Validation report form for inclusion of component project activities

(Version 03.0)

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

BASIC INFORMATION		
Title and GS reference number of the programme of activities (PoA)	Proyecto Mirador Enhanced Distribution of Improved Cookstoves in Latin America (1988)	
Version number of the validation report	1.0	
Completion date of the validation report	16/10/2020	
Version numbers of the PoA-DD to which this report applies	**6.0**	
Title and reference number of each VPAs to be included	VPA Ref. no.	**Title**
	02	Proyecto Mirador Enhanced Distribution of Improved Cookstoves in Latin America (GS1988), Proyecto Mirador Enhanced Distribution of Improved Cookstoves in Latin America – Second VPA for Distribution of Dos por Tres Cookstoves in Guatemala (GS10457)
	03	Proyecto Mirador Enhanced Distribution of Improved Cookstoves in Latin America (GS1988), Proyecto Mirador Enhanced Distribution of Improved Cookstoves in Latin America – Third VPA for Distribution of Dos por Tres Cookstoves in Nicaragua (GS10458)
Applied methodologies and standardized baselines for each VPA	VPA Ref. no.	**Applied methodologies and standardized baselines**
	02	Technologies and Practices to Displace Decentralized Thermal Energy Consumption, Version 2.0
	03	Technologies and Practices to Displace Decentralized Thermal Energy Consumption, Version 2.0
Sectoral scopes for each VPA	VPA Ref. no.	**Sectoral scopes (indicate mandatory and conditional sectoral scopes)**
	02	3: Energy Demand
	03	3: Energy Demand
Coordinating/managing entity (CME)	Proyecto Mirador Foundation (CME)	
Host Parties	Guatemala	
Estimated amount of annual average greenhouse gas (GHG) emission reductions or GHG removals by sinks in the crediting period (tCO2e), per VPA	VPA Ref. no.	**tCO_2e**
	02	10,294
	03	8,503
Name and UNFCCC reference number of the	TÜV NORD CERT GmbH	

DOE	Ref No.: E-0022
Name, position and signature of the approver of the validation report	Stefan Winter Final Approver TÜV NORD Digital unterschrieben von Winter Stefan Datum: 2020.10.16 16:26:47 +02'00'

SECTION A. Executive summary

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Proyecto Mirador Foundation has commissioned the TÜV NORD JI/CDM Certification Program (CP) to validate the inclusion of the specific-case VPAs:

"Proyecto Mirador Enhanced Distribution of Improved Cookstoves in Latin America (GS1988), Proyecto Mirador Enhanced Distribution of Improved Cookstoves in Latin America – Second VPA for Distribution of Dos por Tres Cookstoves in Guatemala (GS10457)" and;

"Proyecto Mirador Enhanced Distribution of Improved Cookstoves in Latin America (GS1988), Proyecto Mirador Enhanced Distribution of Improved Cookstoves in Latin America – Third VPA for Distribution of Dos por Tres Cookstoves in Guatemala (GS10458)"

to the PoA "Proyecto Mirador Enhanced Distribution of Improved Cookstoves in Latin America (1988)"

with regard to the relevant requirements of the GS4GG for project activities, as well as criteria for consistent project operations, monitoring and reporting.

The project activity provides improved cookstove (ICS) technology to the underserved populations of Guatemala and Nicaragua that use inefficient cookstoves, and to facilitate the project's expansion outside Guatemala and Nicaragua.

The following parties to the Kyoto Protocol, CME and VPAs implementers are involved in this component project activity (Table A-1):

Table A-1: Project Parties and VPAs implementer

Characteristic	Party	VPA Implementer	CME
Non-Annex 1 Country	Guatemala	Proyecto Mirador Foundation	X
Non-Annex 1 Country	Nicaragua	Proyecto Mirador Foundation	X

Details of the project location are given in table A-2 below:

Table A-2: Project Location

No.	Project Location		
Host Country	Guatemala		
Region:	The entire country of Guatemala		
Project location address:	N/A		
Latitude:	14°38′N	Longitude:	90°30′W

No.	Project Location		
Host Country	Nicaragua		
Region:	The entire country of Nicaragua		
Project location address:	N/A		
Latitude:	12°09′00″N	Longitude:	86°16′00″O

Basic technical details of the project are summarized in table A-3.

Table A-3: Technical data of the project activity

Parameter	Unit	Value
Type of cookstoves	-	Dos por Tres improved cookstove (ICS)
Capacity	kW	<150

SECTION B. Validation team, technical reviewer and approver

B.1. Validation team member

No.	Role	Type of resource	Last name	First name	Affiliation (e.g. name of central or other office of DOE or outsourced entity)	Involvement in			
						Desk review	On-site inspection	Interview(s)	Validation findings
1.	Team Leader	EI	Quireza	Oliver	TNMX	x	-	x	x
2	Team Member	EI	Mitre	Raul	TNMX	x	-	-	x
3.	Team Member/Technical Expert	EI	Kochaniewicz	Gregor	-	x	-	-	x

B.2. Technical reviewer and approver of the validation report

No.	Role	Type of resource	Last name	First name	Affiliation (e.g. name of central or other office of DOE or outsourced entity)
1.	Technical reviewer	EI	Lubanga	David	-
2.	Approver	IR	Winter	Stefan	TÜV NORD CERT

SECTION C. Means of validation

C.1. Desk/document review

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During the desk review all documents initially provided by the client and publicly available documents relevant for the validation were reviewed. The main documents are listed below:

- draft VPA-DD/VPADD/;
- registered (or draft) PoA-DD/POADD/;
- regulations and approval of project activity/EIA//LIC/;
- technical details of the project/TD/;
- host government approval/LoA/ (if available);
- supporting documents demonstrating the additionality/ADDI/;
- expected emission reductions/XLS/;
- local stakeholders' consultations/SHCP/;
- national legislation/EL/.

Other supporting documents, such as publicly available information on the GS website and background information were also reviewed.

C.2. On-site inspection

Not applicable.

In line with GS4GG-PoA-Req[/PoA-Req/]. §1.3 no site visit is necessary because no new technology is being incorporated to the PoA.

Duration of on-site inspection: N/A				
No.	**Activity performed on-site**	**Site location**	**Date**	**Team member[1)]**
1.	Opening meeting	-	-	-
2.	Interviews with company personnel	-	-	-
3.	Assessment of prior consideration documents and stakeholder consultation process	-	-	-
4.	Assessment of calculation of EF	-	-	-
5.	Assessment of evidences (additional documentation)	-	-	-
6.	Presentation of findings	-	-	-
7.	Closing meeting	-	-	-

C.3. Interviews

No.	**Interviewee**			**Date**	**Subject**	**Team member [1)]**
	Last name	**First name**	**Affiliation**			
1.	Guzman	Juan Carlos	El Mirador	25/09/2020	Technology Guatemala	Oliver Quireza
2.	Mendoza	Rafael	El Mirador	25/09/2020	Project Management	Oliver Quireza
3.	Parrales	Nelson	El Mirador	25/09/2020	Implementation Nicaragua	Oliver Quireza
4.	Hernandez	Ivan	Consultant	25/09/2020	Carbon Topics	Oliver Quireza

C.4. Sampling approach

C.4.1. Sampling during validation

☒	No sampling approach has been used by the VT to validate any parameter
☐	A sampling approach has been applied by the VT for the following parameter(s):

Parameter	Sampling approach [1)]	Sampling Type [2)]	Population	Sample Size
-	-	-	-	-

[1)] *Sampling Approaches:*

SiRS: Simple Random Sampling
StRS: Stratified Random Sampling
SS: Systematic Sampling
CS: Cluster Sampling
MSS: Multi-stage Sampling

[2)] *Sampling Types:*

PS: Parameter Sampling

C.4.2. Sampling approaches during on-site inspection

☒	No sampling approach has been used by the VT at on-site inspection
☐	A sampling approach has been applied by the VT for field check of the following parameter(s):

Parameter	Sampling approach [1)]	Sampling Type [2)]	Population	Sample Size
-	-	-	-	-

[1)] *Sampling Approaches:*

SiRS: Simple Random Sampling
StRS: Stratified Random Sampling
SS: Systematic Sampling

CS: Cluster Sampling
MSS: Multi-stage Sampling

[2] *Sampling Types:*
AS: Acceptance Sampling
PS: Parameter Sampling
COM: Full data check at higher data aggregation levels and sampling at original data levels

C.5. Clarification requests (CLs), corrective action requests (CARs) and forward action requests (FARs) raised

Areas of validation of compliance (SECTION D)	No. of CL	No. of CAR	No. of FAR
Titles of the VPAs and corresponding generic VPAs	-	-	-
Compliance with VPA-DD form	-	-	-
General description of the VPAs	-	-	-
Application of methodologies and standardized baselines	-	-	-
• Reference to methodologies and standardized baselines	-	-	-
• Project boundary, sources and GHGs	-	-	-
• Baseline scenario	-	-	-
Estimation of emission reductions or net anthropogenic removals	-	-	-
• Equations and parameters applied to calculate GHG emission reductions or net anthropogenic GHG removals	-	1	-
• Data and parameters fixed ex ante	-	1	-
• Ex ante calculation of GHG emission reductions or net anthropogenic GHG removals	-	3	-
• Summary of ex ante estimates of GHG emission reductions or net anthropogenic GHG removals	-	-	-
Monitoring plan	-	-	-
• Data and parameters to be monitored	-	2	-
• Description of the monitoring plan	-	-	-
Start date, crediting period type and duration	-	-	-
Environmental impacts	-	-	-
Local stakeholder consultation	-	-	-
Eligibility for inclusion	-	-	-
Others (Additionality)	-	1	-
Total	-	8	-

SECTION D. Validation findings

D.1. Proposed VPA and corresponding generic VPA

VPA title and reference number	Version number of the VPA-DD	Host Party	Generic VPA title, identification/reference number	Version number of the PoA-DD into which the VPA is included
Proyecto Mirador Enhanced Distribution of Improved Cookstoves in Latin America – Second VPA for Distribution of Dos por Tres Cookstoves in Guatemala (GS10457)	4.0	Guatemala	N/A	6.0

Proyecto Mirador Enhanced Distribution of Improved Cookstoves in Latin America – Third VPA for Distribution of Dos por Tres Cookstoves in Nicaragua (GS10458)	4.0	Nicaragua	N/A	6.0

D.2. Compliance with VPA-DD form

Means of validation	A draft VPA-DD for each VPA was submitted to the validation team by CME. By means of the GS website it has been checked whether a valid VPA-DD template (GS-VPA-DD-FORM) has been used. The following sources of information have been used in this context: • /VPADD/ • /VPADD-T/ • /GS/	
Findings	☒	A valid applicable reporting template VPA-DD-FORM as listed on the GS website has been used for the Component Project Activity Design Document to be uploaded.
	☒	The specific-case VPA(s) is(are) submitted with the request for registration of the PoA.
	☐	The specific-case VPA(s) is(are) to be included after the registration of the PoA.
	☐	The respective requirements have widely been complied with. However, the following issues needed to be addressed in this context:
Conclusion	☒	No CARs/CLs have been raised in this context. No correction was required in the context. The project is in line with the respective requirements.
	☐	The raised CARs/CLs have been addressed appropriately. The PP has carried out the requested corrections. All respective findings could be closed out. For details please refer to Appendix 4.
	A valid applicable VPA-DD template (VPA-DD-FORM version 1) has been used and correctly filled out for each VPA. Which is applicable as per implementation plan for the new regulatory framework.	

D.3. General description of the VPAs

Means of validation	By means of comparison of the VPA-DD versus the provided evidence, PoA-DD and Transition Annex presented to the validation team by CME, the validation team has assessed the description of the proposed VPAs in accordance with applicable related validation requirements of VVS. The entity responsible for the implementation and operation of the VPA is Proyecto Mirador Foundation, which is also the CME. The VPA 02 has only one host Party (Guatemala). The VPA 03 has only one host Party (Nicaragua). The description of the project is complete and accurate and provides an understanding of the proposed component project activity. The project consist of provision of improved cookstove (ICS) technology to the underserved populations of Central America that use inefficient cookstoves, and to facilitate the project's expansion throughout Guatemala and Nicaragua. This specific VPA aims to implement the Proyecto Mirador's Dos por Tres improved cookstove (ICS) technology for household applications in Guatemala and Nicaragua. This ICS leads to up to 50% fuel savings in households, which contributes to time, and money savings, better indoor air quality, improved health,

	and emission reductions. The start date of the VPA 02 is 13/05/2019, The start date of the VPA 03 is 02/08/2019, which are the dates when the first cookstove to be certified were installed . This is line with GS P&R §3.4.3. Also, it is confirmed that the start date of: VPA02 13/05/2018 VPA03 02/08/2019 are after the start date of the PoA on 07/02/2013. The length of the retroactive CP is defined as 5 years which is in line with the P&R, renewable twice. The estimated annual average amount of emission reductions during the first crediting period are: VPA 02 = 10,294 tCO_2e. VPA 03 = 8,503 tCO_2e. No public funding has been identified during the validation process. The CME provide ODA declarations for both VPAs. In addition, the VPAs has been neither registered as a GS project activity nor included in another registered PoA. Moreover, the VPAs has not been excluded from a registered GS PoA as a result of erroneous inclusion of VPAs.	
Findings	☒	The VPA-DDs contain a clear, accurate and complete project description.
	☒	The information regarding the implementer of the VPA is listed at the VPA-DD and it is consistent with Appendix 1 that contains the contact information.
	☒	This description is in accordance with the real situation or (in case of greenfield projects) is it most likely that the project will be implemented according to the project description.
	☐	The VPA qualifies as a small-scale GS project activity as defined in decision 4 / CMP.1 annex II.
	☐	The VPA qualifies as an afforestation and reforestation (A/R) GS project activity.
	☒	The VPA has been neither registered as a GS project activity nor included in another registered PoA.
	☒	The VPA is not a VPA that has been excluded from a registered GS PoA as a result of erroneous inclusion of VPAs.
	☐	The respective requirements have widely been complied with. However, the following issues needed to be addressed in this context:
Conclusion	☒	No CARs/CLs have been raised in this context. No correction was required in the context. The project is in line with the respective requirements.
	☐	The raised CARs/CLs have been addressed appropriately. The PP has carried out the requested corrections. All respective findings could be closed out. For details please refer to Appendix 4.
	The description of the VPA is considered in line with the actual information provided by the project developer such as environmental and technology information and in line with the eligibility criteria of the PoA-DD.	

