

Programa Brasileiro  
GHG Protocol



## Inventário de emissões de gases de efeito estufa



Ano inventariado: 2023





### **Banco Santander S.A. (Brasil)**

**Nome fantasia:** Banco Santander

**CNPJ:** 90.400.888/0001-42

**Setor econômico:** Atividades financeiras, de seguros e serviços relacionados

**Subsetor:** Atividades de serviços financeiros

**Endereço:** Avenida Presidente Juscelino Kubitschek - de 953 ao fim - lado ímpar 2235, (Torre Santander) - Vila Nova Conceição - São Paulo - 04543011

#### **Responsável pela publicação do inventário:**

Adriano Alves de Oliveira (adrianoliveira@santander.com.br)

#### **Informações institucionais:**

Nós somos o Santander Brasil, a unidade brasileira do Grupo Santander - o segundo maior conglomerado financeiro da zona do euro e um dos maiores do mundo.

Estamos presentes no mercado local desde 1982 e contamos com mais de 65 milhões de clientes espalhados por todas as regiões do país. Temos uma atuação completa, que passa pelo banco de varejo, focado em serviços financeiros para pessoas físicas e empresas de pequeno, médio e grande porte; e pelo banco de atacado, que é responsável pelo atendimento a companhias globais e por operações no mercado de capitais.

Contamos, ainda, com estruturas especializadas para atuar nas áreas de seguros, investimentos, meios de pagamento e muito mais.

Na área de sustentabilidade, temos uma jornada de mais de 20 anos de atuação, com um histórico de pioneirismo e liderança em temas como energias renováveis, análise de risco socioambiental e microcrédito produtivo e orientado.

Para manter o negócio em movimento, temos uma equipe formada por mais de 55 mil profissionais com as mais diversas origens, formações e repertórios.

## Dados do inventário

Responsável pela elaboração do inventário

Adriano Alves de Oliveira

E-mail do responsável

adrianoliveira@santander.com.br

Ano do inventário

2023

Verificação

O Inventário foi verificado por terceira parte: Sim

Organismo verificador: Fundação Vanzolini

Responsável pela verificação: Valéria Mendonça Gomes (auditor\_a402@vanzolini.org.br)

Tipo do inventário: Completo





## 1. Limites do inventário

### Limites Organizacionais

Abaixo é apresentada uma lista das unidades da organização e de empresas controladas incluídas neste inventário. É obrigatório o relato desagregado das emissões das unidades que possuem emissões de escopo 1 iguais ou superiores a 10.000 tCO<sub>2</sub> e por ano. O relato das emissões das outras unidades, assim como o de empresas controladas, é opcional. As emissões desagregadas por unidades podem ser encontradas na Seção 2.7 - Emissões por unidades de operação

#### Legenda

Matriz  Controlada  Unidade

[ A matriz possui o controle operacional? | % de participação societária referente à Matriz ]

