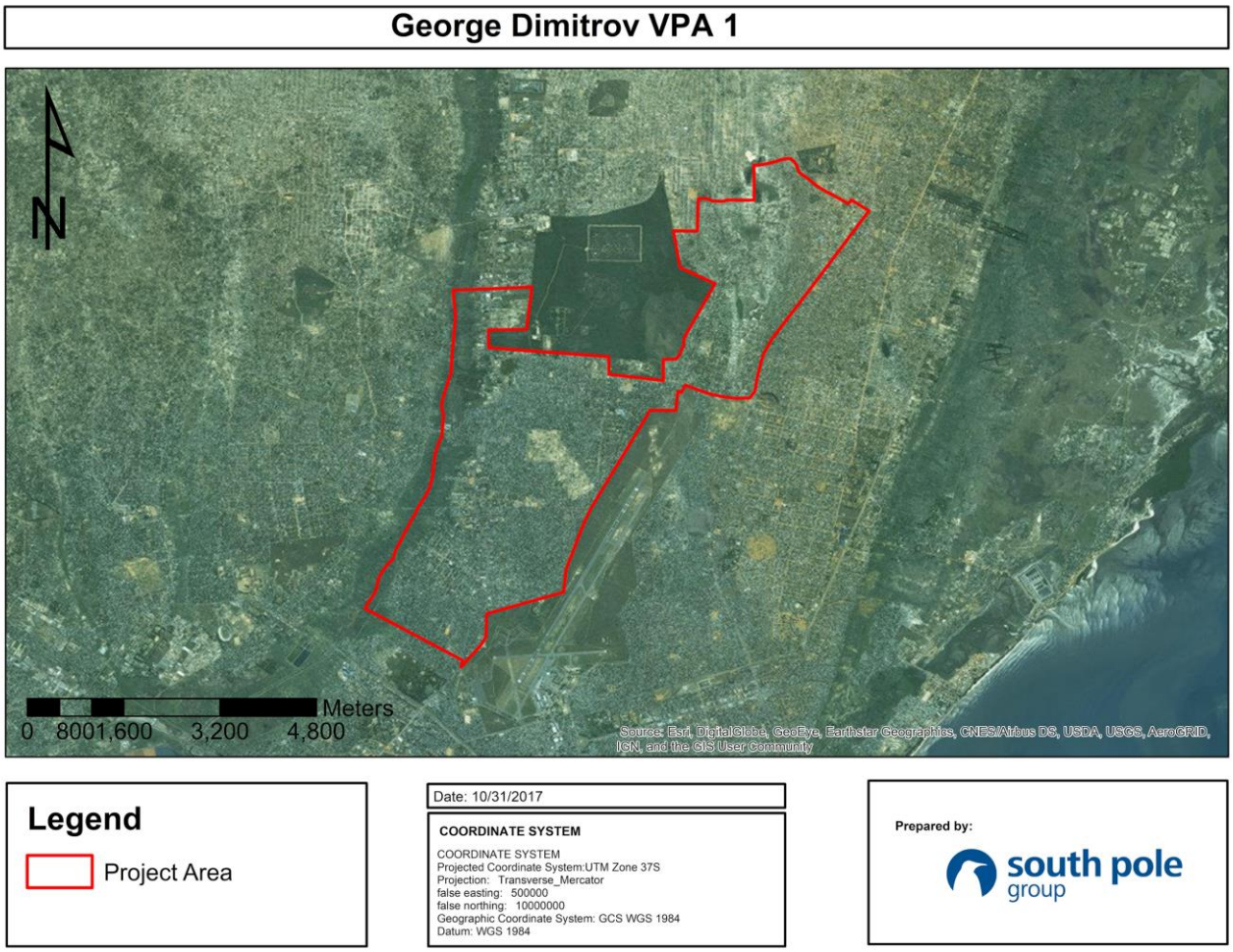

Image 1 - Project area

Source		GHG	Included?	Justification/Explanation
Baseline	Combustion of non-renewable biomass for cooking	CO2	Yes	Important source of emissions
		CH4	No	Not considered as per the methodology. Exclusion is conservative assumption.
		N2O	No	Not considered as per the methodology. Exclusion is conservative assumption.
Project activity	Combustion of non-renewable biomass for cooking	CO2	Yes	Important source of emissions
		CH4	No	Not considered as per the methodology. Exclusion is conservative assumption.
		N2O	No	Not considered as per the methodology. Exclusion is conservative assumption.

B.3. Establishment and description of baseline scenario

Firewood and charcoal are the main sources of energy for cooking, heating and illuminating the Mozambican households. 75% of urban households rely on wood and charcoal for their energy demands. In rural households, almost 98% use wood for energy while 2% use charcoal. Although

70% of the current population resides in rural areas, is not this part of the population that constitutes the major risk for threatening the forest resources, but the remaining 30% of the population that lives in the urban and peri-urban areas, that is still highly dependent depending on firewood and charcoal as the main source of domestic energy. This pattern is explained by the low density population and high wood biomass availability in rural areas, while in the urban zones there is a prevalence of the opposite pattern. This, results in a very high pressure on forests adjacent to cities and along roads that are supplying the cities.

According to Marzolli (2007)[2], this demand for biomass is responsible for the increasing deforestation and forest degradation, which have been identified as the main sources of environmental problems in the country. Additionally, the use of non-efficient technologies for cooking aggravates the problem resulting in higher energy and biomass losses.

Furthermore, non-efficient stoves contribute to the deterioration of the health condition of the population as a result of smoke emissions that concentrate harmful gases and particles inside the houses.

B.4. Estimation of emission reductions

B.4.1. Explanation of methodological choices

It is assumed that in the absence of the project activity, the baseline scenario would be the projected use of fossil fuels to meet similar thermal energy needs as those provided by the project devices.

As per the methodology, emission reductions are calculated as:

$$ER_y = \sum_i \sum_j ER_{y,i,j} ER_y = \sum_i \sum_j ER_{y,i,j} - LE_y - LE_y \qquad \text{Equation (1)}$$

Where:

i	=	Indices for the situation where more than one type of project device is introduced to replace the pre-project devices[3]
j	=	Indices for the situation where there is more than one batch of project device
ER_y	=	Emission reductions during year *y* in t CO_2e
$ER_{y,i,j}$	=	Emission reductions by project device of type *i and* batch *j* during year *y* in t CO_2e
LE_y	=	Leakage emissions in the year *y*

[2] Available at: http://bit.ly/2gtmMzi

[3] For example, in some instances, full replacement of the pre-project device would require the implementation of more than one project device (e.g. one stove suitable for cooking and the other stove suitable for cooking/boiling water).

Equation (

1. $$ER_{y,i,j} = B_{y,savings,i,j} \times N_{y,i,j} \times \mu_y \times f_{NRB,y} \times NCV_{biomass} \times EF_{projected\_fos}$$

2.

Where:

$B_{y,savings,i,j}$	=	Quantity of woody biomass that is saved in tonnes per cook stove device of type *i* and batch *j* during year *y*
$f_{NRB,y}$	=	Fraction of woody biomass that can be established as non-renewable biomass using survey methods or government data or default country specific fraction of non-renewable woody biomass (fNRB) values available on the CDM website[4]
$NCV_{biomass}$	=	Net calorific value of the non-renewable woody biomass that is substituted (IPCC default for wood fuel, 0.015 TJ/tonne, based on the gross weight of the wood that is 'air-dried')
$EF_{projected\_fossilfuel}$	=	Emission factor for the fossil fuels projected to be used for substitution of non-renewable woody biomass by similar consumers. Use a value of 81.6 t CO_2/TJ[5]
$N_{y,i,j}$	=	Number of project devices of type *i* and batch *j* operating during year *y*
μ_y	=	Adjustment to account for any continued use of pre-project devices during the year *y* when applying equations 6 and 8 (fraction).Use 1.0 in other cases

$B_{y,savings,i,j}$ $B_{y,savings,i,j}$ due to implementation of efficient thermal devices is estimated as per the following options:

Option 2: kitchen performance test (KPT):

Equation (3)

3. $$B_{y,savings,i,j} = B_{old,i,j} - B_{new,KPT,i,j}$$

[4] Default values endorsed by designated national authorities and approved by the Board are available at <http://cdm.unfccc.int/DNA/fNRB/index.html> or <http://cdm.unfccc.int/methodologies/standard_base/index.html>.