D.4. Application of methodologies and standardized baselines

D.4.1. Reference to methodologies and standardized baselines

Means of validation	By means of comparison of the VPA-DD with (i) the applied GS methodology, (ii) all applicable GS Meth tools, and (iii) if applicable, a standardized baseline the validation team has checked whether the VPA is in compliance with the related

	requirements of the applied methodology/tools/SB. The following sources of information have been used in this context: • /VPADD/ • /PoADD/ • /METH/ • /TOOL/ • /GS/ The component project activity applies approved Gold Standard methodology Technologies and Practices to Displace Decentralized Thermal Energy Consumption, Version 2.0. The methodology requires 5 applicability conditions: 1. Boundaries clearly defined and avoidance double counting. This condition is fulfilled as section B.2 of VPA-DD clearly defines the geographic area (whole country Guatemala & Nicaragua). Furthermore the double counting is assured by the use of an electronic database where each household is registered; furthermore the stoves are build on site and the designs is unique so that it cannot be confused with other stoves from other projects. 2. The energy capacity of each technology unit has to be less than 150 kW as prescribed by the eligibility criterion 3. This condition is always fulfilled because the Dos por Tres technology has a energy output between 4 and 7 kW, as per aprovecho research Center study/Test/ 3. If baseline technology is to be used, this has to be clearly differentiated from the project technology. Other technology is considered to be used in the baseline if the stove in the baseline is broken of utilized. This is in line with the methodology criteria and the PoA. Nevertheless as per baseline survey most of the baseline doesn't include replacement of other ICS technology, only in very limited cases.. For every stove there is records with include pictures of the baseline stove or "fogon" to confirm that the baseline conditions are fulfilled. Comparison with other projects located in the host country Nicaragua were checked by the VT. It is confirmed that the Dos por tres technology is exclusive to the project el Mirador. 4. The ER ownership has to be communicated to all PPs. The CME is also the VPA implementer and therefore, the VERs automatically belong to the CME. No other PP is involved. The stoves and contractors who install the stoves are informed about the VERs property thought Use and Maintenance brochure provided to the stoves users/Bro/. 5. If new biomass is used in project scenario the the GS requirements for biomass have to be fulfilled. As no new biomass is used in the project scenario this is not applicable. This is confirmed by the baseline surveys. The VPA also applies the methodological tools *"Tool for the demonstration and assessment of additionality" – version 05.0*	
Findings	☒	The VPAs applies a valid version of a GS Methodology.
	☒	All applied methodological tools are valid and approved.
	☒	The applied methodology and methodological tools derived from GS website.
	☒	All methodology applicability conditions are met.
	☒	The VPA is in line with all requirements and stipulations mentioned in all sections of the applied methodology.
	☒	The VPA is expected to result in significant emissions, related both to project and leakage, other than those listed in the methodology.
	☒	The respective requirements have widely been complied with. However, the following issues needed to be addressed in this context:
		CAR 01
Conclusion	☐	No CARs/CLs have been raised in this context. No correction was required in the context. The project is in line with the respective requirements.

	☒	The raised CARs/CLs have been addressed appropriately. The PP has carried out the requested corrections. All respective findings could be closed out. For details please refer to Appendix 4.
	The VPA is in line with all requirements and stipulations mentioned in all sections of the applied GS baseline and monitoring methodology.	

D.4.1.1. Deviation from methodology

Means of validation	By an in-depth review of the VPA-DD against the applied GS methodology and methodological tools, it has been checked whether any deviation from applied methodologies, including standardized baselines have been verified. The following sources of information have been used in this context: • /VPADD/ • /PoADD/ • /METH/ • /TOOL/ The voluntary project activity applies approved methodology TPDDTEC v.2.	
Findings	☒	No deviation from or revision of the methodology is necessary.
	☐	A deviation from or revision of the methodology is to be requested and approved.
	☐	The respective requirements have widely been complied with. However, the following issues needed to be addressed in this context:
		-
Conclusion	☒	No CARs/CLs have been raised in this context. No correction was required in the context. The project is in line with the respective requirements.
	☐	The raised CARs/CLs have been addressed appropriately. The PP has carried out the requested corrections. All respective findings could be closed out. For details please refer to Appendix 4.
	No deviation or revision of the methodology was requested during the validation period.	

D.4.1.2. Clarification on applicability of methodology, tool and/or standardized baseline

Means of validation	By means of validation of the proposed GS voluntary component project activities with (i) the applied GS methodology, (ii) all applicable GS Meth tools, and (iii) if applicable, a standardized baseline the validation team has checked whether if any clarification on applicability of methodology, tool and/or standardized baseline to the proposed VPAs have been issued. The following sources of information have been used in this context: • /VPADD/ • /PoADD/ • /METH/ • /TOOL/ • The component project activity applies approved methodology methodology TPDDTEC v.2	
Findings	☒	No clarification on applicability of methodology, tool and/or standardized baseline to the proposed VPA has been issued.
	☐	A clarification on applicability of methodology, tool and/or standardized baseline to the proposed VPA has been issued.
	☐	The respective requirements have widely been complied with. However, the following issues needed to be addressed in this context:
		-
Conclusion	☒	No CARs/CLs have been raised in this context. No correction was required in the context. The project is in line with the respective requirements.
	☐	The raised CARs/CLs have been addressed appropriately. The PP has carried out the requested corrections. All respective findings could be closed out. For details please refer to Appendix 4.

	There is no clarification on applicability of methodology, tool and/or standardized baseline to the proposed VPAs.

D.4.2. Project boundary, sources and GHGs

Means of validation	By means of comparison of the VPA-DDs with the applied TPDDTEC methodology, the validation team has assessed the project boundary and sources and GHGs identified in the baseline scenario in accordance with applicable related validation requirements in the VVS. The following sources of information have been used in this context: /VPADD/ /POADD/ /METH/	
Findings	☒	The VPA-DD includes a correct and complete description of the system boundary (GHG gases and GHG sources) which is in accordance with the PoA.
	☒	The VPA-DD includes sufficient proofs that the geographical location of the VPA is within the boundary definition of the PoA.
	☒	The VPA-DD includes a flow diagram physically delineating the VPA.
	☐	The respective requirements have widely been complied with. However, the following issues needed to be addressed in this context:
		-
Conclusion	☒	No CARs/CLs have been raised in this context. No correction was required in the context. The project is in line with the respective requirements.
	☐	The raised CARs/CLs have been addressed appropriately. The PP has carried out the requested corrections. All respective findings could be closed out. For details please refer to Appendix 4.
	It is clearly stated at the VPA-DDs a correct and complete description of the system boundary in line with the VPA-DD template. In addition, there are sufficient proofs that the geographical locations of the VPAs are within the boundary definition of the PoA which can be verified by its flow diagram.	

D.4.3. Baseline scenario

Means of validation	By means of comparison of the VPA-DDs with the applied GS methodology, the validation team has assessed the baseline scenario in accordance with applicable related validation requirements in the VVS. The following sources of information have been used in this context: /VPADD/ /PoADD/ /METH/ /BL-S/ In line with the applied methodology TPDDTEC v.2 and the PoA-DD the VPAs baseline requirement to be included in the PoA has to be the “household or institutional users of inefficient biomass stoves. This has to be confirmed by baseline kitchen surveys. The provided baseline survey contains the following information for both VPAs: Types of baseline “fogones” Exact location of towns and household. A modern data gathering is implemented where each interviewed household is recorded electronically and managed in the electronic data bese, including picture of each baseline kitchen. Statistical analysis describing the types of baseline cookstove (*Fogon* in Spanish) and stoves different structures. Questionnaire applied and spreadsheets containing all responses provided by each users, including unique identification of households, telephone, users full name and pictures. Seasonal variations and Fuel types The baseline contain all information requested by the applied methodology

	TPDDTEC v.2. Furthermore the sampling design has been performed following the methodological tool Standard for Sampling and Surveys for CDM Project Activities and Programme of Activities" (Version 04.1) and in line with the PoA-DD. It is designed to ensured that a minimum of 100 samples are taken, where the actual figures are 210 and 299 for Guatemala and Nicaragua respectively. It is relevant to mention that the applied software to collect an manage the data digitally in the field directly from the households provides a very robust and reliable data management system, so that the surveys information is precise and reliable.	
Findings	☒	The baseline scenario is given by the applied methodology.
	☒	All possible baseline scenarios have been considered.
	☒	The respective requirements have widely been complied with. However, the following issues needed to be addressed in this context:
		CAR 01
Conclusion	☐	No CARs/CLs have been raised in this context. No correction was required in the context. The project is in line with the respective requirements.
	☒	The raised CARs/CLs have been addressed appropriately. The PP has carried out the requested corrections. All respective findings could be closed out. For details please refer to Appendix 4.
	After correction of the VPA-DDs and delivery of the baseline surveys/BL-S/, it is confirmed that the VPAs fulfil the requirements to be included in the PoAs.	

D.5. Estimation of emission reductions or net anthropogenic removals

D.5.1. Equations and parameters applied to calculate GHG emission reductions or net anthropogenic GHG removals

Means of validation

- By a detailed review of the VPA-DDs with the PoA-DD and applied GS methodology, the validation team has assessed the steps taken and the equation and parameters applied to calculate the emission reductions or net GHG removals for the specific-case VPAs as follow:
-
- Following assumptions have been considered:
-
- Parameter $EF_{fuel,nonCO2}$ is transparently calculated considering the following default values

CH_4 emission factor for wood	$EF_{fuel,CH4}$	0.30	tCO_2/TJ	IPCC default
N_2O emission factor for wood	$EF_{fuel,N2O}$	0.004	tCO_2/TJ	IPCC default
Global warming potential of CH_4	GWP_{CH4}	25	tCO_2/tCH_4	IPCC Decision 4/CMP.7, see Table 2.14 (Errata)
Global warming potential of N_2O	GWP_{N2O}	298	tCO_2/tN_2O	IPCC Decision 4/CMP.7, see Table 2.14 (Errata)
Leakage for project scenario	$LE_{p,y}$	0	tCO_2e/yr	Mirador monitoring

-
- The default values have been properly selected.
-
- At the time of VPA validation the KPT are not available yet so that the monthly drop-off has been calculated based on the historic data of VPA1. This approach was accepted by the GS. The following values are applied:

DROP OFF PROJECTIONS		
Abandonment Assumption	VP9 Applied	Monitored [Cumulative]
Age 0-1	4%	**4%**
Age 1-2	3%	**6%**
Age 2-3	7%	**14%**
Age 3-4	1%	**15%**
Age 4-5	18%	**33%**
Age 5-6	21%	**54%**

-
- It is important to clarify that before the PoA was developed El Mirador developed a single project in Honduras with the same technology and project structure. After the signe project was registered succesfuly the CME decided to develop the PoA throughout the whole Central American Region do the single project in Honduras became the first VPA. Due to this fact the data gathered for the 1st verification period of the single project in Honduras was taken as the bases to calculate the ex ante ER for the following VPAs 2 and 3.The PoA before was registered as a single project (now called VPA1), consideration to take into account Leakage and Double Counting.was requested by the GS for validation and verification of the single project in Honduras As a conservative approach, the project calculates the leakage and double counting emissions and discount those emissions; this was verified and reviewed by the GS for the VPA1,

		so for the ex ante calculation of VPA 2 and 3 the same approach is followed for consistency. As the proposed approach was requested and approved by the GS, it is considered correct. • • As the fuel in the baseline and project situation is the same, in accordance with the applied methodology TPDDTEC the ER calculation has been done as per equation 1, as follows (see ER sheet, rows 65): $ER_y = \sum_{b,p} (N_{p,y} * U_{p,y} * P_{p,b,y} * NCV_{b,\,fuel} * (f_{NRB,b,y} * EF_{fuel,\,CO2} + EF_{fuel,\,nonCO2})) - \sum LE_{p,y}$ **(1)** Where: $\sum_{b,p}$ Sum over all relevant (baseline b/project p) couples $N_{p,y}$ Cumulative number of project technology-days included in the project database for project scenario p against baseline scenario b in year y $U_{p,y}$ Cumulative usage rate for technologies in project scenario p in year y, based on cumulative adoption rate and drop off rate revealed by usage surveys (fraction) • • Nevertheless, for clarity in the ER spreadsheets the CME included a calculation splitting the BE, PE and LE (see ER sheet row 68). Cross checking both calculation it can be conformed that the final net ER calculation is consistent and correct. • The fNRB is calculates in accordance with section A1.3 of the methodology TPDDTEC V3.1 as per option b, adoption of the approach similar to the latest version of CDM-approved methodology AMS II.G ver. 11.1 which refers to TOOL30 v2.0, where the parameters were assessed by checking the data traceability, by confirming that the data sources are public available and the informations studies are robust, with sufficient information, appropriate and with the most latest available information. The estimated parameters includes: Woody biomass consumption, MAI, total annual consumption of wood, which are taken as the basis for the fNRB calculation, • The KPT information applied for ER ex ante estimation is the one done previously for verification of the 1st VPA in Honduras. This is correct and in line with the TPDDTEC v.2 as the information from the VPA 1 is the more complete and representative of the PoA. Furthermore the methodology TPDDTEC v.2 also states that the actual baseline Field Test can be done before the first verification but not necessary at validation. The following estimations were reviewed: input parameters, annual changes, the 90-30 tests, daily wood use, meals per person and per capita consumption. • • The total emission reductions including the 5 years of the CP are: • VPA2: 51,469 **tCO2e** • VPA3: 42,517 **tCO2e** • The following sources of information have been used in this context: • /VPADD/, /PoADD/, /NBR/, /METH/, /METH2/, /TOOL/, /XLS/
Findings	☒	All formulae to calculate **baseline** emissions have been applied in line with the underlying methodology and the PoA.
	☒	All formulae to calculate **project** emissions have been applied in line with the underlying methodology and the PoA.
	☒	All formulae to calculate **leakage** emissions have been applied in line with the underlying methodology and the PoA.
	☒	The respective requirements have widely been complied with. However, the following issues needed to be addressed in this context:
		CAR 02, CAR 06, CAR 07, CAR 08
Conclusion	☐	No CARs/CLs have been raised in this context. No correction was required in the context. The project is in line with the respective requirements.
	☒	The raised CARs/CLs have been addressed appropriately. The PP has carried out the requested corrections. All respective findings could be closed out. For details please refer to Appendix 4.
	The VPA-DDs include a correct and complete description of the methods or methodological steps as described in the applied methodology to calculate the net Emission Reductions but also calculate separately the baseline, project and leakage emissions. All the equations to calculate the ERs are in accordance with the applied methodology and PoA-DD and the transition annex. The ER calculations are fully traceable, correct and conservative as additional discount has been deducted following the recommendation requested by the GS at verification of VPA1.	