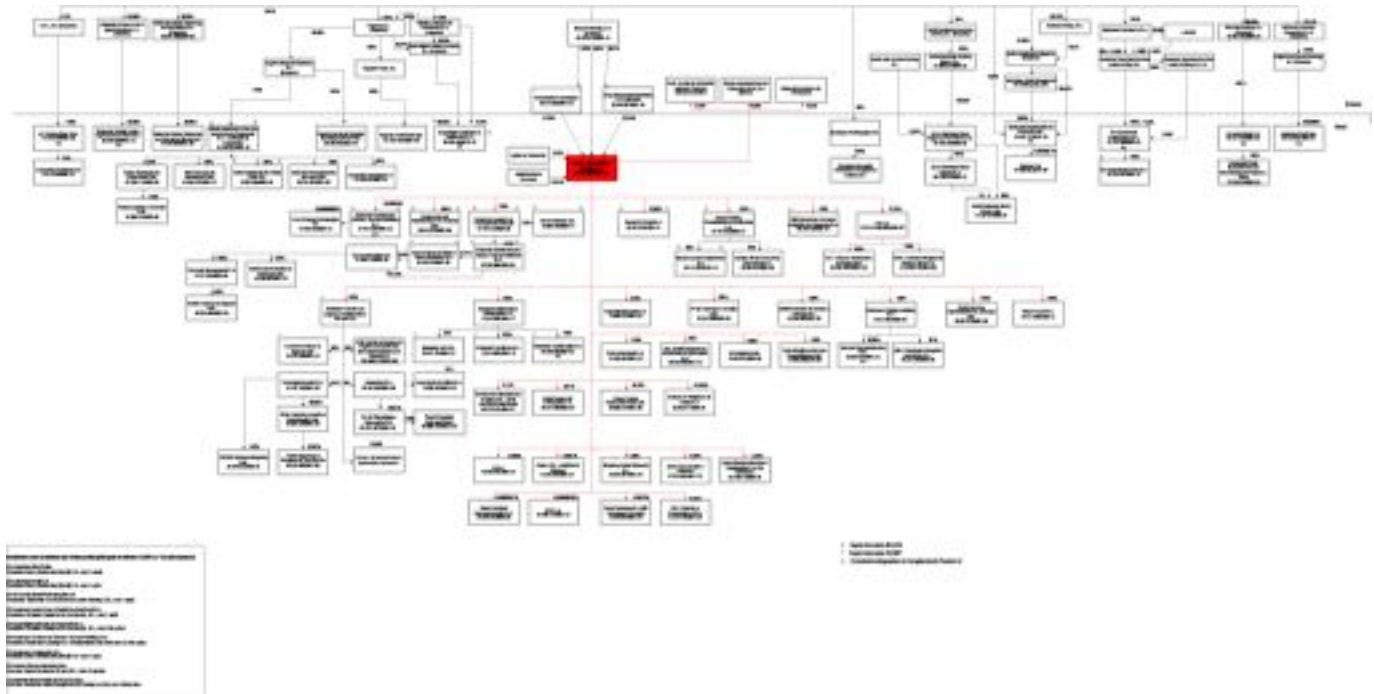
 Banco Santander

 Emissões em São Paulo [ Sim | 100,00% ]

### 1.1 Qual abordagem de consolidação foi utilizada no inventário?

Relato de emissões sob a abordagem de Controle Operacional.

### 1.2 Organograma



## Limites Operacionais

### 1.3 Limites operacionais relatados no inventário

#### **Escopo 1**

Combustão estacionária

Combustão móvel

Fugitivas

#### **Escopo 2 - Abordagem baseada na localização**

Aquisição de energia elétrica

#### **Escopo 2 - Abordagem baseada na escolha de compra**

Aquisição de energia elétrica

#### **Escopo 3**

1. Bens e Serviços comprados

3. Atividades relacionadas com combustível e energia não inclusas nos Escopos 1 e 2

4. Transporte e distribuição (upstream)

5. Resíduos gerados nas operações

6. Viagens a negócios

7. Emissões de funcionários (casa-trabalho)

## 2. Emissões

### Controle Operacional

#### 2.1 Resumo das emissões totais

GEE	Em toneladas do gás				Em toneladas de CO <sub>2</sub> equivalente (tCO <sub>2</sub> e)			
	Escopo 1	Escopo 2 - Abordagem baseada na localização	Escopo 2 - Abordagem baseada na escolha de compra	Escopo 3	Escopo 1	Escopo 2 - Abordagem baseada na localização	Escopo 2 - Abordagem baseada na escolha de compra	Escopo 3
CO <sub>2</sub>	2.276,564	9.290,931	0,000	55.106,462	2.276,564	9.290,931	0,000	55.106,462
CH <sub>4</sub>	0,729	0,000	0,239	68,361	20,412	0,000	6,692	1.914,108
N <sub>2</sub> O	0,162	0,000	0,024	4,677	42,930	0,000	6,360	1.239,405
HFC	1,317	0,000	0,000	0,000	2.410,905	0,000	0,000	0,000
PFC	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
SF <sub>6</sub>	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
NF <sub>3</sub>	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
<b>Total</b>					<b>4.750,811</b>	<b>9.290,931</b>	<b>13,052</b>	<b>58.259,975</b>