[5] This value represents the emission factor of the substitution fuels likely to be used by similar users, on a weighted average basis. It is assumed that the mix of present and future fuels used would consist of a solid fossil fuel (lowest in the ladder of fuel choices), a liquid fossil fuel (represents a progression over solid fuel in the ladder of fuel use choices) and a gaseous fuel (represents a progression over liquid fuel in the ladder of fuel use choices). Thus a 50 per cent weight is assigned to coal as the alternative solid fossil fuel (96 t CO_2/TJ) and a 25 per cent weight is assigned to both liquid and gaseous fuels (71.5 t CO_2/TJ for kerosene and 63.0 t CO_2/TJ for liquefied petroleum gas (LPG).

Where:

$B_{old,i,j}$	Annual quantity of woody biomass that would have been used in the absence of the project activity to generate useful thermal energy equivalent to that provided by the project device type *i and* batch *j*
$B_{new,KPT,i,j}$	Annual quantity of woody biomass used in tonnes per project device of type *i* and batch *j*, measured as per the KPT protocol, for the initial efficiency determined in the year of its commissioning. The KPT shall be carried out in accordance with national standards (if available) or international standards or guidelines (e.g. the KPT procedures specified by the partnership for clean indoor air (PCIA): http://www.pciaonline.org/node/1049)

Option 3: water boiling test (WBT):[6]

$$B_{y,savings,i,j} = B_{old,i,j} \times (1 - \frac{\eta_{old,i,j}}{\eta_{new,i,j}})$$ Equation (4)

$$B_{y,savings,i,j} = B_{y=1,new,i,j,survey} \times (\frac{\eta_{new,i,j}}{\eta_{old,i,j}} - 1)$$ Equation (5)

$$B_{y,savings,i,j} = B_{y=1,new,i,j,survey} \times (\frac{\eta_{new,i,j}}{\eta_{old,i,j}} - 1)$$

Where:

$B_{y=1,new,i,j,survey}$	Quantity of woody biomass used by project devices in tonnes per device of type *i* and batch *j*

The calculations in the equations above assume that there is only one device per household. Considering that baseline surveys or other methods may estimate the total consumption per household, an adjusted formula as below shall be used in case more than one project device is used in the household. For example, if 2 project devices are installed per household, 0.5 times the baseline woody biomass consumption per household ($B_{old,HH}$) is used as the total annual quantity of woody biomass that would have been used in the absence of the project activity in each device ($B_{old,i,j}$). Where more detailed data is available e.g. the thermal capacity of the project devices and respective utilisation hours, a weighted average thermal output ($HR_{y,i,j}$) may be used to determine the savings of baseline consumption for each device.

Equation (429148176)

4. $$B_{old,i,j} = B_{old,HH} \div N_{d,HH}$$

Equation (429148177)

5. $$B_{old,HH} = B_{old,p} \times N_{p,HH}$$

Where:

$B_{old,HH}$	=	Annual quantity of woody biomass that would have been used in the household in the absence of the project activity to generate useful

[6] Based on whether or is used for monitoring, either equation (6) or (7) may be used respectively.

thermal energy equivalent to that provided by the project devices (tonnes/household/year)

$N_{d,HH}$ = Number of project devices per household (number)

$B_{old,p}$ = Annual quantity of woody biomass that would have been used per person in the household in the absence of the project activity to generate useful thermal energy equivalent to that provided by the project devices (tonnes/person/year)

$N_{p,HH}$ = Average number of persons per household (number)

Where charcoal is used as the fuel by baseline (old) or project (new) devices, the quantity of woody biomass shall be determined by using a default wood to charcoal conversion factor of 6 kg of firewood (wet basis) per kg of charcoal (dry basis).[7] Alternatively, credible local conversion factors determined from a field study or literature may be applied.

The life span[8] of each type of the project devices shall be documented in the PDD based on manufacturer's specification.

Based in the manufacturer's specifications, we accounted the lifespan to be of 3 years.

The loss in efficiency of the project devices *i* in each batch *j* due to aging shall be accounted during the monitoring period y. The Project participant may choose any option below to account for the loss in efficiency; the option should be identified and fixed ex ante in the PDD at the time of registration.

(a) A default schedule of linear decrease in efficiency up to the terminal efficiency assumed as 20 per cent shall be applied through the life span of the project device[9]. For example, if the life span of project device is five years and project device has an efficiency of 30 per cent at commissioning then a 2 per cent decrease in efficiency every year shall be applied; or

(b) Manufacturer of project devices shall confirm with technical justification based on certification by a national standards body or an appropriate certifying agent recognized by that body that no decrease in efficiency of project device is envisaged during the crediting period ; or

(c) Determine[10] the rate of efficiency drop for a representative sample of the first batch of project device *i* in year *y* and assume that same rate of loss in efficiency applies to all other batches. In other words, it may be assumed that the degradation of efficiency measured in a representative sample of the first batch of project devices i apply to all subsequent batches. The efficiency of the project devices in the first batch has to be monitored annually through representative samples and this rate of loss in efficiency may be applied correspondingly to all batches.

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7 Refer to:<http://www.ipcc-nggip.iges.or.jp/public/gl/guidelin/ch1ref3.pdf>.The term 'wet basis' assumes that the wood is 'air-dried' as is specified in the IPCC default table.

8 The life span should be reported in cases where the PPs are opting to account the efficiency loss as per paragraph 25 (a).

9 If the efficiency of the project devices falls below 20%, it is no longer eligible to be considered a project device.

10 Example: For the representative sample of Batch 1, if the efficiency of a new project device is 30% and at the end of Year 1, the efficiency is monitored to be 29%; the loss rate is (30%-29%)/1=1%. Then this 1% loss rate is to be assumed to be applicable for all the devices in the first batch and subsequent batches for first year of operation.

(d) Determine the loss in efficiency annually from a representative sample of each batch and use the actual loss rate that is measured.

The option (a) was taken for this project.

If the life span of devices is less than the crediting period it shall be demonstrated that the devices shall be replaced after the life span has ended. In such cases, if it cannot be demonstrated that the project devices will be replaced with new devices, no emission reductions can be claimed beyond the life span of the project devices.

In this project the stoves are to be replaced as they reach the end of their expected lifetime. For that reason the project claims 100% of efficiency in ER in the fourth year, as in the first.

Determination of the value of the Fraction $f_{NRB,y}$

The fraction of non-renewable biomass (f_{NRB}) is determined from the default values endorsed by designated national authorities and approved by the Board.

B.4.2. Data and parameters fixed ex ante

In addition to the parameters listed in the tables below, the provisions on data and parameters not monitored in the tools referred to in this methodology apply.

Data/Parameter	Charcoal use per standard adult/day
Data unit	kg
Description	Where charcoal is used as the fuel by baseline (old) or project (new) devices, the quantity of woody biomass shall be determined by using a default wood to charcoal conversion factor of 6 kg of firewood (wet basis) per kg of charcoal (dry basis). Alternatively, credible local conversion factors determined from a field study or literature may be applied.
Source of data	Refer to: http://www.ipcc-nggip.iges.or.jp/public/gl/guidelin/ch1ref3.pdf. The term 'wet basis' assumes that the wood is 'air-dried' as is specified in the IPCC default table
Value(s) applied	Baseline = 0,74 kg; Project = 0,22 kg
Choice of data or Measurement methods and procedures	CDM default value
Purpose of data	Calculation of baseline emissions and calculation of project emissions
Additional comment	-

Data/Parameter	$N_{p,HH}$
Data unit	Number
Description	Average number of persons per household
Source of data	From KPT Chamanculo
Value(s) applied	4.53
Choice of data or Measurement methods and procedures	Field data
Purpose of data	Calculation of baseline emissions and calculation of project emissions
Additional comment	-

Data/Parameter	$N_{d,HH}$
Data unit	Number
Description	Number of project devices per household
Source of data	PO provided information
Value(s) applied	1
Choice of data or Measurement methods and procedures	Baseline information
Purpose of data	Calculation of baseline emissions
Additional comment	-

Data/Parameter	Average annual biomass savings per stove
Data unit	Tonnes
Description	Average annual biomass savings per stove
Source of data	KPT
Value(s) applied	4.94
Choice of data or Measurement methods and procedures	Field data – KPT
Purpose of data	Calculation of project emissions
Additional comment	-

1.1.8.