D.5.2. Data and parameters fixed ex ante

Means of validation	During the validation, all parameters that are not monitored during the crediting period (as listed in chapter B.4.2 of the VPA-DDs) have been checked in accordance with the requirements of the methodology, tools, underlying GSPoA. The following sources of information have been used in this context: • /VPADD/ • /POADD/ • /METH/ In line with the PoA-DD the following parameters has been fixed ex ante: **Parameters relevant to the SDG - 13 -Climate Action** 1. ID 1 / EF_{fuel,CO_2} 2. ID 2 / $EF_{fuel,nonCO_2,CH_4}$ 3. ID 3 / $EF_{fuel,nonCO_2,N_2O}$ 4. ID 4 / NCV_{fuel}	
Findings	☒	The list of parameters which are determined ex-ante is complete.
	☒	The provided values are correct for all parameters.
	☒	The respective requirements have widely been complied with. However, the following issues needed to be addressed in this context:
		CAR 03
Conclusion	☐	No CARs/CLs have been raised in this context. No correction was required in the context. The project is in line with the respective requirements.
	☒	The raised CARs/CLs have been addressed appropriately. The PP has carried out the requested corrections. All respective findings could be closed out. For details please refer to Appendix 4.
	The list of the ex-ante parameters is complete in accordance with applied methodology and tools.	

D.5.3. Ex-ante calculation of GHG emission reductions or net anthropogenic GHG removals

Means of validation	By means of comparison of the VPA-DDs with the applied GS methodology, methodological tools and presented calculations, the validation team has assessed the estimated emissions reductions of the component project activity in accordance with applicable related validation requirements in the VVS. The following sources of information have been used in this context: • /VPADD/ • /PoADD/ • /METH/ • /METH2/ • /XLS/	
Findings	☒	The equations applied for calculation are correctly applied according to the approved methodology.
	☒	All values of data to be applied are considered to be reasonable, applicable and conservative.
	☒	The ER calculation as described in D.6.2 is correct.
	☒	The respective requirements have widely been complied with. However, the following issues needed to be addressed in this context:
		CAR 02, CAR06, CAR 07, CAR08
Conclusion	☐	No CARs/CLs have been raised in this context. No correction was required in the context. The project is in line with the respective requirements.
	☒	The raised CARs/CLs have been addressed appropriately. The PP has carried out the requested corrections. All respective findings could be closed out. For details please refer to Appendix 4.
	All equations, formulas and conservative assumptions have been applied correctly as per the applied methodology The ERs are deemed real and measurable. The calculation at the Excel spreadsheet is correct and traceable.	

D.5.4. Summary of ex ante estimates of GHG emission reductions or net anthropogenic GHG removals

Means of validation	The validation team has checked the ex-ante calculations of the VPA-DDs as well as the calculation sheets in detail, in accordance with the applicable validation requirements in the VVS and the PoA standard.	
Findings	☒	The annual, total and average values for baseline, project and leakage emissions as well as emission reductions have been listed correctly.
	☒	The template table has been used.
	☐	The respective requirements have widely been complied with. However, the following issues needed to be addressed in this context:
		CAR 02, CAR06, CAR 07, CAR08
Conclusion	☐	No CARs/CLs have been raised in this context. No correction was required in the context. The project is in line with the respective requirements.
	☒	The raised CARs/CLs have been addressed appropriately. The PP has carried out the requested corrections. All respective findings could be closed out. For details please refer to Appendix 4.
	The ex-ante net Emission Reduction calculations have been correctly listed for each year of the crediting period.	

D.6. Monitoring plan

D.6.1. Data and parameters to be monitored

Means of validation	During the validation all monitoring parameters (as listed in chapter B.7.1 of the VPA-DD) have been checked with regard to: Description, source of data, appropriateness of the applied measurement / determination method, monitoring frequency, applied QA/QC measures, purpose of data, formats. The following sources of information have been used in this context: • /VPADD/, /PASS/, /PoADD/, /METH/, /TRANS/ The following parameters have been included in the MP in accordance with the PoA-DD: **Parameter relevant to the SDG - 15 - Life on Land** ✓ ID 5 / fNRB,b,y ✓ ID 7 / Pp,b,y **Parameters relevant to the SDG - 13 - Climate Action** ✓ ID 6 / Np,y ✓ ID 7 / Pp,b,y ✓ ID 8 / Up,y ✓ ID 9 / LEp,y ✓ ID 10 / LEp,y – Leakage due to Transportation **Parameters relevant to the SDG - 7 - Affordable and Clean energy** ✓ ID 11 / % reduction in release of PM2.5 **Parameters relevant to the SDG - 3 - Good Health and Well Being** ✓ ID 12 / % reduction in personal exposure to PM2.5 **Parameters relevant to the SDG - 1 - No Poverty** ✓ ID 13 / Time saved collecting fuelwood ✓ ID 14 / Money saved purchasing fuel -as per Transition document -CAR 04 **Parameters relevant to the SDG - 2 - Zero Hunger** ✓ ID 15 / % of people reporting they used money saved purchasing fuelwood to buy food *The following parameters are defined in accordance with the Transition Annex, as theses are not defined in the PoA-PDD v6.* **Parameters relevant to the SDG - 7 - Affordable and Clean energy** ✓ ID 16 / % of households that report the air inside the home is cleaner

	Parameters relevant to the SDG - 4 - Quality Education ✓ ID 17 / Training hours provided per year **Parameters relevant to the SDG - 5 - Gender Equality** ✓ ID 18 / Proportion of employees who are women ✓ ID 19 / Reduction in cooking time ✓ ID 20 / % of users who say there is something they don't like about the stove **Parameters relevant to the SDG - 8 - Decent Work and Economic Growth** ✓ ID 21 / % of Mirador employees and microenterprises who report they are satisfied with their jobs ✓ ID 22 / Quantitative employment by job type **Parameters relevant to the SDG - 13 - Climate Action** ✓ ID 23 / Tonnes of CO2 reduced It is observed that the PoA was originally registered under the version ToolKit 2.2, nonetheless the VPA2 and VPA3 are done as per new standard GS4GG. So the sustainable development monitoring parameters in VPA2 and VPA3 are not exactly described as per Passport (ver.1, 21/06/2013), nevertheless the monitoring parameters have been described in VPA-DD 2 and 3 in accordance with the Transition Annex, which at the same time cover the parameters included in the Passport.	
Findings	☒	The list of parameters which are to be monitored is complete.
	☒	The respective requirements have widely been complied with. However, the following issues needed to be addressed in this context:
		CAR 03, CAR 04
Conclusion	☐	No CARs/CLs have been raised in this context. No correction was required in the context. The project is in line with the respective requirements.
	☒	The raised CARs/CLs have been addressed appropriately. The PP has carried out the requested corrections. All respective findings could be closed out. For details please refer to Appendix 4.
	The list of the parameters is complete and the monitoring is in accordance with applied methodology, the Transition Annex, PoA-DD and Passport. For each identified parameter a separate table has been included in line with the given instructions with value, description, source of data, appropriateness of the applied measurement / determination method and responsible persons, monitoring frequency, applied QA/QC measures, purpose of data and formats.	

D.6.2. Description of the monitoring plan

Means of validation	The VPA-DDs monitoring plans including the sampling procedures has been provided in section B.7.2 and B.7.3. Nonetheless, most of the monitoring activities are provided at PoA level. Section D.7.2 of PoA-DD describes the monitoring plan details, including the sampling activities. In line with the PoA-DD the usage surveys are planned in VPA-DD to be completed annually with a minimum sample size of 100 with at least 30 samples per age group. The KPTs sample size shall comply with the COV as per methodology (0.5-1.0), no less than 30 samples and for the case of paired sampling the 90/30 rules shall apply. If single sample approach is used then the 90/10 rules shall be applied The monitoring arrangements for the parameters can be implemented, the QA/QC procedures are appropriate and sufficient to ensure that the emission reductions achieved from the component project activity can be reported ex-post and further verified. In addition, procedures, type of data and responsibilities are identified and provisions for data archiving are made. The following sources of information have been used in this context: • /VPADD/

	• /PoADD/ • /METH/ The monitoring plan and monitoring parameters described in the VPA-DDs are fully in line with the PoA-DD.	
Findings	☒	The monitoring plan of the VPA is in accordance with the underlying methodology/ies.
	☒	The means of monitoring of all parameters contained in the monitoring plan are feasible.
	☒	A sampling plan has been provided in line with the standard for sampling and surveys.
	☐	The respective requirements have widely been complied with. However, the following issues needed to be addressed in this context:
		-
Conclusion	☒	No CARs/CLs have been raised in this context. No correction was required in the context. The project is in line with the respective requirements.
	☐	The raised CARs/CLs have been addressed appropriately. The PP has carried out the requested corrections. All respective findings could be closed out. For details please refer to Appendix 4.
	It can be confirmed that the monitoring plan and the means of the monitoring of its parameters is feasible within the project design and that all parameters can be measured accurately ex-post without material misstatements. In addition, the monitoring plan for the VPA is in accordance with the methodology TPDDTECv2.0. Management structure and roles and responsibilities are set for data collection, and data archiving. In addition, procedures for surveys and sampling have been sufficiently established.	

D.7. Start date, crediting period type and duration

Means of validation	By means of comparison of the VPA-DDs and evidences presented, the validation team has checked the compliance of the start date of the PoA in accordance with the applicable requirements in the VVS. The following sources of information have been used in this context: • /PoADD/ • /VPA-DD/ • /PSD/ • /GS/ The start date of the VPAs are: VPA02: 13/05/2019 VPA03: 02/08/2019 The start date of the VPAs,is the date when the first cookstove was installed (certified). This date is considered the date at which the real action of the VPA begins and the date of no return in the development of the project. It is confirmed that the start date of the VPA on is after the start date of the PoA on 07/02/2013. Therefore, these are retraoactive VPAs. In line with the GS4GG, the chosen crediting period is renewable twice with duration of 5 years each.	
Findings	☒	The start date of the PoA was correctly determined and correctly evidenced.
	☐	The respective requirements have widely been complied with. However, the following issues needed to be addressed in this context:
		-
Conclusion	☒	No CARs/CLs have been raised in this context. No correction was required in the context. The project is in line with the respective requirements.
	☐	The raised CARs/CLs have been addressed appropriately. The PP has carried out the requested corrections. All respective findings could be closed out. For details please refer to Appendix 4.

	It has been confirmed that the start dates of the VPAs is after the start date of the PoA on 07/02/2013.

D.8. Environmental impacts

Means of validation	In line with the PoA-DD the environmental analysis shall be performed at VPA level. Nonetheless, the PoA does not have a negative environmental impact, and improved cookstoves projects are not among the project activities which EIA is mandatory as per the laws and regulations of Guatemala and Nicaragua. In line with the SDG analysis the PoA had positive impacts to the environment, such as the reduction of biomass consumption and the reduction of air emission, where the main impact in the cookstoves users is health. The following sources of information have been used in this context: • /VPADD/ • /PoADD/	
Findings	☒	The project complies with host Party requirements for an Environmental Impact Assessment.
	☐	Not applicable as the environmental analysis was performed at the PoA level.
	☐	The VPA qualifies as a small-scale GS project activity as defined in decision 4 / CMP.1 annex II.
	☐	The VPA qualifies as an afforestation and reforestation (A/R) GS project activity.
	☐	The respective requirements have widely been complied with. However, the following issues needed to be addressed in this context:
		-
Conclusion	☒	No CARs/CLs have been raised in this context. No correction was required in the context. The project is in line with the respective requirements.
	☐	The raised CARs/CLs have been addressed appropriately. The PP has carried out the requested corrections. All respective findings could be closed out. For details please refer to Appendix 4.
	By verifying the local EIA legislations in Guatemala and Nicaragua it is confirmed that the project doesn't require any environmental licensing	

D.9. Local stakeholder consultation

Means of validation	In line with the GS4GG Stakeholder Procedure Requirements and Guidelines the LSC is performed at VPA level. No LSC requirements are required by the legislation in Guatemala and Nicaragua for this kind of project. The LSC took place on: VPA 02: 27/02/2020 VPA 03: 06/02/2020 The following sources of information have been used in this context: • /VPADD/ • /POADD/ • /SHCP/	
Findings	☐	The local stakeholder consultation process was completed before the start date of the VPA.
	☒	The local stakeholder consultation process was completed before the submission of the VPA-DD to the DOE.
	☐	The local stakeholder consultation process can be assessed as adequate and in accordance with host Country requirements.
	☐	The local stakeholder consultation process was carried out at the PoA level.
	☐	The respective requirements have widely been complied with. However, the following issues needed to be addressed in this context:
		-
Conclusion	☒	No CARs/CLs have been raised in this context. No correction was required in the context. The project is in line with the respective requirements.
	☐	The raised CARs/CLs have been addressed appropriately. The PP has carried out the requested corrections. All respective findings could be closed out. For details please refer to Appendix 4.
	The local stakeholder consultation process was carried out in line with the GS4GG	

	Stakeholder Procedure Requirements and Guidelines for the LSC.

D.10. Eligibility for inclusion

By means of comparison of the specific-case VPA(s) with each eligibility criterion for the inclusion of a VPA in the PoA, including the demonstration of additionality, as described in the PoA and the corresponding generic VPA(s), in accordance with the applicable requirements in the PoA Standard[/POAS/]. As the project was originally register under the GS Tool-kit 2.2. The following assessment is focused specially in the Transition Annex because this document includes the PoA information aligned with the new Standard GS4GG.

Demonstration of the Eligibility Criteria:

#	Eligibility Criteria	Description	Means of Verification (as defined in PoA)	Proof of Eligibility (this VPA)	VVB Assessment and conclusion
1	VPA Location and Project Boundary	VPA shall involve the distribution of ICS within the geographical boundary of Host Countries defined in the PoA	VPAs clearly states VPAs project boundary under Section A.4, "Geographic Reference or Other Means of Identification," and VPA project boundary falls within PoA project boundary. GPS markings are kept for each stove installed and available to VVB for verification to ensure all stoves are within VPA project boundary.	VPA clearly states VPA project boundary under Section A.4, "Geographic Reference or Other Means of Identification." VPAs project boundary are Guatemala and Nicaragua, which falls within PoA project boundary. GPS markings are kept for each stove installed and available to VVB for verification to ensure all stoves are within VPA project boundary	The geographic locations Guatemala and Nicaragua of VPA02 and VPA03 respectively are clearly stated throughout the project documentation which is in line with the host parties indicated in the registered PoA-DD. The criterion is fulfilled.
2	Avoid double counting	VPA shall apply a unique identifier to each cookstove installed and apply routine data checks and other management protocols that ensure double counting is avoided.	Electronic database is available to VVB for verification containing individual records for each stove, each with a unique identifier automatically generated by database.	Stoves are built *in situ* and a unique household account is created in the electronic database at the time of construction, including a GPS mark. Furthermore, an inspector goes to each house before construction can begin and at that time, verifies that ICS technology is not already present. For those reasons, if there is another similar activity within the same target area, stoves from the other project cannot possibly be counted under Mirador's activity.	The verification means included in the VPA02 and VPA03 are as per the PoA-DD. The reviewed electronic database clearly states the unique identifier, user name, address, telephone number and GPS for each household. Such data was crosschecked versus the data in the baseline stoves data. Inspectors were interviewed to cross checked how they proceed when other ICS is in the households. They have confirmed that other developers could work in near communities but it is difficult to get a different developer in the same house or street where Mirador is working because the householders usually are organized in small groups or families that usually commit to work with one developer. Furthermore, pictures from the stove 2x3 were provided by the CME to confirm than no other ICS is installed in the visited households.