#### 2.2 Emissões de Escopo 1 desagregadas por categoria

Categoria	Emissões (tCO <sub>2</sub> e)	Emissões de CO <sub>2</sub> biogênico (t)	Remoções de CO <sub>2</sub> biogênico (t)
Combustão móvel	1.414,311	708,115	0,000
Combustão estacionária	925,595	80,317	0,000
Fugitivas	2.410,905	0,000	0,000
<b>Total</b>	<b>4.750,811</b>	<b>788,432</b>	<b>0,000</b>

## 2.3 Emissões de Escopo 2 desagregadas por categoria

### Abordagem baseada na localização

Categoria	Emissões (tCO <sub>2</sub> e)	Emissões de CO <sub>2</sub> biogênico (t)	Remoções de CO <sub>2</sub> biogênico (t)
Aquisição de energia elétrica	9.290,931	0,000	0,000
<b>Total</b>	<b>9.290,931</b>	<b>0,000</b>	<b>0,000</b>

### Abordagem baseada na escolha de compra

Categoria	Emissões (tCO <sub>2</sub> e)	Emissões de CO <sub>2</sub> biogênico (t)	Remoções de CO <sub>2</sub> biogênico (t)
Aquisição de energia elétrica	13,052	13.062,400	0,000
<b>Total</b>	<b>13,052</b>	<b>13.062,400</b>	<b>0,000</b>

## 2.4 Emissões de Escopo 3 desagregadas por categoria

Categoria	Emissões (tCO <sub>2</sub> e)	Emissões de CO <sub>2</sub> biogênico (t)	Remoções de CO <sub>2</sub> biogênico (t)
1. Bens e Serviços comprados	1.476,872	0,000	0,000
3. Atividades relacionadas com combustível e energia não incluídas nos Escopos 1 e 2	1.685,707	0,000	0,000
4. Transporte e distribuição (upstream)	12.130,882	1.461,520	0,000
5. Resíduos gerados nas operações	1.865,217	3,220	0,000
6. Viagens a negócios	6.508,839	0,000	0,000
7. Emissões de funcionários (casa-trabalho)	34.592,458	6.102,290	0,000
<b>Total</b>	<b>58.259,975</b>	<b>7.567,030</b>	<b>0,000</b>

## 2.5 Outros gases de efeito estufa não contemplados pelo Protocolo de Quioto

Não foi relatado



## 2.6 Emissões fora do Brasil

Não foi relatado

## 2.7 Emissões por unidade

Não foi relatado

### 3. Métodos

#### 3.1 Método e/ou ferramentas intersetoriais

Foi utilizada alguma metodologia e/ ou ferramenta inter-setorial além daquelas fornecidas pelo Programa Brasileiro GHG Protocol?

Não foi utilizado.

#### 3.2 Método e/ou ferramentas para setores específicos

Foi utilizada alguma metodologia e/ ou ferramenta para setores específicos?

Não foi utilizado.

#### 3.3 Fatores de emissão

Foi utilizado algum fator de emissão diferente daqueles sugeridos pelo Programa Brasileiro GHG Protocol?

Não foi utilizado.

## 4. Outros Elementos

*Campos de preenchimento opcional*

4.1 Informações sobre a performance da organização, em comparação com benchmarks internos (ex: outras unidades) ou externos (ex: organizações do mesmo setor).

Nossa ambição global é alcançar emissões líquidas zero até 2050. Isso se aplica tanto para as emissões de gases de efeito estufa (GEE) das nossas operações (das quais já somos carbono neutro desde 2010) quanto às emissões indiretas, relacionadas aos nossos serviços de empréstimo, assessoria e investimento. Para atingir esse compromisso, uma de nossas metas é manter nossas operações neutras em carbono. Reduzir o impacto ambiental das nossas atividades, atingindo 100% de abastecimento elétrico por fontes renováveis até 2025 e manter a neutralização das emissões de GEE de nossas operações.