B.4.3. Ex ante calculation of emission reductions

In this project, for ex-ante calculation of VPA emission reductions, the KPT (option 2) and WBT (option 3) options provided in the methodology AMS-II.G version 08.0 are used.
When option 2 is applied, the following table is used for ex-ante calculations:

	Value	Unit	Source/Reference
$N_{y,i}$	[XX]	N/A	Database from the PO. Distributed ICS.
$B_{old,HH}$	[XX]	tonnes/household/year	From Chamanculo KPT. The KPT shall be carried out in accordance with national standards (if available) or international standards or guidelines (e.g. the KPT procedures specified by the

			partnership for clean indoor air (PCIA): http://www.pciaonline.org/node/1049)
$N_{d,HH}$	[XX]	Number	From KPT. The KPT shall be carried out in accordance with national standards (if available) or international standards or guidelines (e.g. the KPT procedures specified by the partnership for clean indoor air (PCIA): http://www.pciaonline.org/node/1049).
Charcoal use per standard adult/day	[XX]	kg	From KPT. The KPT shall be carried out in accordance with national standards (if available) or international standards or guidelines (e.g. the KPT procedures specified by the partnership for clean indoor air (PCIA): http://www.pciaonline.org/node/1049).
Firewood biomass	6	N.A.	Methodology
$B_{old,i,j}$	[XX]	tonnes/year	$B_{old,i,j=}$ $B_{old,HH/}$ $N_{d,HH}$
$\eta_{oldi,j}$	21.28	%	Effciency average from Testing Report Baseline
$\eta_{newi,j}$	33.09	%	Efficiency average from ICS WBT
$B_{y,savings,i,j}$	[XX]	tonnes/year	$B_{y,savings,i,j} = B_{old,i,j} \times (1 - \frac{\eta_{old,i,j}}{\eta_{new,i,j}})$
$f_{NRB,y}$	0.91	N/A	CDM web
$NCV_{biomass}$	0.029	TJ/tonne	IPCC Guidelines
$EF_{projected\_fossilfuel}$	81.6	tCO_2/TJ	Default value
μ_y	0.5 or 1	N/A	Methodology
Baseline Emissions	[XX]	tCO_2/y	$ER_y=B_{y,savings}*f_{NRB,y}*NCV_{biomass}*EF_{projected\_fossilfuel}*N_{y,i}*\mu_y$
Project emissions (PE_y)	[XX]	tCO_2/y	-
Leakage emissions (LEy)	[XX]	tCO_2/y	0, does not need to be accounted for
Emission reduction	[XX]	tCO2/y	$ER_y=B_{y,savings}*f_{NRB,y}*NCV_{biomass}*EF_{projected\_fossilfuel}*N_{y,i}*\mu_y$

B.4.4. Summary of ex ante estimates of emission reductions

Year	Emission reductions (t CO_2e)
Year 1	10,949.36

Year 2	10,219.40
Year 3	9,538.11
Year 4	8,902.23
Year 5	10,949.36
Year 6	10,219.40
Year 7	9,538.11
Total	70,315.95
Total number of crediting years	7
Annual average over the crediting period	10,045.14

It is assumed that the ICS efficiency in the fifth year is equal to the efficiency in the first year, result of the substitution of the stoves in the end of their lifespan.

B.5. Monitoring plan

B.5.1. Data and parameters to be monitored

1	**Data/Parameter**	2	$N_{y,i,j} N_{y,i,j}$
3	Data unit	4	-
5	Description	6 7	Number of project devices of type i and batch j operating during year y.
8	Source of data	9	Monitoring
10	Value(s) applied	6379	
11	Measurement methods and procedures	12	Measured directly or based on a representative sample. Sampling standard shall be used for determining the sample size to achieve 90/10 confidence precision. A discount shall be applied based on the percentage of devices operational as determined by the sample survey e.g. if survey shows that 10% of the devices is non-operating, an adjustment factor of 0.9 shall be applied to number of project devices commissioned in a particular batch. Separate samples shall be taken for each batch.
13	Monitoring frequency	14	At least once every two years (biennial)
15	QA/QC procedures	16	As mentioned in the monitoring plan
17	Purpose of data	18	-
19	Additional comment	20 21	- If equation (6) under option 3 (WBT) is used combined with direct measurement of Biomass new, then $\mu_{y,i,j} \mu_{y,i,j}$ (parameter 2) may be assumed as 1.0. - When the data loggers are used, the days when only project devices or only pre-project devices are used will be attributed accordingly. The days where both devices have been used, if the data loggers are able to detect and record the time each device has been used (e.g. in hours), the share in the total duration of utilization will be used to attribute a fraction of this day to one or to the other device. Alternatively, if the data loggers are not able to determine the duration

	of the utilization, but only the situation of the device being on or off (i.e. used or not used during that day), the share of 50:50 may be used

22 **Data/Parameter**	23 $\mu_y \mu_y$
24 Data unit	25 Fraction
26 Description	27 Adjustment to account for any continued use of pre-project devices during the year y
28 Source of data	29 When applying equations 6 and 8, it is a fraction based on monitoring results. In other cases (i.e. applying equations 3, 5 and 7), use1.0.
30 Value(s) applied	31
32 Measurement methods and procedures	33 This parameter should be monitored using one of the following methods: 1. If the pre-project devices are decommissioned and no longer used, as determined by the monitoring survey its value is 1.0. If both the project devices and pre-project devices are used together, measurement campaigns shall be undertaken using data loggers such as stove utilization monitors (SUMs) which can log the operation of all devices (recording the situation of the device being used or not during any day'd' of the measurement campaign) in order to determine the average device utilization intensity (to establish the relative share of the usage of the devices). The measurement campaign shall be conducted in at least 10 randomly selected participant households of the project activity or the component project activity (CPA) for at least 90 days during the year y. If seasonal variation is observed, the average value determined through the campaign shall be annualised taking into account seasonal variation of device utilization. 2. Alternatively, surveys may be conducted if the use of data loggers to record the continued operation of baseline devices is demonstrated to be not practical, for example when the baseline device is the three stone fire. The surveys should be designed to capture the cooking habits and stove usage of households in the region, including quantification of use of baseline devices, by formulating questions and/or collecting evidences to determine the frequency of usage of both the project devices and baseline devices. For example if there were 3 pre-project devices per household and it was determined during the survey that use of one of them continues during the crediting period then a conservative adjustment factor of 0.66 is applied for the relevant monitoring period. Another example would be the case where there was only one pre-project device per household and its use during the project period continues along with the project stove to meet 25% of the cooking needs of the household in which case the adjustment factor will be 0.75. Where a more precise data is available i.e. the thermal capacity of the project and pre-project devices and respective utilisation hours, a weighted average adjustment factor may be used.
34 Monitoring frequency	35 At least once every two years (biennial)
36 QA/QC procedures	37 As mentioned in the monitoring plan
38 Purpose of data	39 -
40 Additional comment	41 - If equation (6) under option 3 (WBT) is used combined with direct measurement of Biomass new, then $\boldsymbol{\mu y,i,j}$ (parameter 2) may be

	assumed as 1.0. - When the data loggers are used, the days when only project devices or only pre-project devices are used will be attributed accordingly. The days where both devices have been used, if the data loggers are able to detect and record the time each device has been used (e.g. in hours), the share in the total duration of utilization will be used to attribute a fraction of this day to one or to the other device. Alternatively, if the data loggers are not able to determine the duration of the utilization, but only the situation of the device being on or off (i.e. used or not used during that day), the share of 50:50 may be used