#	Eligibility Criteria	Description	Means of Verification (as defined in PoA)	Proof of Eligibility (this VPA)	VVB Assessment and conclusion
					The criterion is fulfilled.
3	Technology	VPAs shall utilize ICS technologies with useful energy output of less than 150kW	Technical report from qualified 3rd party.	Each stove installed has continuous useful energy outputs of less than 150kW per unit, as provided (per Aprovecho, 2009).	The technology stated in the registered PoA-DD is applied in the VPA-DDs. ICS technologies with useful energy output of less than 150kW is confirmed by the Technical report from qualified 3rd party Aprovecho Research Center/Test/ and cross checked by the interviewed stakeholders y the VVB. The criterion is fulfilled.
4	Start Date	The start date of each VPA shall be the first date of stove construction.	All stove installations are individually tracked on an electronic database that is available to VVB for validation.	Start date of this VPAs are: VPA02 May 13th, 2019. VPA03: Aug 2nd 2019 All installations from the project start date and forward are in the Mirador stove database and available for VVB review.	The provided start dates VPA02 13/05/2019 and VPA03 02/08/2019 are in line with the start date as defined in the PoA-DD. The installation data of the first ICS was cross checked by the VVB in the stoves database, screen shots of the Sales Database system, interviewed different Mirador cooperation partners and revision of the CME online stoves database by sharing screen The application registers the installation dates and data of each ICS. The criterion is fulfilled.
5	Methodology	VPA uses approved Gold Standard Methodology *Technologies and Practices to Displace Decentralized Thermal Energy Consumption, Version 2.0,* and satisfies all its requirements.	VPA-DD states methodology used under Section B.1, under "Reference of methodology(ies) and standardized baseline(s)."	Section B.1 of VPA-DD states methodology used as "*Thermal Practices to Displace Decentralized Thermal Energy Consumption, Version 2.0."* Applicable requirements are substantiated as follows: • Project boundary is clearly identified in Section A-4 of VPA-DD and agrees with PoA project boundary. • VPA confirms that technologies counted in the	The defined Gold Standard Methodology *Technologies and Practices to Displace Decentralized Thermal Energy Consumption, Version 2.0* is applied to the VPA and confirmed throughout the whole project documentation. The criterion is fulfilled.

#	Eligibility Criteria	Description	Means of Verification (as defined in PoA)	Proof of Eligibility (this VPA)	VVB Assessment and conclusion
				project are not included in another voluntary market or CDM project activity. • Appropriate mechanisms are in place to prevent double counting (see explanation in this chart, above). • Each stove installed has continuous useful energy outputs of less than 150kW per unit, as provided (per Aprovecho, 2009). • As a precondition for the installation of ICS, beneficiaries are required to remove the traditional stove that is being replaced. • PP clearly communicates to all beneficiaries, verbally (in training sessions) and in writing (in the Use & Maintenance Brochure), that the ownership of emission reductions shall reside with the CME. Use and Maintenance brochure has been supplied to the VVB for confirmation.	
6	LSC	VPA shall conduct an LSC that follows the GS LSC guidance	LSC report	The LSC is conducted at the VPA level. The Second VPA held its LSC meeting in 27/02/2020. The third VPA held its LSC meeting in 06/02/2020.	As per GS rules, the LSC is to be performed at VPA level. The PP performed the LSC on 27/02/2020 and 06/02/2020 respectively for VPA 2 and 3, and provided the LSC report in the proper GS template. The criterion is fulfilled.
7	EIA	EIA shall be	Official documentation	EIA is not required	As per review of EIA

#	Eligibility Criteria	Description	Means of Verification (as defined in PoA)	Proof of Eligibility (this VPA)	VVB Assessment and conclusion
		conducted if required by the host country	confirming EIA conducted	by the host country. Informal environmental assessment is provided at the PoA level.	legislations in Guatemala and Nicaragua, no EIA or Environmental permit is required for the type of projects involving cookstoves. The criterion is fulfilled.
8	Target group	VPAs shall target household or institutional users of inefficient biomass stoves. Users may or may not include auxiliary non-biomass cookstoves to augment their cooking practices.	To be confirmed via baseline kitchen surveys, conducted according to the requirements of the GS methodology.	To be confirmed via baseline kitchen surveys that target users are household users of inefficient biomass stoves. Mirador verifies, before installation, that each stove user is a household user of a traditional *fogón.*	The defined target group in the VPAs is as per PoA-DD, clearly defined: *household or institutional users of inefficient biomass stoves.* *Users may or may not include auxiliary non-biomass cookstoves to augment their cooking practices.* As per electronic database and baseline survey it is confirmed that so far only households have received the ICS. Also from the baseline surveys it is confirmed that only 1% of the ICS in both countries have been provided to households where other ICS were used, which are been properly documented and included. By means of interviews of the Mirador partners it is confirmed that the ICS has not been provided to institutions, although they are not excluded from the PoA scope, because usually the energy needs and space for business cannot be covered by a single 2x3 stove. The criterion is fulfilled.
9	Additionality	VPA must demonstrate that the project meets additionality requirements of the Gold Standard.	VPA demonstrates additionality using the Investment Barrier Analysis. Analysis shall be structured to include three potential sources of income: • Equity investment upon expectation of certain returns • Financing institution (bank) in the form of a bank loan • Donations Each potential source of income shall be analyzed from the perspective of three potential project	VPAs demonstrate additionality using Investment Barrier Analysis. VPA demonstrates that in the absence of project activity, baseline conditions (installation of the traditional cookstove) would persist.	Full additionality assessment is done by the VVB in Appendix 6 The VPAs provides the additionality analysis base on the investment Barrier Analysis as stated in the PoA-DD. The criterion is fulfilled.

#	Eligibility Criteria	Description	Means of Verification (as defined in PoA)	Proof of Eligibility (this VPA)	VVB Assessment and conclusion
			developers: • Individual households • Governmental Institutions • Private organizations By exploring the potential of the above three sources income from those three perspectives, VPA shall show that in the absence of project activity, baseline conditions (installation of the traditional cookstove) would persist.		
10	Ownership of ER credits	VPA shall be developed and implemented by the CME. In case contracted entities are retained to manage future VPAs, the contractual agreements between each partner and the CME will clearly establish ownership of emission reduction credits generated through the PoA as belonging to the CME. VPA shall clearly communicate to all end user beneficiaries, verbally and in writing, that the ownership of emission reductions shall reside with the CME.	VPA-DDs shall be approved by the CME and submitted by CME to VVB for inclusion. VPA is managed by CME. In case contracted entities are retained to manage future VPAs, contracted entities shall confirm to VVB their agreement that emission reduction credits generated by the VPA through the PoA belong to the CME. VPA shall present training brochures and procedural training materials to show that final beneficiaries are clearly informed that the ownership of emission reductions shall reside with the CME.	This VPAs are submitted directly by the CME to VVB for inclusion. VPA is managed by CME, so it is clear ERs are owned by CME.	The ER credits ownership is to be kept by the CME as no other developer is participating in the VPAs. Furthermore, the contractors and the households are aware of the ERs property as they are informed during training and the such information is included in the brochure. Brochure was reviewed and information was confirmed during interviews by VVB. Also the Brochure contains the information financing scheme of the project. The householders provide the construction materials and El Mirador through the construction/installation partners provide the ICS materials and pay the installations works. The criteria is fulfilled.
11	ODA	If official development assistance (ODA) is provided, it is not contingent on transfer of carbon credits to the donor country providing ODA support.	Completion of ODA Declaration form, if required	ODA Declaration Form has been submitted to GS.	ODA declaration has been provided to GS/VVB. It is confirmed that no ODA is provided for the development of VPA2 and 3 This criterion is fulfilled.

#	Eligibility Criteria	Description	Means of Verification (as defined in PoA)	Proof of Eligibility (this VPA)	VVB Assessment and conclusion
12	Sustainable Development	VPA is required to align with the Sustainable Assessment as defined in the GS4GG Transition Annex.	CME shall directly review VPA for compliance and if any negative indicators are present, modifications will be required until all indicators score positive or neutral.	The VPA aligns with the Sustainable Development GOALS outcomes as described in the GS4GG Transition Annex and articulated in detail in section B.6 of the VPA-DD	As per GS4GG the VPA is aligned with the SD. Section B.6 of the VPA-DD provides the DS outcome and selected indicators.. The criterion is fulfilled.
13	Prior consideration of carbon revenues	VPA is required to demonstrate that real actions were taken to secure carbon revenue for the project in parallel with its implementation.	Evidence to support this should include one or more of the following: contracts with consultants for services related to GS compliance; draft versions of PDDs; evidence of agreements or negotiations with a VVB for validation services, or earlier correspondence with the Gold Standard regarding the project.	The VPAs have been submitted within a year of the start date of the project activity.	As per PoA-DD the VPAs have to be submitted within a year of the start date to the VVB. As the project start date are 13/05/2019 and 02/08/2019, and the project was assigned to the GS-VVB (TÜV NORD) on 29/01/2020 it is confirmed that the VPAs have been submitted within a year of the start date. The criterion is fulfilled.

The respective requirements have widely been complied with. All eligibility criteria established for the VPA inclusion in the PoA have been sufficiently accomplished.

Table A-4. Assessment of the Analysis of social, economic and environmental impacts

Safeguarding principles (SP)	Assessment questions	Assessment of relevance to the project (Yes/ potentially/ no)	Justification	Mitigation measure (if required)	VVB Assessment and conclusion
1 - Human Rights	a. The Project Developer and the Project shall respect internationally proclaimed human rights and shall not be complicit in violence or human rights abuses of any kind as defined in the Universal Declaration of Human Rights. b. The Project shall not discriminate with regards to participation and inclusion.	No	The project is implemented respecting internationally proclaimed human rights and is no complicit in violence or human rights abuses of any kind as defined in the Universal Declaration of Human Rights. The project doesn't either discriminate with regards to participation and inclusion as the efficient project stoves are free and are distributed for the families selected in collaboration with the	N/A	From the transition annex assessment it is concluded that the human Right principle is not affected by the VPAs The SP is ensured. Therefore, no mitigation measure is necessary

			representatives of the local communities.		
2 - Gender Equality and Women's Rights	a. The Project shall complete the following gender assessment questions in order to inform Requirements 2-4, below: Is there a possibility that the Project might reduce or put at risk women's access to or control of resources, entitlements and benefits? Is there a possibility that the Project can adversely affect men and women in marginalised or vulnerable communities (e.g., potential increased burden on women or social isolation of men)? Is there a possibility that the Project might not take into account gender roles and the abilities of women or men to participate in the decisions/designs of the project's activities (such as lack of time, child care duties, low literacy or educational levels, or societal discrimination)? Does the Project take into account gender roles and the abilities of women or men to benefit from the Project's activities (e.g., Does the project criteria ensure that it includes minority groups or landless peoples)? Does the Project design contribute to an increase in women's workload that adds to their care responsibilities or that prevents them from engaging in other activities? Would the Project potentially reproduce or further deepen discrimination against women based on gender, for instance, regarding their full participation in design and implementation or access to opportunities and benefits? Would the Project potentially limit women's ability to use, develop and protect natural resources, taking into account different roles and priorities of women and men in accessing and managing environmental goods and services? Is there a likelihood that the proposed Project would expose women and girls to	No	JUSTIFICATION POINT 1: The project activity doesn't endorse any form of discrimination based on gender. Every beneficiary decides if want the project cookstove. It's not foreseen that the Project reduces or put at risk women's access to or control of resources, entitlements and benefits. Instead, it's foreseen that the women, as main responsible for firewood collection and cooking activities will have better control of resources (firewood and time will be saved) and moreover to benefit most for the possible health improvements caused by the reduced smoke inhalation during the cooking activities. It is thereafter not either foreseen that the Project would adversely affect man and women in marginalised or vulnerable communities. There will be less burden on women, men and children, as less firewood for cooking needs to be collected. This will reduce the time burden on women and men in the socially isolating activity of collecting resources. The Project takes into account gender roles and the abilities of women and men to participate in the decision/designs of the project activities. For example, the Stakeholder Consultation made included both women and men participating in the consultation meeting. In fact, women's participation and engagement in the project (as they are the main responsibles of the cooking activities) will be essential for the success of the whole project. The Project will take into account gender roles and the abilities of women and men to participate and benefit from the project	N/A	In accordance to the VPAs documentation and LSC the SP: Gender Equality and Women's Rights is not impacted negatively The SP is ensured. Therefore, no mitigation measure is necessary

	further risks or hazards? b. The Project shall not directly or indirectly lead to/contribute to adverse impacts on gender equality and/or the situation of women. Specifically, this shall include (not exhaustive): Sexual harassment and/or any forms of violence against women - address the multiple risks of gender-based violence, including sexual exploitation or human trafficking. Slavery, imprisonment, physical and mental drudgery, punishment or coercion of women and girls. Restriction of women's rights or access to resources (natural or economic). Recognise women's ownership rights regardless of marital status - adopt project measures where possible to support to women's access to inherit and own land, homes, and other assets or natural resources. c. Projects shall apply the principles of nondiscrimination, equal treatment, and equal pay for equal work, specifically: Where appropriate for the implementation of a Project, paid, volunteer work or community contributions will be organised to provide the conditions for equitable participation of men and women in the identified tasks/activities. Introduce conditions that ensure the participation of women or men in Project activities and benefits based on pregnancy, maternity/paternity leave, or marital status. Ensure that these conditions do not limit the access of women or men, as the case may be, to Project participation and benefits. 4. The Project shall refer to the country's national gender strategy or equivalent national commitment to aid in assessing gender risks. 5. Based on the Preliminary Review assessment of		activities. For example, the training/cooking demonstrations on using the new stoves and on their benefits will be targeted especially for women who are traditionally responsible for the cooking activities. The project is not contributing to an increase in women's workload or preventing them from engaging in other activities. In fact, the efficient cookstoves will reduce the firewood need for daily cooking activities and will thereafter reduce women's and girls workload related to the firewood collection. The project is not foreseen to reproduce or deepend discrimination against women. The women's role will be essential as the cookstove users and they will have the possibility for giving feedback regarding the project as any other community member. The project is not foreseen to limit women's ability to use, develop and protect natural resources. Instead the use of the efficient cookstoves will reduce the firewood consumption and will thereafter give a possibility for saving and local natural wood resources. The project activity will not expose women or girls to further risks or hazards. Instead the risk related to the smoke inhalation during the cooking activities or the risks related to the firewood collection are foreseen to be reduced. The Project will not directly or indirectly lead or contribute to adverse impacts on gender equality or the situation of women. In fact, the use of the efficient project cookstoves is foreseen to improve the general conditions of women and not to lead to any risk of contributing issues like sexual harassment/		

	Requirement 1, above, Gold Standard may require that the Project seek the input of an Expert Stakeholder and to include their recommendations in the Project design.		exploitation, violence, human trafficking slavery, imprisonment, drudgery or restriction of women's rights or access to resources. The Project will not have any impact on women's ownership rights to inherit and own land, homes and other assets. The Project applies the principles of non-discrimination and equal treatment and equal pay for equal work. For the project monitoring activities and for any other eventual paid or volunteer work the principle of the equal pay for equal work will be applied and it will be organized in way to provide the conditions for equitable participation of men and women whenever possible. Project activities like using the efficient cookstoves is not having any limitations on participation or benefiting from the Project depending on the pregnancy, maternity/paternity leave or marital status.		
3 - Community Health, Safety and Working Conditions	a. The Project shall avoid community exposure to increased health risks and shall not adversely affect the health of the workers and the community.	No	The project activities don't include exposing the community to increased health risks and is not adversely affecting the health of workers and the community. In fact, the project activities provide the distribution of improved cookstoves, with the aim, omitting the other objectives, to improve the health of households, for example through the reduction of smoke and therefore less harmful inhalations.	N/A	In accordance with the VPA documentation and LSC the SP: Community Health, Safety and Working Conditions is not impacted negatively. On the other hand, the community health is improved directly by the use of the more efficient cookstoves. The SP is ensured. Therefore, no mitigation measure is necessary
4 – Cultural Heritage, Indigenous Peoples, Displacement and Resettlement	a. Sites of Cultural and Historical Heritage Does the Project Area include sites, structures, or objects with historical, cultural, artistic, traditional or religious values or intangible forms of culture (e.g., knowledge, innovations, or practices)? b. Forced Eviction and Displacement Does the	No	The project activity doesn't include sites, structures or objects with historical, cultural, artistic, traditional or religious value or intangible forms of culture. The Project will provide improved cookstoves to the households in the project area and it does not require alternation,	N/A	In accordance to the VPAs documentation and LSC the SP: Cultural Heritage, Indigenous Peoples, Displacement and Resettlement is not impacted negatively. The SP is ensured. Therefore, no mitigation measure is necessary

	Project require or cause the physical or economic relocation of peoples (temporary or permanent, full or partial)? c. Land Tenure and Other Rights 1. Does the Project require any change to land tenure arrangements and/or other rights? 2. For Projects involving land-use tenure, are there any uncertainties with regards land tenure, access rights, usage rights or land ownership? d. Indigenous People Are indigenous people present in or within the area of influence of the Project and/or is the Project located on land/territory claimed by indigenous people?		damage or removal of any historical, artistic, traditional, religious or cultural heritage issues. The project activity consists of distributing improved cookstoves and therefore no physical or economic relocation of peoples is involved. Stoves distribution doesn't need additional lands to be used and, therefore, doesn't require any change to land tenure arrangements and/or other rights. In fact, the aim of the project is to reduce the quantity of firewood consumed in the project area. There are no indigenous people present within the area of influence nor the project is located on territory claimed by indigenous people.		
5 - Corruption	The Project shall not involve, be complicit in or inadvertently contribute to or reinforce corruption or corrupt Projects.	No	The Project doesn't involve, be complicit in or inadvertently contribute to or reinforce corruption or corrupt Projects.	N/A	In accordance to the VPAs documentation and LSC the project has no risk to involve Corruption . The SP is guranteed as the CME has a policy against corrupt practices. Therefore, no mitigation measure is necessary.

6 – Economic Impact	a. Labour Rights 1. The Project Developer shall ensure that there is no forced labour and that all employment complies the national labour and occupational health and safety laws, with obligations under international law, and consistency with the principles and standards embodied in the International Labour Organization (ILO) fundamental conventions. Where these are contradictory and a breach of one or other cannot be avoided, then guidance shall be sought from Gold Standard. 2. Workers shall be able to establish and join labour organizations. 3.Working agreements with all individual workers shall be documented and implemented. These shall at minimum comprise: (a) Working hours (must not exceed 48 hours per week on a regular basis), AND (b) Duties and tasks, AND (c) Remuneration (must include provision for payment of overtime), AND (d) Modalities on health insurance, AND (e) Modalities on termination of the contract with provision for voluntary resignation by employee, AND Provision for annual leave of not less than 10 days per year, not including sick and casual leave. 4. The Project Developer shall justify that the employment model applied is locally and culturally appropriate. 5. Child labour, as defined by the ILO Minimum Age Convention is not allowed. The Project Developer shall use adequate and verifiable mechanisms for age verification in recruitment procedures. Exceptions are children for work on their families' property if: (a) Their compulsory schooling (minimum of 6 schooling years) is not hindered, AND Respected, (b) The tasks they perform do not harm their physical and mental	No	The project is implemented in the field by Proyecto Mirador. The employees' rights are a cross-cutting issue and respected in all of the projects of project partners. All employees, will work voluntarily for the project, no forced labour is used and all employment is in compliance with national laws and consistency with the principles of standard ILO conventions. The workers can establish and join labour organizations. In case of new workers will be hired, the working agreement will be documented and implemented in compliance with the Section 3.6.1 of GS4GG Safeguarding Principles & Requirements version 1.1. The employment model applied will be also locally and culturally appropriate. The use of the efficient cookstove will reduce the quantity of firewood used in daily cooking activities and can thereafter release economical and time resources of the local families for other tasks which can be considered to support the financial sustainability of the project. The use of efficient cookstoves will reduce the firewood consumption and will thereafter save the resources of the project families and can be considered to have positive impacts on the project families' economic situation. No potential risks for the local economy are expected.	N/A	In accordance with the VPAs documentations and LSC the SP: Economic Impact is positive, the cookstoves users save fuel, money and time. The proposed Project activity Will have no negative economic impacts. Furthermore, the employees are from the communities and hired as per local regulations Workers labor rights are respected, and no child labour is tolerated The SP is met. Therefore, no mitigation measure is necessary.

	development, AND (c) The opinions and recommendations of an Expert Stakeholder shall be sought and demonstrated as being included in the Project design. 6. The Project Developer shall ensure the use of appropriate equipment, training of workers, documentation and reporting of accidents and incidents, and emergency preparedness and response measures. b.Negative Economic Consequence 1. The Project Developer shall demonstrate the financial sustainability of the Projects implemented, also including those that will occur beyond the Project Certification period. 2. The Projects shall consider economic impacts and demonstrate a consideration of potential risks to the local economy and how these have been taken in account in Project design, implementation, operation and after the Project. Particular focus shall be given to vulnerable and marginalized social groups in targeted communities and that benefits are socially-inclusive and sustainable.				
Environmental & Ecological Safeguarding Principles					
1 – Climate and Energy	Emissions Will the Project increase greenhouse gas emissions over the Baseline Scenario? Energy Supply Will the Project use energy from a local grid or power supply (i.e., not connected to a national or regional grid) or fuel resource (such as wood, biomass) that provides for other local users?	No	The Project will reduce the GHG emissions as will be monitored and verified in line with the GS4GG. The Project will not use energy from a local grid or power supply. The efficient cookstoves are fired with charcoal and therefore no change for the currently used cooking fuel will be made.	N/A	In accordance to the VPAs documentations and LSC the SP: Climate and Energy is positive, the cookstoves will reduce the GHG emissions. The Project activity Will also not use external energy sources. Furthermore the VPAs analysis was done in accordance with the Transition Annex The SP is ensured. Therefore, no mitigation measure is necessary

Water	Impact on Natural Water Patterns/Flows Will the Project affect the natural or pre-existing pattern of watercourses, ground-water and/or the watershed(s) such as high seasonal flow variability, flooding potential, lack of aquatic connectivity or water scarcity? Erosion and/or Water Body Instability 1. Could the Project directly or indirectly cause additional erosion and/or water body instability or disrupt the natural pattern of erosion? If 'Yes' or 'Potentially' proceed to question 2. 2. Is the Project's area of influence susceptible to excessive erosion and/or water body instability?	No	The project will not affect the natural or preexisting pattern of watercourses, groundwater and/or the watersheds etc. water related issues. The Project will not cause additional erosion directly or indirectly and/or water body instability or disrupt the natural pattern of erosion.	N/A	In accordance to the VPAs documentations and LSC the SP: water is not impacted. Furthermore the VPAs analysis was done in accordance with the Transition Annex The SP is ensured. Therefore, no mitigation measure is necessary
3 – Environment, ecology and land use	Landscape Modification and Soil Does the Project involve the use of land and soil for production of crops or other products? Vulnerability to Natural Disaster Will the Project be susceptible to or lead to increased vulnerability to wind, earthquakes, subsidence, landslides, erosion, flooding, drought or other extreme climatic conditions? Genetic Resources Could the Project be negatively impacted by the use of genetically modified organisms or GMOs (e.g., contamination, collection and/or harvesting, commercial development)? Release of pollutants Could the Project potentially result in the release of pollutants to the environment? Hazardous and Non-hazardous Waste Will the Project involve the manufacture, trade, release, and/ or use of hazardous and non-hazardous chemicals and/or materials? Pesticides & Fertilisers Will the Project involve the	No	The project impact on environment is positive, no negative impacts are expected. Moreover, the stove distribution activities does not include planting or other agricultural activities, producing chemicals or use of GMOs. The project will distribute one clay stove model produced locally. The local stove production is not having any significant environmental impacts as for example the quantities of clay collection needed for the stove production are low compared to other activities like house construction. Neither hazardous waste is produced. Furthermore, the aim of the project is to reduce the quantity of firewood consumed in the project area for cooking activities which will save the natural resources. The Project is not suspected to or will lead to increased vulnerability to any extreme climatic conditions. The Project doesn't involve or is negatively impacted by the use of genetically modified	N/A	In accordance to the VPAs documentations and LSC the SP: The VPA implementer Will ensure that the Environment, ecology and land use is not affected. The SP is ensured. Therefore, no mitigation measure is necessary

	application of pesticides and/or fertilisers? Harvesting of Forest Will the Project involve the harvesting of forests? Food Does the Project modify the quantity or nutritional quality of food available such as through crop regime alteration or export or economic incentives? Animal husbandry Will the Project involve animal husbandry? High Conservation Value Areas and Critical Habitats Does the Project physically affect or alter largely intact or High Conservation Value (HCV) ecosystems, critical habitats, landscapes, key biodiversity areas or sites identified? Endangered Species 1. Are there any endangered species identified as potentially being present within the Project boundary (including those that may route through the area)? 2. Does the Project potentially impact other areas where endangered species may be present through transboundary affects?		organisms or GMOs. The Project is not potentially resulting in release of pollutants to the environment. The Project is not involving the manufacture, trade, release, and/or use of hazardous chemicals and or materials. The Project doesn't involve the application of pesticides and/or fertilisers. Neither harvesting of forests is involved. The Project doesn't modify the quantity or nutritional quality of food available. The Project doesn't involve animal husbandry. The project boundary is the physical, geographical sites of the project technologies, in other words, the physical location of the project stoves . There are no endangered species identified as potentially being present the project boundary and the project is not foreseen to have any negative potential impacts on other areas where endangered species may be present through transboundary effects.		

SECTION E. Internal quality control

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Before the submission of the final validation report, a technical review of the whole validation procedure was carried out. The technical reviewers are competent GHG auditors being appointed for the scope this project falls under. The technical reviewers are not considered to be part of the validation team and thus not involved in the decision-making process up to the technical review.

As a result of the technical review process the validation opinion and the topic specific assessments as prepared by the validation team leader may have been confirmed or revised.

Furthermore, reporting improvements might have been achieved.
After the successful technical review, an overall (esp. procedural) assessment of the complete validation has been carried out by a senior assessor located in the accredited premises of TÜV NORD.

After this step the submission for requesting the registration of the project activity is conducted.

SECTION F. Validation opinion

Proyecto Mirador Foundation has commissioned the TÜV NORD JI/CDM Certification Program (CP) to validate the inclusion of the specific-case VPAs:

"Proyecto Mirador Enhanced Distribution of Improved Cookstoves in Latin America (GS1988), Proyecto Mirador Enhanced Distribution of Improved Cookstoves in Latin America – Second VPA for Distribution of Dos por Tres Cookstoves in Guatemala (GS10457)", and;

"Proyecto Mirador Enhanced Distribution of Improved Cookstoves in Latin America (GS1988), Proyecto Mirador Enhanced Distribution of Improved Cookstoves in Latin America – Third VPA for Distribution of Dos por Tres Cookstoves in Guatemala (GS10458)"

to the PoA "Proyecto Mirador Enhanced Distribution of Improved Cookstoves in Latin America"

with regard to the relevant requirements of the GS4GG for PoAs, as well as criteria for consistent project operations, monitoring and reporting.

In detail validation opinion can be summarized as follows:

- the voluntary project activities are in line with all relevant host country criteria (Guatemala) and all relevant GS requirements for PoAs;
- the baseline has been appropriately identified as per the applied methodology;
- the framework for determination of project additionality is sufficiently justified in the VPA-DDs and in line with the PoA-DD and generic VPA-DDs;
- all eligibility criteria established for VPAs inclusion in the PoA have been sufficiently fulfilled;
- the monitoring plans are transparent and adequate;
- the calculation of the emission factors and the VPAs emission reductions are carried out in a transparent and conservative manner, so that the calculated emission reductions of:
    - VPA02 51,469 tCO_2e
    - VPA03 42,517 tCO_2e
- are most likely to be achieved within the (1st renewable) crediting period;
- information on the environmental impact analysis of the VPAs are sufficiently provided in the VPA-DDs, which is in line with PoA-DD and generic VPA-DDs.