42 **Data/Parameter**	43 $\eta_{new,i,j}\eta_{new,i,j}$
44 Data unit	45 Fraction
46 Description	47 Efficiency of the device of each type i and batch j implemented as part of the project activity.
48 Source of data	49 -
50 Value(s) applied	51
52 Measurement methods and procedures	53 Efficiency shall be measured/estimated as per the following: 54 1. The efficiency of the project devices shall be based on certification by a national standards body or an appropriate certifying agent recognized by that body. 55 1. Alternatively, manufacturer specifications on efficiency based on water boiling test (WBT) may be used. The sampling test of stoves by such certification bodies/agents or manufacturers shall be conducted following a 90/10 precision in accordance with the "Standard for sampling and surveys for CDM project activities and programme of activities 56 1. However, the following simplified approach may be used, when the efficient cook-stoves are produced by a manufacturer with a good quality management system in place to ensure that the individual equipment produced do not vary beyond the range of acceptance limits (e.g. characteristics such as materials, critical dimensions): 57 (i) Conduct a sample test on three cook stoves with three tests conducted for each stove; (ii) (ii) If the standard deviation of the nine test results indicated above is very small and 90/10 precision requirement is met (in this case, the value of the t-distribution for 90 per cent confidence shall be used instead of Z value), the efficiency determined is acceptable, otherwise more sample tests would be required until 90/10 precision is met
58 Monitoring frequency	59 (i)Recorded at the time of commissioning/distribution 60 (ii) Adjusted for the loss if efficiency as paragraph 25.
61 QA/QC procedures	62 As mentioned in the monitoring plan
63 Purpose of data	64 -
65 Additional comment	66 -

67 **Data/Parameter**	68 $NCV_{biomass}$
69 Data unit	70 TJ/tonne
71 Description	72 Net calorific value of the non-renewable woody biomass, briquettes or charcoal used in project devices.
73 Source of data	74 IPCC default
75 Value(s) applied	76 0.015
77 Measurement methods and procedures	78 IPCC default for wood fuel, 0.015 TJ/tonne
79 Monitoring frequency	80 Yearly
81 QA/QC procedures	82 As mentioned in monitoring plan
83 Purpose of data	84 -
85 Additional comment	86 -

87 **Data/Parameter**	88 $f_{NRB,y} f_{NRB,y}$
89 Data unit	90 -
91 Description	92 Fraction of woody biomass saved by the project activity during year *y* that can be established as non-renewable biomass
93 Source of data	94 CDM value for Mozambique
95 Value(s) applied	0.91
96 Measurement methods and procedures	97 The useful thermal energy shall be calculated based on the rated capacity of the project device multiplied by the number of utilization hours. Refer equation 4
98 Monitoring frequency	99 Ex ante
100 QA/QC procedures	101 As mentioned in monitoring plan
102 Purpose of data	103 -
104 Additional comment	105 -

106 **Data/Parameter**	107 $\eta_{old,i,j} \eta_{old,i,j}$
108 Data unit	109 %
110 Description	111 Efficiency of pre - project device, which is a three stone fire using firewood (not charcoal), or a conventional device with no improved combustion air supply or flue gas ventilation, that is without a grate or a chimney; for other types of devices, a default value of 0.2 may be optionally used. Use weighted average values (taking the amount of woody biomass consumed by each device as the weighting factor) if more than one type of device is being replaced
112 Source of data	113 Baseline WBT
114 Value(s) applied	21.28

115 Measurement methods and procedures	116 The useful thermal energy shall be calculated based on the rated capacity of the project device multiplied by the number of utilization hours. Refer equation 4
117 Monitoring frequency	118 Fixed for each individual household when included in the project activity database
119 QA/QC procedures	120 As mentioned in monitoring plan
121 Purpose of data	122 -
123 Additional comment	124 -

125 **Data/Parameter**	126 Life Span
127 Data unit	128 Number of years
129 Description	130 The operating life time of the project device. The life span should be reported in cases where the PPs are opting to account the efficiency loss as per paragraph 25
131 Source of data	132 Manufacturer (certified by a national standards body or an appropriate certifying agent recognized by that body)
133 Value(s) applied	3
134 Measurement methods and procedures	135 -
136 Monitoring frequency	137 Fixed and recorded at the time of commissioning/distribution
138 QA/QC procedures	139 As mentioned in monitoring plan
140 Purpose of data	141 -
142 Additional comment	143 -

144 **Data/Parameter**	145 Life Span
146 Data unit	147 Number of years
148 Description	149 The operating life time of the project device. The life span should be reported in cases where the PPs are opting to account the efficiency loss as per paragraph 25
150 Source of data	151 Manufacturer (certified by a national standards body or an appropriate certifying agent recognized by that body)
152 Value(s) applied	3
153 Measurement methods and procedures	154 -
155 Monitoring frequency	156 Fixed and recorded at the time of commissioning/distribution
157 QA/QC procedures	158 As mentioned in monitoring plan
159 Purpose of data	160 -
161 Additional comment	162 -

163 **Data/Parameter**	164 $N_{d,HH}N_{d,HH}$
165 Data unit	166 Number
167 Description	168 Number of project devices distributed per household
169 Source of data	170 Internal records
171 Value(s) applied	1
172 Measurement methods and procedures	173 -
174 Monitoring frequency	175 Recorded at the time of commissioning/distribution of project devices
176 QA/QC procedures	177 As mentioned in monitoring plan
178 Purpose of data	179 -
180 Additional comment	181 -

B.5.2. Sampling plan

A statistically valid sample of the locations where the devices are deployed, with consideration, in the sampling design, of occupancy and demographic differences can be used to determine parameter values used to calculate emission reductions, as per the relevant requirements for sampling in the “Standard for sampling and surveys for CDM project activities and programmes of activities”. When biennial inspection is chosen a 95 per cent confidence interval and a 10 per cent margin of error shall be achieved for the sampling parameter. On the other hand when the project proponent chooses to inspect annually, a 90 per cent confidence interval and a 10 per cent margin of error shall be achieved for the sampled parameters. In cases where survey results indicate that 90/10 precision or 95/10 precision are not achieved, the lower bound of the 90 per cent or 95 per cent confidence interval of the parameter value may be chosen as an alternative to repeating the survey efforts to achieve the 90/10 or 95/10 precision.
Efficiency of devices may be monitored in a common survey with other monitoring parameters; therefore, a random sub-sample within the common survey can be taken for which stove efficiency is tested, as long as the required precision for stove efficiency is achieved.

B.5.3. Other elements of monitoring plan

The PO shall maintain a record for the date of commissioning of project devices of each type i and batch j.
According to the Tool 16 v4 "Project and leakage emissions from biomass" leakage does no need to be accounted for. Therefore leakage will not be monitored.
Relevant parameters shall be monitored and recorded during the crediting period as indicated in section I.7.1. above. The applicable requirements specified in the “General guidelines for SSC CDM methodologies” are also an integral part of the monitoring guidelines and therefore shall be followed by the project participants.
MozCarbon, the PO, is responsible for overall monitoring management. The sampling effort, data collection, consolidation and results analysis will be undertaken by a team adequately trained, well aware of CDM requirements/Gold standard foundation requirements and supervised by the PO. A compensation system based partly on objective performance criteria may be established in order to encourage workers to perform work of the best quality possible, as long as this does not challenge the sincerity of monitoring.
The human resources dedicated to the monitoring tasks will consist of:

- A monitoring manager;
- A data manager;

- Field supervisors;
- Field agents

Their role description is displayed in the table below.

Role	**Description**
Monitoring manager	The person responsible for: - Ensuring that all the VPAs and units within each VPA are following the monitoring steps in accordance with the registered monitoring plan as required by the UNFCCC guidelines and approved applied methodologies; - Ensuring that the equipment and measurements in the field are in line with the measurement methods and recording frequency and storing approaches; - Ensuring that all the monitoring data collected from project sites are consolidated and processed digitally in a central database; - Ensuring all monitoring team members received a proper training; - Ensuring that each VPA produces a coherent and standard monitoring report.
Data manager	The person responsible for: - Collecting all data for monitoring; - Register data in electronic database and keep hardcopies; - Following up with data calculations and annual monitoring set up.
Fields supervisors	The person responsible for: - Organizing monitoring in the field; - Product identification and maintenance of continuous record of the issued serial numbers along with distribution and commissioning; - Customer training and introduction to O&M during installation and commissioning; -Field agents training; - Collect Legal agreements with end-users and transfer to data manager. -Cross check monitoring information collected by Field agents.
Field agents	-The people employed locally working on diverse task for the PoA including monitoring tasks. The person responsible for: -Going in the field and collect raw data from households for monitoring. -Make sign sale agreement to end-users

Training will be provided to all the monitoring staff before the commencement of monitoring works, to ensure the project participants' ability to implement the described monitoring plan.
Training will be conducted for monitoring agents to master their expected tasks in surveying, in order to ensure monitoring rigour and quality as well as minimal refusals or biases.
Special circumstances such as former traditional stove still operating, or dual improved cookstoves owner etc. will be carefully integrated to the training and simulated.

Personnel involved in VPA inclusion, VPA/PoA level monitoring and PO level review and approval shall have either, alone or collectively as a team, the necessary competence including:
- Knowledge of the CDM technical and methodological aspects;
- Skills to apply relevant principles, procedures and techniques for VPA inclusion, verification and review and approval
- As a team leader to:
    · Plan and make effective use of resources;
    · Understand the different functions and lead the team to reach conclusion;
    · Prepare the relevant reports and handle all follow up actions.

A key aspect is training and education. The PO is responsible for ensuring that the procedures are carried out properly. Training is provided on the PoA management system that has been established so roles, responsibilities and communication channels are clear.
All documents, lists and questionnaires produced during monitoring shall be saved under electronic format with physical copies securely stored as evidences under the direct responsibility of the data manager and the supervision of the monitoring manager and should be kept and archived electronically for two years after the end of the crediting period or the last issuance of VERs, whichever occurs later.

SECTION C. Start date, crediting period type and duration

C.1. Start date of VPA

The start date of the programme is July 2015 as a pilot in the suburbs of Maputo. The implementation of the stoves started in January 1st, 2016. Therefore, this is a retroactive programme.

C.2. Expected operational lifetime of VPA

21 years, renewable every 7 years.

C.3. Crediting period of VPA

C.3.1. Type of crediting period

Renewable, every 7 years up to 21 years. This VPA corresponds to the first crediting period.

C.3.2. Start date of crediting period

January 1st, 2016.

C.3.3. Duration of crediting period

7 years.

SECTION D. Environmental impacts

D.1. Analysis of environmental impacts

>> Not applicable, as the VPA includes only a small-scale project and the host party does not require an EIA.

Due to its small-scale nature and its overall positive environmental benefits, it is unlikely that the proposed distribution of efficient ICS will result in any negative environmental impacts.

D.2. Environmental impact assessment

>> Not applicable as the EIA was not carried out. Please, refer to the section E2 of this document above.

SECTION E. Local stakeholder consultation

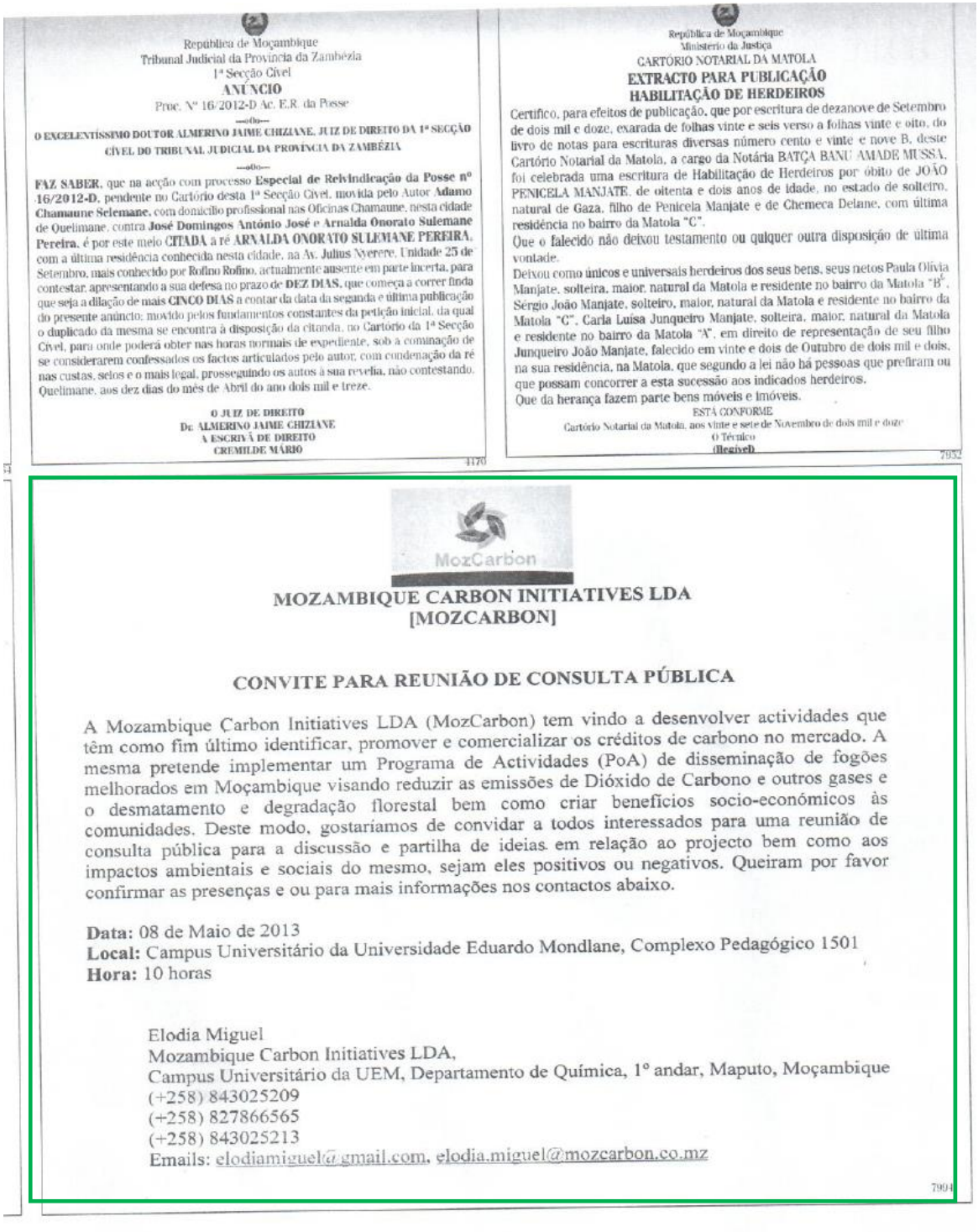
E.1. Modalities for local stakeholder consultation

The invitations aimed to gather a broad range of people and organizations with direct relation to the subject of improved cooking, renewable energies and environment in general. The invited include NGOs working with environment, forest and clean energy, including clean cooking. Those NGOs are working in different aspects as field implementation, funding, Monitoring and evaluation. We also invited the local leaders of the anticipated neighbourhoods of stove dissemination, which will work as mobilizers of the community for adoption and continuous use of improved stoves. Apart of the leaders, in each neighbourhood we invited local people. We also invited young people from the neighbourhoods which have the potential to work on stove promotion and distribution and in stove production and/or assembly.
We also invited the relevant government bodies, working in environment, forests and renewable energies. Are the examples the former MICOA (now MITADER, which is the Ministry of Land, Environment and Rural Development), the National Directorate for New AND Renewable Energy of the Ministry of Energy, the National Energy Fund, and the Ministry of Agriculture through the National Directorate of Forests and Wildlife.

We also invited companies and NGOs working in stove production with potential to be partners within the PoA, to supply high quality improved biomass cooking stoves.