The conclusions of this report show, that the projects, as were described in the project documentation, are in line with all criteria applicable for the validation.

The VPAs "Proyecto Mirador Enhanced Distribution of Improved Cookstoves in Latin America (GS1988), Proyecto Mirador Enhanced Distribution of Improved Cookstoves in Latin America – Second VPA for Distribution of Dos por Tres Cookstoves in Guatemala (GS10457)", and;

"Proyecto Mirador Enhanced Distribution of Improved Cookstoves in Latin America (GS1988), Proyecto Mirador Enhanced Distribution of Improved Cookstoves in Latin America – Third VPA for Distribution of Dos por Tres Cookstoves in Guatemala (GS10458)"

shall be included in the PoA "Proyecto Mirador Enhanced Distribution of Improved Cookstoves in Latin America (1988)".

Querétaro, 16/10/2020

Oliver Quireza

Team Leader

Appendix 1. Abbreviations

Abbreviations	Full Texts
BAU	Business as usual
CA	Corrective Action / Clarification Action
CAR	Corrective Action Request
CDM	Clean Development Mechanism
CER	Certified Emission Reduction
CL	Clarification Request
CM	Combined Margin
CME	Coordinating / Managing Entity
CO_2	Carbon dioxide
CO_2e	Carbon dioxide equivalent
COP/MOP	Conference of Parties / Meeting of Parties
CP	Certification Program
CPA	Component Project Activity
DNA	Designated National Authority
CPA	Component Project Activity
VPA-DD	Voluntary Project Activity Design Document
FAR	Forward Action Request
FTs	Field Performance Tests
FOGON	Spanish of the cookstove method use in baseline (i.e. Direct open fire, Disc Stove, etc)
GHG	Greenhouse gas(es)
GT	Glossary of Terms
GS4GG	Gold Standard for the Global Goals
ICS	Improved Cookstove
IPCC	Intergovernmental Panel on Climate Change
KPT/KT	Kitchen Performance Test
LSC	Local Stakeholder Consultation
LoA	Letter of Approval
MAI	Mean Annual Increment of woody biomass per hectare
MARN	Ministry of Environment and Natural Resources
MEM	Ministry of Energy and Mines Guatemala
MoC	Modalities of Communication
MP	Monitoring Plan
NRB	Non-Renewable Biomass
ODA	Official Development Assistance
PA	Project Activity
PoA	Programme of Activities
PoA-DD	Programme of Activities Design Document
PP	Project Participant(s)
QA/QC	Quality Assurance/Quality Control
SD	Sustainable Development
UNFCCC	United Nations Framework Convention on Climate Change
VER	Verified Emission Reduction
VPA	Voluntary Project Activity
VT	Validation/Verification team
VVB	Validation/Verification Body

Appendix 2. Competence of team members and technical reviewers

Statement of Competence

Appointment and authorization according to the procedures of the TÜV NORD JI/CDM Certification Program

Mr. Oliver Quireza Campos

SCHEME	STATUS	VALID UNTIL
CDM	Lead Assessor (Validation, Verification)	2021-05-28
VCS / ISO 14064-2	Lead Assessor	2021-05-28

Authorization status for technical areas within sectoral scopes:

CODE	TECHNICAL AREA
1.1	Thermal energy generation
1.2	Renewables
13.1	Solid waste and wastewater
13.2	Manure

337 - Rev. 5, Date: 2018-08-17

337_S01-VA060-F20_2018-08-17_rev5.doc S01-VA060-F20 rev3 / 2012-10-25

Statement of Competence

Appointment and authorization according to the procedures of the TÜV NORD JI/CDM Certification Program

Mr. Raul Gonzalez Mitre

SCHEME	STATUS	VALID UNTIL
CDM	Senior Assessor (Validation, Verification) Technical Reviewer	2021-06-27
VCS / ISO 14064-2	Senior Assessor	2021-06-27

Authorization status for technical areas within sectoral scopes:

CODE	TECHNICAL AREA
1.2	Renewables
13.1	Solid waste and wastewater

082 - Rev. 8, Date: 2018-08-09

082_S01-VA060-F20_2018-08-09_rev8.doc S01-VA060-F20 rev3 / 2012-10-25

Statement of Competence

Appointment and authorization according to the procedures of the TÜV NORD JI/CDM Certification Program

Mr. David Lubanga

SCHEME	STATUS	VALID UNTIL
CDM	Senior Assessor (Validation, Verification) Technical Reviewer	2021-10-20
VCS / ISO 14064-2	Senior Assessor Technical Reviewer	2021-10-20

Authorization status for technical areas within sectoral scopes:

CODE	TECHNICAL AREA
1.2	Renewables
3.1	Energy demand
13.2	Manure

251 - Rev. 7, Date: 2018-10-19

251_S01-VA060-F20_2018-10-19_rev7.doc S01-VA060-F20 rev3 / 2012-10-25

Appendix 3. Documents reviewed or referenced

No.	Reference	Author	Title	References to the document	Provider
1.	**/VPADD-T/**	GS	Key Project Information & VPA Design Document (PDD), version 1.0	https://www.goldstandard.org/project-developers/standard-documents	Other
2.	**/GGPR/**	GS	GS Principles and Requirements, version 1.2, October 2019	https://www.goldstandard.org/project-developers/standard-documents	Other
3.	**/GSPoA/**	GS	GS PoA Requirements version 1.2, October 2019	https://www.goldstandard.org/project-developers/standard-documents	Other
4.	**/GSPR/**	GS	GS4GG Emission Reduction & Sequestration Product Requirements, 22/07/2017	https://www.goldstandard.org/project-developers/standard-documents	Other
5.	**/SAMPL/**	UNFCCC	Standard for Sampling and Surveys for CDM Project Activities and Programme of Activities, Annex 4, CDM EB69	https://cdm.unfccc.int/Reference/old_reg.html	Other
6.	**/CPM/**	DOE	TÜV NORD JI / CDM CP Manual (incl. CP procedures and forms)	https://cdm.unfccc.int/Reference/old_reg.html	Other
7.	**/GOT/**	UNFCCC	Glossary "CDM terms" – version 10	https://cdm.unfccc.int/Reference/old_reg.html	Other
8.	**/IPCC/**	IPCC	1. 1996 IPCC Guidelines for National Greenhouse Gas Inventories: work book 2. 2006 IPCC Guidelines for National Greenhouse Gas Inventories: work book	www.ipcc-nggip.iges.or.jp	Other
9.	**/KP/**	UNFCCC	Kyoto Protocol (1997)	http://unfccc.int/kyoto_protocol/items/2830.php	Other
10.	**/MA/**	UNFCCC	Decision 3/CMP. 1 (Marrakesh – Accords)	http://cdm.unfccc.int/Reference/COPMOP/index.html	Other
11.	**/METH/**	GS	-Technologies and Practices to Displace Decentralized Thermal Energy Consumption, Version 2.0	N/A	Other
12.	**/METH2/**	UNFCCC	-AMS II.G. Small-Scale methodology - Energy Efficiency Measures in Thermal Applications of non-renewable biomass, ver. 11.1	https://cdm.unfccc.int/methodologies/DB/ZI2M2X5P7ZLRGFO37YBVDYOW62UHQP	Other
13.	**/TOOL/**	UNFCCC	Methodological Tools: -Tool for the demonstration and assessment of additionality - version 05. EB39 -TOOL 30 calculation of the fraction of non-renewable biomass, version 2.0	http://cdm.unfccc.int/Reference/tools/index.html	Other
14.	**/PS/**	UNFCCC	CDM Project Standard for programs of activities – version 02.0	https://cdm.unfccc.int/Reference/old_reg.html	Other
15.	**/VVS/**	UNFCCC	CDM Validation and Verification Standard – version 02.0	https://cdm.unfccc.int/Reference/old_reg.html	Other
16.	**/PASS/**	CME	Passport "Proyecto Mirador Enhanced Distribution of Improved Cookstoves in Latin America", ver. 1, 21/06/2013	N/A	CME
17.	**/VPADD/**	CME	Proyecto Mirador Enhanced Distribution of Improved Cookstoves in Latin America (GS1988), Proyecto	N/A	CME

			Mirador Enhanced Distribution of Improved Cookstoves in Latin America – Second VPA for Distribution of Dos por Tres Cookstoves in Guatemala (GS10457), version 5.1, 06/10/2020 Proyecto Mirador Enhanced Distribution of Improved Cookstoves in Latin America (GS1988), Proyecto Mirador Enhanced Distribution of Improved Cookstoves in Latin America – Third VPA for Distribution of Dos por Tres Cookstoves in Nicaragua (GS10458), version 5.1, 07/10/2020		
18.	**/POADD/**	CME	PoA-DD Proyecto Mirador Enhanced Distribution of Improved Cookstoves in Latin America, 25/03/2016, version 06	N/A	CME
19.	**/XLS/**	CME	-ER calculation spread sheet VPA2 Guatemala, 26/09/2020 -ER calculation spread sheet VPA3 Nicaragua, 26/09/2020 -KPT data	N/A	CME
20.	**/unfccc/**	-	UNFCCC	http://cdm.unfccc.int	Other
21.	**/Mirador/**	CME	PoA website: https://www.proyectomirador.org/stove-benefits/dos-por-tres-stoves-remove-toxic-smoke-causes-health-problems http://aprovecho.org/portfolio-item/stove-testing/	N/A	Other
22.	**/Test/**	Aprovecho Center	Stove test, by Aprovecho Research Center , 28/04/2009.	N/A	CME
23.	**/BRO/**	CME	-Brochures: -Use and Maintenance Stove 2 x 3 -Requirements and Materials for construction of cookstove 2 x 3	N/A	CME
24.	**/ODA/**	CME	ODA declarations VPA 2 and VPA 3, 23/04/2020	N/A	CME
25.	**/GSPR/**	GS	GS Preliminary review, 31/07/2020	N/A	CME
26.	**/TRANS/**	CME	GS Transition Annex- Proyecto Mirador Enhanced Distribution of Improved Cookstoves in Latin America, 12/04/2019	N/A	CME
27.	**/DATA/**	CME	-Screenshots, Sales Database Guatemala and Nicaragua, from 01/01/2019 -Stove Database, VPA2, 15/07/2020 -Stove Database, VPA3, 15/07/2020	N/A	CME
28.	**/NRB/**	CME	NRB assessment, Proyecto Mirador Enhanced Distribution of Improved Cookstoves in Latin America: -VPA2, 11/08/2020 -VPA3, 11/08/2020	N/A	CME
29.	**/LSC/**	CME	LSC Reports, Proyecto Mirador Enhanced Distribution of Improved Cookstoves in Latin America: -VPA2, 11/08/2020 -VPA3, 11/08/2020	N/A	CME
30.	**/BL-S/**	CME	-Baseline Survey Report, Proyecto Mirador Enhanced Distribution of Improved Cookstoves in Latin America, VPA2 and VPA3	N/A	CME

			-Baseline survey raw data and analysis spreadsheet, VPA2 and VPA3		
31.	**/GA/**	UPM	Global Alliance for Clean Cookstoves Guatemala Cookstoves and Fuels Market Assessment Sector Mapping, University Politecnica of Madrid, 2013	N/A	CME
32.	**/ADDI/**	SEVERAL	Additionality background investigation: Documents consulted independently by the DOE to confirm additionality **Guatemala** -Guatemala Country Action Plan for Clean Cookstoves and fuels - Global alliance for Clean Cookstoves, May 2014 -Transforming the Coostoves Market through Standards & Labels in Guatemala **Nicaragua** -The GEF Small Frants Programme, UNDP, GEF -Pilot Commercialization of ICS in Nicaragua, ESMAP, 2005 **Both** -What have we learned about Household Biomass Cooking in Central America, ESMAP, WB	N/A	OTHER
33.	**/BIO/**	SEVERAL	BIOMASS DATA SOURCES Nicaragua -Nicaragua Foresty Inventory -FAO FRA 2015 Guatemala -SIFGUA Sistema de Información Forestal Guatemala -United Nations Statistics Division, Energy Statistics Database, Guatemala 2015 -MINISTERIO DE ENERGÍA Y MINAS, Informe de Balance Energético 2015, Guatemala 2017 -Instituto Nacional de Bosques INAB, Guatemala Yearbook of Forest Product 2015.	http://www.inafor.gob.ni/index.php/inventario-forestal/ http://www.fao.org/3/Y1997E/y1997e21.htm#bm73 http://www.sifgua.org.gt/Cobertura.aspx# United Nations Statistics Division - Energy Statistics Database - Guatemala 2015 https://www.mem.gob.gt/energia/estadisticas-energia/balances-energeticos/	OTHER

Appendix 4. Clarification requests, corrective action requests and forward action requests

Table 1. CL from this validation

CL ID	**-**	**Section no.**	**-**	**Date: DD/MM/YYYY**
Description of CAR				
n.a.				
CME response (1st round)				Date: **DD/MM/YYYY**
Documentation provided by project participant				
DOE assessment (1st round)				**Date: DD/MM/YYYY**

Conclusion *Tick the appropriate checkbox*	☐ Additional action should be taken (finding remains open) ☒ The finding is closed

Table 2. CAR from this validation

CAR ID	**01**	**Section no.**	**B.4**	**Date: 19/08/2020**
Description of CAR				
In line with §4 of the methodology TPDDTEC v2 and comment/request 2, point 7 of the preliminary review from GS . Section B.4 of VPA-DD has to provide the baseline survey results.				
CME response (1st round)				Date: 23/09/2020
The baseline survey result can be found the documents listed below. The baseline report includes and summary of the finding and a description of the procedures carried out during the surveys. The excel file includes the baseline survey raw data and some graphics and statistics.				
Documentation provided by project participant				
1. Baseline Survey (raw and analyzed data) v1 22 Sep 2020.xlsx 2. Baseline Report Proyecto Mirador VPA2 & VPA3 v1 21 Sep 2020.docx				
DOE assessment (1st round)				**Date: 25/09/2020**
The provided baseline surveys were performed as per methodology TPDDTEC v2, including: data and the sample size (>100 as the group size is >1,000)				
Conclusion *Tick the appropriate checkbox*	☐ Additional action should be taken (finding remains open) ☒ The finding is closed			

CAR ID	**02**	**Section no.**	**B.6.5**	**Date: 19/08/2020**
Description of CAR				
1. The Baseline, PE and Net ER calculation provided in section B.6.5 doesn't match the calculation provided in the ER spreadsheet of file Ex-ante ER calculation VPA2 Guatemala. Correction is requested 2. Leakage is to be calculated as per methodology and PoA-DD, nonetheless the calculation in the spreadsheet doesn't account it.				
CME response (1st round)				**Date: 23/09/2020**
1. The section B.6.5 of the PDD has been updated as per the request. The The Baseline, PE and Net ER calculation are now consistent in the VPA-DDs and the ERs Calculations Spreadsheets. 2. The ERs calculations spread sheet and the VPA-DDs have been revised. The calculation now includes the discount of leakage. Please see the ERs spread sheet, tab 'ER Sheet', Rows 63 and 67.				
Documentation provided by project participant				
1. VPA-DD_VPA2_Guatemala_v4_23_Aug_2020 TC.doc 2. VPA-DD_VPA2_Nicaragua_v4_23_Aug_2020 TC.doc 3. Ex-Ante ER Calculations VPA2 Guatemala 23 Sep 2020.xlsx 4. Ex-Ante ER Calculations VPA3 Nicaragua 23 Sep 2020.xlsx				
DOE assessment (1st round)				**Date: 25/09/2020**
Baseline, PE and Net ER calculation provided in section B.6.5 of VPA-DD is consistent with the revised ER spreadsheet. The ER calculation is correct and performed a per methodology TPDDTEC v2.				
Conclusion *Tick the appropriate checkbox*	☐ Additional action should be taken (finding remains open) ☒ The finding is closed			

CAR ID	**03**	**Section no.**	**B.6.3**	**Date: 19/08/2020**
Description of CAR				
Parameter ID 5 / fNRB,b,y is defined as Ex-ante in the VPA-DD but in the Transition Annex is defined as Monitoring Parameter. Correction/clarification is requested				
CME response (1st round)				Date: 23/09/2020

Indeed, in the Transition Annex, the Parameter ID 5 / fNRB,b,y was is defined as Monitoring Parameter. Despite this fact, for the VPA1, this parameter was only updated at the renewal of the crediting period, it was not monitored or updated periodically. In the previous verification for VPA1, GS has not requested the periodical monitoring or update. According the Methodology (see page 26) The non-renewable biomass fraction is fixed based on the results of the NRB assessment. Over the course of a project activity the project proponent may at any time choose to re-examine renewability by conducting a new NRB assessment. In case of a renewal of the crediting period and as per Gold Standard rules, the NRB fraction must be reassessed as any other baseline parameters and updated in line with most recent data available. Following the statement in the methodology and how in practice this parameter has been accepted, the Project proponent adheres to approach that keep it fixed and to be updated at the renewal or the crediting period. Specific acceptance of this approach can be sought from Gold Standard/SustainCert at the design certification request.
Documentation provided by project participant
N/A
DOE assessment (1st round) **Date: 25/09/2020**
Clarification provided is correct and consistent with the handling os the GS on this regard.

Conclusion *Tick the appropriate checkbox*	☐ Additional action should be taken (finding remains open) ☒ The finding is closed

CAR ID	**04**	**Section no.**	**B.7.1**	**Date: 19/08/2020**
Description of CAR				
VPA-DD: ID 14 has not been correctly indicated, instead parameter *ID 15* is repeated (*% of people reporting they used money saved purchasing fuelwood to buy food)*				
CME response (1st round)				Date: 23/09/2020
The VPA-DDs have been revised. The parameter 'ID 14 / Money saved purchasing fuelwood' is now correctly shown.				
Documentation provided by project participant				
1. VPA-DD_VPA2_Guatemala_v4_23_Aug_2020 TC.doc 2. VPA-DD_VPA2_Nicaragua_v4_23_Aug_2020 TC.doc				
DOE assessment (1st round)				**Date: 25/09/2020**
The revised parameter ID 14 is correct and line with the transition Annex				

Conclusion *Tick the appropriate checkbox*	☐ Additional action should be taken (finding remains open) ☒ The finding is closed

CAR ID	**05**	**Section no.**	**B.5**	**Date: 19/08/2020**
Description of CAR				
As per PoA-DD v6, and GS-PoA Requirements §4 the additionality must be demonstrated also at VPA level, nonetheless, section B.5 doesn't show any barrier analysis.				
CME response (1st round)				Date: 23/09/2020
The Section B.5 of the VPA-DD has been updated including the Investment barriers analysis for the additionality demonstration.				
Documentation provided by project participant				
1. VPA-DD_VPA2_Guatemala_v4_23_Aug_2020 TC.doc 2. VPA-DD_VPA2_Nicaragua_v4_23_Aug_2020 TC.doc				
DOE assessment (1st round)				**Date: 25/09/2020**
The provided additionality analysis has been performed based on a step by step approach, it is complete, correct and in accordance with the PoA-DD and the Tool for the Demonstration and Assessment of Additionality," Version 05, EB39. Full VVB assessment in Appendix 6 of this report				

Conclusion *Tick the appropriate checkbox*	☐ Additional action should be taken (finding remains open) ☒ The finding is closed

CAR ID	**06**	**Section no.**	ER spreadsheet	**Date: 19/08/2020**

Description of CAR

1. Tab "Introduction: Clarify if the crediting period duration is 5 or 7 years
2. Tab "Introduction: Please distinguish between PoA title and actual VPA title
3. Tab "Drop-off: Clarify the crediting period 1, and the dates indicated that are prior to the VPA start date
4. Tab "Drop-off: What is VP?
5. Tab "Drop-off: What is the assumed drop off rate and what is the basis. Besides, the values here are inconsistent with what is actually applied in the "ER sheet"

CME response (1st round) Date: 23/09/2020

1. The duration of the crediting period is 5 years. The correct length of the crediting period has been updated in the tab "Introduction".
2. The titles for the VPA and the PoA are shown now correctly in the tab "Introduction".
3. For VPA 2 and VPA3, the monitoring surveys have not been undertaken yet, therefore, ex-ante ERs calculations took as reference the drop-off rates of VPA1 in Honduras. The dates indicated come from the previous verification periods from VPA1. In order to avoid confusion, the data in columns F-K have been removed, instead a note was added explaining that values were taken from historical drop-off rates defined for VPA1, and the actual drop-off rate for this VPA will be monitored and will be reported in the verification.
4. VP stands for Verification Period. When there is a number after the acronym (e.g. VP9) this refers to Verification Period number 9th. Verification Period is synonym of monitoring period.
5. As mentioned above, for the ex-ante ERs calculations, the reference available for the drop-off rate comes from VPA1 in Honduras, specifically from the monitoring periods verified so far. Regarding mentioned inconsistency of the values applied, first, the values shown in tab 'Drop-off' are yearly values. Since the ERs are reported on a monthly basis, the drop-off rate applied in the tab 'ER Sheet' are also monthly (divided by 12). This approach has been accepted by the Gold Standard for VPA1 since project inception. As can be seen in tab 'ER Sheet' rows 7, 15, 23, 31, 39, 47 the values reported for each stove age group are as follows:

Abandonment Assumption	**Applied[1]**	**Monthly rate**
Age 0-1	4%	4% ÷ 12 = 0.33%
Age 1-2	3%	3% ÷ 12 = 0.25%
Age 2-3	6%	6% ÷ 12 = 0.50%
Age 3-4	8%	8% ÷ 12 = 0.67%
Age 4-5	13%	13% ÷ 12 = 1.08%
Age 5-6	21%	21% ÷ 12 = 1.75%

According to this explanation, there is no inconsistency in how drop-off rates are applied in the ER calculations.

Documentation provided by project participant

1. Ex-Ante ER Calculations VPA2 Guatemala 26 Sep 2020 TC.xlsx
2. Ex-Ante ER Calculations VPA3 Nicaragua 26 Sep 2020 TC.xlsx

DOE assessment (1st round) **Date: 25/09/2020**

1. The 5 year CP is as per GS rules and is consistent throughout the spreadsheets and CPA-DD
2. The provided VPA and PoA names are correct and in accordance with the VPA and PoA
3. The clarification provided by the CME is correct. The ex ante ER calculation is based on the historic data taken from the first VPA. The approach is accepted by the GS
4. VP of MP abbreviations are correctly indicated for verification/monitoring period
5. The drop-off rate is correctly calculated based in the VPA1 historic data.

Conclusion *Tick the appropriate checkbox*	☐ Additional action should be taken (finding remains open) ☒ The finding is closed

CAR ID	07	Section no.	ER spreadsheet	Date: 19/08/2020
Description of CAR				
1. Tab “Leakage and Double Counting: Not clear what this tab is for and basis for the calculation approaches **2.** Tab “Assumption: What is VP7 and VP10, and why is this data applied at the same time in different tabs				
CME response (1st round)				Date: 23/09/2020
1. In previous verification periods for VPA1, as the conservative approach, the project calculates the leakage and double counting emissions and discount those emissions. The basis for those calculations were defined in the previous verification and issuance review done by the Gold Standard. The intention is to incorporate these discount factors in the ex-ante ERs calculations in consistency with VPA1. 2. As explained above, the results for the KPTs for VPA2 & VPA3 are not yet available, therefore, the KPTs’ results from the VPA1 have been used for the ex-ante emissions reduction of the new VPAs. The fuel savings values used are aggregated KPT results since project inception. VP stands for Verification Period, see CAR 6.				
Documentation provided by project participant				
1. Ex-Ante ER Calculations VPA2 Guatemala 26 Sep 2020 TC.xlsx 2. Ex-Ante ER Calculations VPA3 Nicaragua 26 Sep 2020 TC.xlsx				
DOE assessment (1st round)				**Date: 25/09/2020**
1. The leakage and double counting is correctly calculated, base on the data from the first VPA. 2. The CME has performed the ex ante ER calculation for VPA 2 and 3 based on the KPT from VPA1. This approach was accepted by the GS. The calculation is assessed by the VT as correct and precise as this based in actual monitoring data.				
Conclusion *Tick the appropriate checkbox*	☐ Additional action should be taken (finding remains open) ☒ The finding is closed			

CAR ID	08	Section no.	B.7.1	Date: 19/08/2020
Description of CAR				
1. Tab “ER Sheet”: Clarify why BE, PE and LE are calculated separately. Furthermore, leakage value is not considered for in the ER calculation 2. Tab “ER Sheet”: ER calculation is based on 7-year CP. Clarify the disparity with C.1.2 of the VPA-DD 3. Tab “ER Sheet”: $EF_{b,fuel,nonCO2}$: Demonstrate how applied 8.692 tCO_2/TJ has been arrived at **4.** Tab “ER Sheet”: Emission reductions per vintage have been calculated for “VP1” only for years 2019 & 2020. Clarify				
CME response (1st round)				Date: 23/09/2020

1. The BE, PE and LE are calculated separately to ensure transparency and facilitate clear interpretation of the equations. Please see tab 'ER sheet', rows 65 and 68, where in row 65 the ERs are calculated applying a single equation, and row 68 shows how they are calculated on separate bases (e.g. BE and PE), given the same result. The slight differences are due to the rounding of decimals, but at the end it is negligible, corroborating that any approach followed provides the same result.

   Leakage is indeed considered in the ERs calculations. For simplification, the leakage is calculated in the net emissions on a yearly basis during the crediting period and discounted on an absolute basis. Please see tab 'ER calculations', cells C74:E78, specifically in cells D74:D78, the leakage is considered in the project emissions. Respectively, the leakage emissions come from tab 'Leakage and Double Counting'.
   The ERs were also calculated for the first verification period (VP1, May 2019-Nov 2020) for the CEM to visualize the expected credits in that period (also see explanation about VP1 below in number 4). As can be seen in tab 'ERs Sheet', Cells R74, R75 and R76, the leakage is accounted to define the net ERs.
2. The ERs calculations are now shown only for 5 years, which is consistent with the crediting period described in the VPA-DD.
3. The calculation of the value $EF_{fuel,nonCO2}$ is shown in tab 'Assumptions', cells B9:G13. The table below shows how this value has been arrived at.

Non-CO_2 emission factor for wood that is reduced	$EF_{fuel,nonCO2}$	8.692	tCO_2/TJ	Calculated
CH_4 emission factor for wood	$EF_{fuel,CH4}$	0.30	tCO_2/TJ	IPCC default
N_2O emission factor for wood	$EF_{fuel,N2O}$	0.004	tCO_2/TJ	IPCC default
Global warming potential of CH_4	GWP_{CH4}	25	tCO_2/tCH_4	IPCC Decision 4/CMP.7, see Table 2.14
Global warming potential of N_2O	GWP_{N2O}	298	tCO_2/tN_2O	IPCC Decision 4/CMP.7, see Table 2.14

For internal purposes, the ERs were also calculated for the first verification period (VP1). This first verification period is different from the calendar year and includes May 2019 to Nov 2020. The ERs in that monitoring period include emissions from both years, 2019 and 2020

Documentation provided by project participant

Ex-Ante ER Calculations VPA2 Guatemala 26 Sep 2020 TC.xlsx
Ex-Ante ER Calculations VPA3 Nicaragua 26 Sep 2020 TC.xlsx

DOE assessment (1st round) **Date: 25/09/2020**

1. The provided BE, PE and LE calculation, is correct and in accordance with the applied methodology.
2. The 5 year length of the CP has been correctly applied to the ER calculation.
3. The $EF_{b,fuel,nonCO2}$: is transparently calculated in sheet assumptions.
4. The calculated ER per vintage is correctly calculated for years 2019 and 2020

Conclusion *Tick the appropriate checkbox*	☐ Additional action should be taken (finding remains open) ☒ The finding is closed