These institutions and individuals constitute the necessary parts to give feedback for successful project implementation and are able to give input in different aspects, including: production of stoves, dissemination and awareness raising, funding, monitoring and evaluation, regulatory guidance to make sure the program fulfil national development goals, including environmental.

The public invitation was made through the most important newspaper of the country: Jornal Noticias. The stakeholders invitation appeared three times in the newspaper during one week. Another way was to send letters to the neighborhoods, so that the local leaders would spread the message to each block chief of neighborhood and then those would have made the meeting know to the residents.
Other invitations were sent by email to the different stakeholders on the clean cooking and energy and environmental sector in general. Please, see text of invitation inside green box below.



República de Moçambique
Tribunal Judicial da Província da Zambézia
1ª Secção Cível
ANÚNCIO
Proc. Nº 16/2012-D Ac. E.R. da Posse

---oOo---

O EXCELENTÍSSIMO DOUTOR ALMERINO JAIME CHIZIANE, JUIZ DE DIREITO DA 1ª SECÇÃO CÍVEL DO TRIBUNAL JUDICIAL DA PROVÍNCIA DA ZAMBÉZIA

---oOo---

FAZ SABER, que na acção com processo **Especial de Reivindicação da Posse nº 16/2012-D**, pendente no Cartório desta 1ª Secção Cível, movida pelo Autor **Adamo Chamaune Selemane**, com domicílio profissional nas Oficinas Chamaune, nesta cidade de Quelimane, contra **José Domingos António José e Arnalda Onorato Sulemane Pereira**, é por este meio **CITADA** a ré **ARNALDA ONORATO SULEMANE PEREIRA**, com a última residência conhecida nesta cidade, na Av. Julius Nyerere, Unidade 25 de Setembro, mais conhecido por Rofino Rofino, actualmente ausente em parte incerta, para contestar, apresentando a sua defesa no prazo de **DEZ DIAS**, que começa a correr finda que seja a dilação de mais **CINCO DIAS** a contar da data da seganda e última publicação do presente anúncio; movido pelos fundamentos constantes da petição inicial, da qual o duplicado da mesma se encontra à disposição da citanda, no Cartório da 1ª Secção Cível, para onde poderá obter nas horas normais de expediente, sob a cominação de se considerarem confessados os factos articulados pelo autor, com condenação da ré nas custas, selos e o mais legal, prosseguindo os autos à sua revelia, não contestando.
Quelimane, aos dez dias do mês de Abril do ano dois mil e treze.

O JUIZ DE DIREITO
Dr. ALMERINO JAIME CHIZIANE
A ESCRIVÃ DE DIREITO
CREMILDE MÁRIO

1170

República de Moçambique
Ministério da Justiça
CARTÓRIO NOTARIAL DA MATOLA
EXTRACTO PARA PUBLICAÇÃO
HABILITAÇÃO DE HERDEIROS

Certifico, para efeitos de publicação, que por escritura de dezanove de Setembro de dois mil e doze, exarada de folhas vinte e seis verso a folhas vinte e oito, do livro de notas para escrituras diversas número cento e vinte e nove B, deste Cartório Notarial da Matola, a cargo da Notária BATÇA BANU AMADE MUSSA, foi celebrada uma escritura de Habilitação de Herdeiros por óbito de JOÃO PENICELA MANJATE, de oitenta e dois anos de idade, no estado de solteiro, natural de Gaza, filho de Penicela Manjate e de Chemeca Delane, com última residência no bairro da Matola "C".
Que o falecido não deixou testamento ou qulquer outra disposição de última vontade.
Deixou como únicos e universais herdeiros dos seus bens, seus netos Paula Olivia Manjate, solteira, maior, natural da Matola e residente no bairro da Matola "B", Sérgio João Manjate, solteiro, maior, natural da Matola e residente no bairro da Matola "C", Carla Luísa Junqueiro Manjate, solteira, maior, natural da Matola e residente no bairro da Matola "A", em direito de representação de seu filho Junqueiro João Manjate, falecido em vinte e dois de Outubro de dois mil e dois, na sua residência, na Matola, que segundo a lei não há pessoas que prefiram ou que possam concorrer a esta sucessão aos indicados herdeiros.
Que da herança fazem parte bens móveis e imóveis.
ESTÁ CONFORME
Cartório Notarial da Matola, aos vinte e sete de Novembro de dois mil e doze
O Técnico
(Ilegível)

7932

MozCarbon

MOZAMBIQUE CARBON INITIATIVES LDA
[MOZCARBON]

CONVITE PARA REUNIÃO DE CONSULTA PÚBLICA

A Mozambique Carbon Initiatives LDA (MozCarbon) tem vindo a desenvolver actividades que têm como fim último identificar, promover e comercializar os créditos de carbono no mercado. A mesma pretende implementar um Programa de Actividades (PoA) de disseminação de fogões melhorados em Moçambique visando reduzir as emissões de Dióxido de Carbono e outros gases e o desmatamento e degradação florestal bem como criar benefícios socio-económicos às comunidades. Deste modo, gostariamos de convidar a todos interessados para uma reunião de consulta pública para a discussão e partilha de ideias em relação ao projecto bem como aos impactos ambientais e sociais do mesmo, sejam eles positivos ou negativos. Queiram por favor confirmar as presenças e ou para mais informações nos contactos abaixo.

Data: 08 de Maio de 2013
Local: Campus Universitário da Universidade Eduardo Mondlane, Complexo Pedagógico 1501
Hora: 10 horas

Elodia Miguel
Mozambique Carbon Initiatives LDA,
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7904

The consultation was carried out with the following agenda:

- Opening of the meeting
    - The meeting started at 10.00am at Eduardo Mondlane University Campus, Complexo Pedagogico 1501. The meeting was moderated by Hugo Mabilana, one of the project personnel. The meeting was opened by Managing Director of the project proponent Mr Micas Cumbana. He presented the project personnel and the roles. Then, the presentation of each participant by stating the name, institution and the expectations on the meeting were carried out. After that, the Managing Director Micas Cumbana

presented the company and objectives and expectations of the meeting (presentation available on request).

- Explanation of the programme
  - The objectives of the project for dissemination of improved stoves was presented as well as the concept of carbon credits and how those can be generated, with focus on improved cooking stoves. Also, the benefits of carbon credits mechanisms to improve accessibility of stoves and massification were presented, with the anticipated social, economic and environmental benefits. This was followed by an explanation of the social, economic and environmental impacts of improved stove adoption and continuous use. The steps of a carbon project was also presented and the current stage of the project was highlighted and the Local Stakeholders Consultation was indicated as one of the necessary and important steps to follow for a successful carbon project implementation.
    It was also presented the experiences of SNV in the implementation of improved cooking stoves in Mozambique. SNV is a Holland based international NGO working on energy in different countries around the globe, with one of its components being the improved stoves.
- Discussion of continuous input / grievance mechanism
  - It was discussed during the meeting how the stakeholders could give inputs, opinions or suggestions during the duration of the crediting period. Participants were informed that all situations arising from the participation of stakeholders would be taken into account.
- Questions for clarification about the programme
  - Participants presented questions and comments which were answered or acknowledged by the moderator and project personnel.
- Blind SD exercise (to be conducted per methodology/technology/practice)
  - After the Questions and Answers session, the presenter introduced the concept of sustainable development indicators and asked the participants to present their ideas in terms of project impact towards those indicators. Participants were encouraged to rate the impact of the project on SD indicators using positive +, Negative – and neutral 0. Participants were encouraged to discuss and to present arguments towards their choices. After that, participants filled an SD Matrix sheet, rating the indicators. Also participants presented ideas on how those indicators can be monitored.
- Discussion on monitoring SD (to be conducted per methodology/technology/practice)
  - The presenter discussed with the stakeholders how the indicators would be monitored. The stakeholders engaged in a discussion and possible ways were presented and discussed
- Closure of the meeting

E.2. Summary of comments received

Stakeholder comment	Was comment taken into account (Yes/ No)?	Explanation (Why? How?)
There is a need to create a sustainable market for the improved stoves in Mozambique	Yes	Stoves are not handed for free; people need to pay for stoves. If not possible in cash, instalments are allowed. MozCarbon and other sell stoves taking into account the need not to create market distortions. Also, significant part of the income from stoves is re-

		invested on stoves and awareness campaigns.
The issue of stove price should be seen with attention, as the majority of the people in neighbourhoods of Maputo are below the poverty line.	Yes	Stove is sold at less than 40% of its real cost. Also, there is the possibility for the people in the community to buy stoves in instalments
The stoves should be sold at subsidized price against the benefits of carbon credits	Yes	Stove is sold at less than 40% of its real cost. Also, there is the possibility for the people in the community to buy stoves in instalments
There is a need to use simple language when presenting the benefits of improved biomass stoves to the communities	Yes	It is important to highlight that the communication is the best vehicle to raise awareness of the communities about the benefits of using improved and clean stoves. The project proponent uses local and simple language in some cases to communicate with the people. The promoters were trained to explain project concepts in local simple language. Also, in general, the promoters are from the communities where the project is implemented, thus facilitating communication, by translating scientific and academic language to comprehensible meaning when explaining concepts like carbon credits, carbon dioxide, combustion, etc.
How to integrate the people who sell charcoal as is expected reduction in revenues because of the massive use of improved stoves?	Yes	Some of the people who sell charcoal are also stove promoters, thus earning a percentage (commission) per stove sold, generating income to fill the gap created by the decrease of charcoal sales.
There is a need of teaching cooking practices in terms of stove usage, to combine the benefits of the stoves with good cooking practices.	Yes	Each stove sold by a promoter is accompanied by an explanation of stove usage and maintenance, and also, cooking practices

		as soaking beans per example.
I heard about carbon and I still do not understand. I'm from the community. We will have to work very hard with the communities in order to make them use stoves and understand these concepts. In the community it is advised to use simple (local) language so people will understand the message. (Maria Leonor - Community representative)	Yes	The whole concept of carbon credits was re-explained based on the presentation. Also, considerable funds will be made available for awareness campaigns
(i) My observation is that families use 1.5 sacks of charcoal per month, equivalent to 3-5ton CERs/year. There is a need for the subsidies because if 1 stove generate 2 tons of carbon emission reductions, multiplying by the price of 8USD and stoves disseminated, there is a room for subsidies. (ii) Different presentations no mention to better use of stove and different cooking techniques to use stove efficiently. Even if this is not important for carbon credits this has to be implemented. Example soak beans before cooking, kitchen protection, etc (Peter Coughlin – Econ Policy Group)	Yes	(i) Donor Funded projects for example the CBNRM have failed after the donors left. This shows the risk of subsidies. Example Mbaula save 40% in charcoal. Meaning that savings can pay for the stove. But as a carbon project developer, for the project, the stove will be subsidized. But is good to create capacity in long term for the market intervenient to make stoves a profitable business to develop the market. Examples from Association Mbeu. (ii) In fact, one of the components of the stove is awareness raising and, this is contemplated.
Which will be the price of the stove? (Narciso Sozinho – Local resident)	Yes	We expect to sell the stoves for an affordable price. We expect not be more than 500MT per ICS. The project is selling stove for 500MT.
It is important because the project has its focus in the community. Changalane is a big supplier of charcoal to Maputo. How involve the charcoal producers in the project? (Maposse – One World University)	No	In fact, Changalane was a supplier of charcoal to Maputo. Now, there are no forests capable to produce charcoal for Maputo. Charcoal comes now from Gaza and some parts of Inhambane province. One way to involve the producers is to teach techniques to add value to

		the charcoal produced, so they could sell in higher markets. Charcoal vendors were integrated in selling improved stoves in fixed charcoal selling points. They earned a percentage for each stove sold, filling the gap of the anticipated decrease of charcoal sales.
We are project developer with same intentions as yours. Who will certify? You said that there was no limitation in terms of stoves to be used in the project. We were advised by the consultant to use certified stoves (showing envirofit stoves). Our project is equal but the one difference is in the product to be distributed. I suggest you to use better stoves. Is one of the weakness of your project. The one you presented are not certified (I don't know). Which authority after the Ministry of Environment will certify the stoves? (Alessandro Galimberti – Fundação AVSI)	Yes	We will not distribute stoves for free. So families have to disburse some cash to have it. We are working to determine the price to be affordable. There are experiences and studies from PROBEC with the price people are willing to pay for charcoal improved stoves. Sales strategies include community sales, door to door and fixed stations. There are two separate mechanisms for the carbon projects. One is validation which is external auditing. Other is registration. There is CDM and Gold Standard. We will go for Gold Standard. About the quality of stoves to be used. We are working with faculty of engineering to test the stoves to comply with carbon requirements. Also with a lab in the Johannesburg University (SETAR). We are working to improve the locally available stoves. Currently, the project distributes Envirofit (world lead manufacturer of improved biomass stoves) and Chazam, which are certified by accredited laboratories.
Do you have producers of stoves? Modalities for buying from producers and when? What type of stoves are you considering?	Yes	We will include different stoves, as long as they are approved by the laboratory through the test. We have contacts with different producers which

If there is a producer ready today, are you able to buy? (Peter Coughlin – Econ Policy Group)		we cannot mention as a matter of business confidentiality. First, we will buy with associations which we are working with. We are working with stove producers associations. Micas Cumbane responded: we have funds to fulfill the expectations from the project. E.g, we were selected to implement the EEP S&EA project in Mozambique, donor funding constitutes part of the available funding, apart of the investors.
You said you will distribute in the first phase 13000 stoves. For how long will you distribute? (Sitoe – Kulima NGO)	Yes	The distribution has to be quick as we are eager to see the benefits to the poor. We expect to distribute the stoves in one year and, as it is a PoA, it is expected thousands of stoves delivered to the poor.
Which mechanisms to fulfill the social, economic and environmental? (Maposse- One World University)	Yes	The proponent will make sure that all actors are involved in the project. The socio-economic will be fulfilled by allowing more people to access clean energy, reduce the expenditure in fuel, reduce indoor pollution and associated respiratory diseases. The environmental benefits will be the reduction of emission of greenhouse gases and reduction of deforestation and forest degradation.
Working currently with SNV in stoves and your project is one of the kind we would be interested in funding We are to install a lab at UEM premises. Working with UEM to test stoves. We have to guarantee quality so we need a lab for testing.	Yes	As a result of the comments and the follow up meetings with GIZ, the proponent decided to implement Envirofit and Chazam stoves, suggested within these meetings. Also, further work was done with the proponent to install a Biomass Emissions

We have to use certified stoves. We have to work all together to avoid duplicating efforts. The stoves under the EnDev framework must at least be 40% efficient compared to traditional stoves. We have to work together to meet this criteria. (Rosario Loayza – Biomass Component Manager GIZ-EnDev)		Testing Center (BECT) at Eduardo Mondlane University, dedicated to do different tests within the biomass sector. This testing center was further integrated as one of the RTKC (Regional Testing and Knowledge Centers) within the framework of the Global Alliance for Clean Cookstoves. About the need for collaboration among biomass energy stakeholders, the proponent is a member of the renewable energy steering committee in Mozambique.

E.3. Consideration of comments received

The DNA for Mozambique is the MITADER.
The DNA approved the Project Proposal (PIN, for its acronym in Portuguese) and does not oppose to the project development. It does request the handing of 4 PDD printed copies and 1 digital copy, to be delivered to the DNA.
Please, refer to Section F3, Summary of comment received, above for consideration of comments received by the project owner.