Description of CAR	
Sub-step 1a (Define alternatives to the project scenario) 1. As several initiatives for development of ICS projects are observed by the VVB in the host countries, other realistic and credible alternative scenarios such as the implementation of ICS project by other developers has not been defined and analysed. Correction is requested. **Output of sub-step 1b:** 2. Description the output of the realistic and credible alternative scenarios that are in compliance with the regulations are missing. Correction is requested. **Outcome of sub-step 3a:** 3. The outcome of identified barrier that may prevent one or more alternative scenarios to occur is not clearly stated.	
CME response (1st round)	**Date:**
1. The following statement has been added to each VPA-DD: The alternative of implementing the project under a sales-based approach was not considered because the significant difference with the proposed project activity. The significant difference between other ICS projects observed in the host countries and the project proposed is that Proyecto Mirador does not sell the stoves. The project's beneficiaries contribute 'in kind' with some materials but no payments take place. Given this substantial difference, any comparison against sales-based project would not be applicable. Although other ICS projects may provide a similar service for cooking needs, from the investors' point of view–which is the focus of the analysis–these other projects cannot be compared with the proposed project activity. This is the reason why other ICS projects were not listed as realistic and credible alternative scenarios. Furthermore, another substantial difference is that sales-based ICS projects, in virtually all cases, do not include monitoring. The cost of the monitoring program, including supervisory visits, surveys, kitchen performance tests, and the development and maintenance of a highly customized digital database built on the Salesforce.com platform, can only be afforded with the income from carbon revenues. On the other hand, the lack of monitoring to ensure adoption and usage will result in abandonment of the ICS technology, meaning the user returns to the traditional cooking method. The same logic applies for the GS TPPDTEC methodology; unless it is demonstrated that the ICS is still in use, it is assumed that the beneficiary has returned to the cooking practice identified in the project scenario. From the investor perspective, it is not relevant to compare these contrasting alternatives. The proposed project activity does not generate income aside from the carbon credits, and the training and monitoring cost is significantly high, making the alternatives not financially attractive. 2. The following statement has been added to each VPA-DD: Guatemala: The two alternatives identified comply with current law and regulations. There is no law or regulation that prohibits the use of the traditional fogón or other inefficient combustion methods for cooking, nor are there regulations that provide efficiency acceptance levels for improved cookstoves in Guatemala.[2] Nicaragua: The two alternatives identified comply with current law and regulations. There is no law or regulation that prohibits to use traditional fogones or other inefficient combustion methods for cooking, nor, there are regulations or efficiency acceptance level for improved cookstoves in Nicaragua. 3. The following statements have been added to each VPA-DD: The proposed project activity does not generate income other than from the carbon credits, and the training and monitoring costs are significantly high. From the investor perspective, the project proposed is not financially attractive, therefore, as explained above, the barriers faced prevent this alternative. Since no investment is needed for the alternative of continue cooking on the fogon stove, there are no barriers that prevent this alternative "business as usual" scenario.	
Documentation provided by project participant	
VPA-DD_VPA2_Guatemala_v5.1_07-10-20 TC.doc VPA-DD_VPA3_Nicaragua_v5.1_07-10-20 TC.doc	
DOE assessment	**Date:** 10/10/2020

Sub-step 1a (Define alternatives to the project scenario)

1. As the TOOL01 requires to analysis credible alternative scenarios, the argument provided by the CME is correct. From the background investigations performed by the VVB the direct sales alternative it is not comparable with the VPAs because that option is not very successful, furthermore other alternatives always use donations or carbon financing to be financially atractive. Furthermore the VPAs diferenciate from the other projects in the host countries because the PoA El Mirador considered supervision and maintenance throughout the monitoring period, which make it a strong alternative in the middle-long term.

Output of sub-step 1b:

2. The output of the credible alternatives has been clearly stated

Outcome of sub-step 3a:

3. The investment barrier is clearly stated in the VPA-DDs.

Finding is closed

CAR ID	CAR 10	**Section no.**	B.5	**Date:** 04/10/2020
Description of CAR				
In accordance with PoA-DD and the TOOL01, if barrier analysis (Step 3) is selected it is not mandatory to perform Step 2 (Investment Analysis). Nevertheless the CME could apply both. If the CME decided to apply Step 2 (Investment Analysis) too, then further data has to be provided. For example: if other project developers are developing ICS projects in the same countries then data such costs, efficiency, etc. have to be provided to demostrate the less costly alternative.				
CME response (1st round)				**Date:** 07/10/2020
As explained in the response to CAR 09, the project cannot be compared with sales-based projects because it does not generate income other than carbon revenues. Furthermore, the cost of other stoves may vary significantly among them and against the "Dos por Tres" model, which offers the alternative that is best for maintaining local cooking practice, which ensures easy adoption. Finally, for determining the appropriate method, the tool indicates that **if the CDM project activity and the alternatives identified in Step 1 generate no financial or economic benefits other than CDM related income, then apply the simple cost analysis (Option I).** Otherwise, use the investment comparison analysis (Option II) or the benchmark analysis (Option III). Thus, there is no need to perform an investment analysis.				
Documentation provided by project participant				
VPA-DD_VPA2_Guatemala_v5.1_07-10-20 TC.doc VPA-DD_VPA3_Nicaragua_v5.1_07-10-20 TC.doc				
DOE assessment				**Date:** 10/10/2020
In line with the PoA-DD and TOOL01 the CME decided to no to do investment analysis. This is correct as the only credible alternative is the continuation of the baseline. It can be confirmed by other background references cross check that the other ICS project initiatives in the host countries are not comparable with El Mirador PoA. Finding is closed				

CAR ID	CAR 11	**Section no.**	B.5	**Date:** 04/10/2020

Description of CAR	
Sub-step 3a The analysis of the Financing institution (bank) in the form of a bank loan for Private organization (business oriented or non-profitable) in Table of Sub-step 3a has not been provided	
CME response (1st round)	**Date:** 07/10/2020
The statement below has been added to each VPA-DD: *As mentioned above, several organizations have funded a small number of efficient stoves. These efforts have had limited impact due to both limited size and lack of long-term funding*	
Documentation provided by project participant	
VPA-DD_VPA2_Guatemala_v5.1_07-10-20 TC.doc VPA-DD_VPA3_Nicaragua_v5.1_07-10-20 TC.doc	
DOE assessment	**Date:** 10/10/2020
The provided description of the Financing institution (bank) in the form of a bank loan for Private organization is correct and in line with the background references cross checked by the VVB.	

CAR ID	CAR 12	Section no.	B.5	Date: 04/10/2020
Description of CAR				
The following conclusion has been provided in Sub-step 4b: Nonetheless relevant information about other ICS in the host countries is missing, i.e. costs of other ICS, number of installed ICS, efficiency of other ICS.				
Documentation provided by project participant				
VPA-DD_VPA2_Guatemala_v5.1_07-10-20 TC.doc, VPA-DD_VPA3_Nicaragua_v5.1_07-10-20 TC.doc				
DOE assessment				**Date:** 10/10/2020
CME response (1st round)				**Date:** 07/10/2020
The statements below have been added in the VPA-DD: For Guatemala: In Guatemala[3], there are no official statistics available regarding the implementation of ICS activities. Some organizations and researchers have documented such activities in the past. The Clean Cooking Alliance (formerly the Global Alliance for Clean Cookstoves) has documented that cost the of ICS devices in Guatemala is in the range of USD$38.00 to USD$198.00.[4] The models identified are also very diverse including portable devices, metal made stoves, cement stoves, in-situ stoves, etc. The total number of ICS implemented is unknown.[5] However, research indicates that the current consumption of biomass for energy purposes is estimated at 15.8 million tons on a dry wood basis, of which 97.8% corresponds to the domestic sector. The annual deficit of firewood is equivalent to more than 5 million tons firewood (on a dry wood basis). Approximately 70% of the population (>10 million) in Guatemala uses firewood for cooking.[6] Although data is not available regarding the number of ICS in use, none of the projects implemented, not even in total, come close to addressing the demand of households that need an ICS. For Nicaragua: As mentioned above, several organizations have funded a small number of efficient stoves. These efforts have had limited impact due to both limited size and lack of long-term funding, or the impact simply remains unknown due lack of monitoring. In Nicaragua there are no official statistics available regarding the implementation of ICS activities. There is an evident data gap concerning comprehensive studies of ICS adoption rates, models used, and their cost. Due the lack of data in this regard, it is evident that activities done in the past cannot be considered as working on a steady basis.[7]				
Documentation provided by project participant				
VPA-DD_VPA2_Guatemala_v5.1_07-10-20 TC.doc, VPA-DD_VPA3_Nicaragua_v5.1_07-10-20 TC.doc				
DOE assessment				**Date:** 10/10/2020

The clarification provided by the CME is correct. No official information about ICS exist in the host countries, the back ground information investigated and reviewed by VVB provide a general situation of the ICS project in the host countries based on specific project or limited investigations performed by several institutions, usually financed by foreigner institutions. Furthermore the data provided by the CME, such as the cost the of ICS devices in Guatemala which range from USD$38 to USD$198 could be cross checked against other studies which confirm that the ICS prices are between: USD$32 to USD$340. which confirm the correctness of the data. Finding is closed

Table 3. FAR from this validation

FAR ID	**-**	**Section no.**	**-**	**Date: DD/MM/YYYY**
Description of FAR				
N/A				
CME response (1st round)				Date: **DD/MM/YYYY**
Documentation provided by project participant				
DOE assessment (1st round)				**Date: DD/MM/YYYY**
Conclusion *Tick the appropriate checkbox*	☐ Additional action should be taken (finding remains open) ☐ The finding is closed			

Appendix 5. Assessment of open issued from the GS preliminary review

N/A

Appendix 6. Assessment of additionality

The VPAs provide the additionality analysis based on the investment Barrier Analysis as stated in the PoA-DD. So as the investment barrier is the only one defined at PoA level, the assessment done by the VVB focuses on that barrier only. The TOOL01 step approach is followed.

The VT reviewed a database/ADDI/ of around 18 projects in Guatemala that provide ICS. It is observed that the more successful project (with the larger amount of ICS provided) are the ones registered as carbon project or fundations with support of different types of donations to support local ICS programs.

Sub-step 1a (Define alternatives to the project activity)

As per the background research/ADDI/ done by the VVB two scenarios are identified, which is in accordance with the alternatives provided by the CME.

Alternative A: Continue cooking on the fogon stove. No investments needed.
Alternative B: Implementation of the project without GS VER revenues.

Following findings were raised: CAR 09

Sub-step 1a Consistency with mandatory laws and regulations
The statement provided by the CME is confirmed by other references/ADDI/ of the VVB. It is clear that in none of the host countries Guatemala and Nicaragua there are regulations that force or promote the mandatory use of ICS. In addition, there is no related EB decision. The output of Sub-step 1a is stated.

Following finding was raised and successfully closed: CAR 09

Step 3 - Barrier Analysis
As per PoA-DD the barrier analysis, specifically investment barrier has to be applied. The investment barrier analysis is provided by the CME.
In accordance with the TOOL01 and PoA-DD if the project activity and the alternatives identified in Step 1 generate no financial or economic benefits other than CDM (GHG Emission Reductions Certificate in this case) related income, then apply the simple cost analysis (Option I). Therefore, there is no need to perform an investment analysis.

Sub-step 3a. Identify barriers that would prevent the implementation of the proposed GS VER project activity
The barrier was identified at PoA-level where the barrier to be analysed is the investment one. The CME provided in the VPA-DDs the possible investment sources. Such investment alternatives are confirmed by the references/GA/ provided by the CME but also by the VVB references/ADDI/.
In accordance with the PoA-DD three different investment alternatives are analysed for three different developers. The analysis has been provided by the CME and in the following table is assessed by the VT.

Source of funding	DOE Assessment
Equity investment upon expectation	**Individual households**

of certain returns (i.e. tangible or intangible)	The CME provided strong evidence by the study Global Alliance for Clean Cookstoves Guatemala Cookstoves and Fuels Market Assessment Sector Mapping/GA/ developed by a third party and recognized organization to confirm that in fact the individual households cannot be bought directly de ICS for 2 reasons, the users usually belongs poorest communities in the Guatemala and Nicaragua and furthermore there is ignorance about the benefits of ICS. The VT confirmed such information by cross checking with other studies/ADDI/ **Governmental Institutions** By the provided evidence/GA/ and the research done by the VT/ADDI/ it is confirmed that the Governments in both countries Nicaragua and Guatemala have another priorities and have no program to develop the ICS sector. **Private organization (business oriented or non-profitable)** From the research/ADDI/ done by the VT it is confirmed the statement provided by the CME in the VPA-DDs is correct, the private sector is involved only if the project has an additional financing such as carbon or other special subsides program or donations. As the individual households cannot buy the ICS directly, then external money source have to be sought.
Financing institution (bank) in the form of a bank loan	**Individual households** The information provided by the CME can be confirmed by several available studies/ADDI/. most of the workers in rural areas work in agricultural and seasonal work so that they cannot payback loans and above of that in the research done by the VT couldn't be identified banks providing special loans for ICS. **Governmental Institutions** As described before the government has no special interest in ICS project development as it has other priorities. **Private organization (business oriented or non-profitable)** From the research/ADDI/ done by the VT it is confirmed the statement provided by the CME in the VPA-DDs is correct, the private sector is involved only if the project has an additional financing such as carbon or other special subsides program or donations. As the individual households cannot buy the ICS directly, then external money source have to be sought.
Donations	**Individual households** The information provided by the CME can be confirmed by several available studies/ADDI/. The donations hardly can be managed directly by the individual households due to lack of information. The observed cases identified in the references/ADDI/ refer to some isolated cases but with no long-term impact as relevant project components such as training are missing in this cases. **Governmental Institutions** As described before the government has no special interest in ICS project development as it has other priorities. **Private organization (business oriented or non-profitable)** As stated by the CME in the VPA-DDs donations from Europe and USA can be observed/ADDI/. which can in fact in punctual cases make a ICS project development financially feasible, nevertheless such donation are not continuous and cannot be ensured in the long term.

Following related findings were raised: CAR 09, CAR 10, CAR 11

Sub-step 3b. Show that the identified barriers would not prevent the implementation of at least one of the alternatives (except the proposed project activity)

The alternative selected by the CME is correct, as it has been done in line with the TOOL01. Alternative A 'Continue cooking on the fogon stove' does not face any barrier.

As Sub-steps 3a and 3b are satisfied then Step 4 is analysed.

Step 4a Analyse other activities similar to the proposed project activity

The similar activities have been provided and evidenced by a regional study/GA/ the description provided is in line with the information identified by the VVB in the references/ADDI/.

Sub-step 4b. Discuss any similar options that are occurring

The VT reviewed a database/ADDI/ of around 18 projects in Guatemala that provide ICS. It is observed that the more successful project (with the larger amount of ICS provided) are the ones registered as carbon project or fundations with support of different types of donations to support local ICS programs.

The clarification provided by the CME is correct. No official information about ICS exist in the host countries, the back ground information investigated and reviewed by VVB provide a general situation of the ICS project in the host countries based on specific project or limited investigations performed by several institutions, usually financed by foreigner institutions. Furthermore, the data provided by the CME, such as the cost the of ICS devices in Guatemala which range from USD$38 to USD$198 could be crosschecked against other studies where prices are between: USD$32 to USD$340, which confirm the correctness of the data./GA/

Accordingly, it can be concluded that the implementation of ICS projects are not a common practice and it cannot be implemented with additional financing such as carbon or others.

Following findings were raised: CAR 12

Table A-7: Assessment of Financial Parameters

☒	No financial parameters are used for additionality justification
☐	Assessment of all financial parameters see below

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Document information

Version	*Date*	*Description*
03.0	31 May 2019	Revision to: • Ensure consistency with version 02.0 of the "CDM validation and verification standard for programmes of activities" (CDM-EB93-A08-STAN); • Make editorial improvements.
02.0	29 December 2017	Revision to align with the requirements of the "CDM validation and verification standard for programme of activities" (version 01.0).
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