SECTION F. Eligibility for inclusion

No.	Eligibility criterion - Category	Eligibility criterion - Required condition	Supporting evidence for inclusion	Description of this CPA in relation to the criterion and supporting evidence
1	Boundary and location of the VPA	The VPA is located within the boundary of the country within the PoA boundary.	Location and boundary is specified in the specific VPA-DD.	The VPA is located in 25 de Junho, Bagamoyo, George Dimitrov, Inhagoia, Inhagoia A, Nsalene, Magoanine A, Malhazine and Zimpeto (south) neighbourhoods from Maputo, Mozambique's capital city.
2	Avoiding double counting	The VPA includes a means of uniquely identifying the stoves to be distributed and the end-users who will receive stoves.	Photo or similar proof that stoves have a unique serial ID number or other means of identification.	All the serial numbers and batch numbers are recorded in the project database, as well as the address and GPS location

			Database and/or Distribution Record showing that end user details including name and address are to be collected along with Stove ID.	of each home an ICS is delivered.
3	Technology requirements	The ICS uses one of the following fuel types: ● Wood fuel ● Charcoal The ICS has a minimum efficiency of 20%(AMS II.G, Version 8.0, para 1)	Technical specification of ICS provided	All the technical specifications are up to the methodology requirements. Technical specifications are reviewed at the purchase time.
4	Start date of VPA	The start date of the VPA shall be after the PoA validation start date (i.e. not prior to 13 December 2011, which was the date the PoA was made available online on the UNFCCC website for global stakeholder consultation). However, retroactive projects have different rules and the start date of the VPA does not need to be after the PoA validation start date.	The start date of the VPA will be specified in each VPA-DD.	The start date of the programme is July 2015 as a pilot in the suburbs of Maputo. The implementation of the stoves started in January 1st, 2016.
5	Non-renewable biomass in use since Dec 1989	The first VPA in each country will demonstrate that non-renewable biomass has been in use since December 1989.	Information sourced from survey methods, published literature, official reports or statistics.	Forest degradation in Mozambique has been a consistent problem for decades, and non-renewable biomass has been used since before 31 Dec 1989. The population is strongly dependent on woody fuels and 80% of the population uses wood and charcoal to supply the household needs in terms of thermal energy, causing deforestation at a large scale.[11]
6	Additionality of VPAs	The VPA shall satisfy the methodology additionality conditions for small-scale VPAs: savings must be under 180 GWh_{th}/year so it can be	For the first VPA it shall be demonstrated that its savings are under the	This VPA can distribute a maximum of 14,554 ICS units. So far it has distributed 7090. It will distribute more stoves up

[11] Falcão, D. (2013) "Produção e Consumo Doméstico de Combustíveis Lenhosos em Moçambique". Faculdade de Ciências e Tecnologia of the Universidade Nova de Lisboa. Lisbon, Portugal.

		deemed as automatically additional under the methodology	methodology threshold	to the threshold limit, but never surpassing it.
7	Official Development Assistance (ODA)	The VPA is either: a) not receiving any funding from Annex I parties; or b) the Annex I party funds do not result in a diversion of ODA.	a) Confirmation by the DO or CME b) Affirmation by the funding party	The PO does not transfer credits to the Donor Country
8	End-user group	The VPA is either aimed at households, community organisations (eg. schools) or small/medium enterprises.	The VPA-DD specifies the target end-user group and the appropriate baseline.	The end-user group is clearly defined as the communities of the selected neighbourhoods
9	Sampling	Sampling of stoves within the VPA must meet the requirements of AMS II G v8.0 and the "Standard on Sampling and Surveys for CDM Projects and Programmes of Activities" (the Sampling Standard).	The VPA-DD either specifies a) sampling will be undertaken as part of the PoA Sampling Plan, or b) if VPA-specific sampling is to be undertaken, the VPA Sampling Plan must meet the requirements of AMS II G v8.0 and the Sampling Standard	The VPA sampling plan is designed to comply with the AMS II G v08.0 specifications
10	SSC Limit for VPAs	The annual energy savings of each VPA shall not go beyond the limits of 180 GWh_{th}/year over the entire crediting period.	The maximum number of ICS will be determined in each VPA-DD depending on the technology used. If a VPA exceeds the applicable limit, the claimable emission reduction shall be capped at 180 GWhth/year.	This VPA can distribute a maximum of 14,554 ICS units. So far it has distributed 6379. It will distribute more stoves up to the threshold limit, but never surpassing it.
11	Exempted from de-bundling	Each ICS reduces energy consumption by less than 180 GWh_{th}/year, according to the the Methodological Tool for Assessment of debundling for small-scale project activities v4.0 and the decision 1/CMP.2	Specific energy savings for the applied ICS estimated using Excel sheet or similar tool.	In the decision 1/CMP.2, paragraph 28 line b) states that a Type II project activities or those relating to improvements in energy efficiency which reduce energy consumption, on the supply and/or demand side, shall be limited to those with a maximum output of 60 GWh per

				year, or an appropriate equivalent, in this case 180 GHh_t per year. If so, the Methodological Tool for Assessment of debundling for small-scale project activities v4.0 states in the paragraph 10 that the project activity can qualify to use simplified modalities and procedures for small-scale CDM project activities.
12	Contractual agreement	In the case that the PO is not responsible for implementing the VPA, the organization responsible for VPA implementation, known as the Distributing Organisation (DO), has signed a contractual agreement with the CME to participate in the PoA.	Contract signed by the parts.	1. As part of the inclusion of this SSC-VPA under the PoA, an agreement will be signed by the distributing organization representing its associated ICS technicians and the PO. The agreement will include specific provisions and declarations that confirm the SSC-VPA project implementers agree that their activity is being subscribed under the PoA.

Appendix 429164024. Contact information of VPA implementers

Organization name	Mozambique Carbon Initiatives Lda.
Country	Mozambique
Address	Avda. Felipe Samuel Magaia 1530 Maputo, Mozambique
Telephone	+ 258 824811010
Fax	
E-mail	mycasnoa@gmail.com
Website	
Contact person	Micas Noa

Appendix 429164025. Affirmation regarding public funding

N/A

Appendix 429164026. Further background information on ex ante calculation of emission reductions

N/A

Appendix 429164027. Further background information on monitoring plan

N/A

Appendix 429164028. Summary report of comments received from local stakeholders

N/A

Appendix 429164029. Summary of post-registration changes

N/A

Document information

Version	*Date*	*Description*
08.1	20 October 2017	Editorial revision to remove appendix “Applicability of methodologies and standardized baselines” from the main part of the form which had been mistakenly kept in the previous version.
08.0	28 June 2017	Revision to: ● Remove appendix “Applicability of methodologies and standardized baselines” as the appendix is not relevant at the CPA level; ● Make editorial improvement.
07.0	7 June 2017	Revision to: ● Improve consistency with the “CDM project standard for programmes of activities” and with the PDD and PoA-DD forms; ● Make editorial improvement.
06.0	24 May 2017	Revision to: ● Ensure consistency with the “Standard: CDM project standard for programme of activities” (CDM-EB93-A07-STAN) (version 01.0); ● Incorporate the “Component project activity design document form for small-scale component project activities” (CDM-SSC-CPA-DD-FORM); ● Make editorial improvement.
05.0	15 April 2016	Revision to ensure consistency with the “Standard: Applicability of sectoral scopes” (CDM-EB88-A04-STAN) (version 01.0).
04.0	9 March 2015	Revision to: ● Include provisions related to statement on erroneous inclusion of a CPA; ● Include provisions related to delayed submission of a monitoring plan; ● Provisions related to local stakeholder consultation; ● Provisions related to the Host Party; ● Make editorial improvement.
03.0	25 June 2014	Revisions to: ● Include the Attachment: Instructions for filling out the component project activity design document form for CDM component project activities (these instructions supersede the "Guidelines for completing the component project activity design document form" (Version 01.0)); ● Include provisions related to standardized baselines; ● Add contact information on a CPA implementer and/or responsible person/ entity for completing the CDM-CPA-DD-FORM in A.13. and Appendix 1; ● Add general instructions on post-registration changes in paragraph 4 and 5 of general instructions and Appendix 6; ● Change the reference number from F-CDM-CPA-DD to CDM-CPA-DD-FORM;

		● Make editorial improvement.
02.0	13 March 2012	Revision required to ensure consistency with the "Guidelines for completing the component project activity design document form" (EB 66, Annex 16).
01.0	27 July 2007	EB 33, Annex 42 Initial adoption.

Decision Document Business	Class: Type: Function:	Regulatory Form Registration

Keywords: component project activity, project design document