4.2 Descrição de indicadores de emissão de GEE para as atividades da organização. Por exemplo, tCO<sub>2</sub>e/produtos fabricados.

Os indicadores monitorados pelo Santander são as emissões absolutas de escopo 1,2 e 3 e sua evolução ao longo do tempo. Também avaliamos a intensidade de emissões por funcionário, receita e kWh consumido.

4.3 Descrição de estratégias e projetos para a gestão de emissões de GEE.

O Banco Santander possui uma Governança Climática baseada em 3 pilares:

1. Responsabilidade pelo nosso impacto: publicamos nossas emissões diretas e indiretas no Registro Público de Emissões do GHG Protocol Brasil e respondemos também ao CDP (Carbon Disclosure Project). Implantamos ações para reduzir emissões e, desde 2010, compensamos nossas emissões dos escopos 1 e 2 por meio da compra de créditos de carbono oriundos de projetos sustentáveis.
2. Negócios de baixo carbono: apoiamos empresas na transição para uma economia de baixo carbono, com enfoque no desenvolvimento da energia renovável e da agricultura responsável.
3. Engajamento e transparência: Desde 2017 aderimos ao CDP Supply Chain, com o objetivo de engajar nossos fornecedores. Também estamos presentes em fóruns de discussão empresarial sobre o tema e divulgamos nossas ações e resultados.

4.4 Informações sobre contratos com clientes e fornecedores que incluam cláusulas vinculadas à elaboração de inventários de GEE e/ou ao envio de informações relacionadas.

Desde 2017 o Santander participa do CDP Supply Chain com o objetivo de incentivar os fornecedores mais emissores a medir seus gases de efeito estufa e gerenciar os impactos relacionados às mudanças climáticas em suas operações.

4.5 Informações sobre incertezas, exclusões de fontes de dados e outras características da elaboração do inventário.

Assumimos um grau de incerteza de até 5% no cálculo das emissões, devido a extrapolações e estimativas, principalmente no escopo 3.

Buscamos o melhor entendimento dos impactos ambientais em nossa cadeia de valor, e por isso reportamos 6 fontes de emissão no escopo 3. Os dados para estes cálculos não estão, em alguns casos, sob nossa gestão direta,

levando a aproximações.

#### 4.6 Descrição sobre ações internas para melhoria da qualidade do inventário de GEE. Por exemplo, sistematização da coleta de dados, contratação de verificação externa, etc.

A elaboração do inventário de emissões do Santander Brasil conta com um sistema informatizado para coleta de dados, garantindo a rastreabilidade das informações.

A verificação externa oferece oportunidades para melhora contínua na qualidade do inventário, além de assegurar a transparência do processo. Além disso, os processos de escopo 1 e 2 estão dentro do perímetro de nossa certificação ISO 14001 e passam por auditorias anualmente.

#### 4.7 Informações sobre a compra de energia elétrica oriunda de fonte renovável.

Quantidade em MWh	Fonte de Geração	Instrumento de rastreamento da origem	Informações adicionais	Informação pública
57.869,020	Hidráulica	Certificados de energia renovável	Certificado IREC - Total do certificado foi comprado com base no projetado para o consumo do ano, porém o realizado é o que foi reportado nesta seção. Fonte de Geração: Hidrelétrica	Não
124.897,160	Hidráulica	Certificados de energia renovável	Certificado IREC - Total do certificado foi comprado com base no projetado para o consumo do ano, porém o realizado é o que foi reportado nesta seção. Fonte de Geração: Hidrelétrica	Não
20.937,589	Hidráulica	Contrato bilaterais	Hídrica	Não
18.588,279	Biomassa	Contrato bilaterais	Biogás	Não
2.894,688	Solar	Contrato bilaterais	Cogeração	Não
19.628,978	Solar	Contrato bilaterais	Solar	Não

#### 4.8 Informações sobre autoprodução de energia oriunda de fonte renovável para consumo próprio.

Não foi relatado

4.9 Informações sobre o estoque de carbono, em toneladas, de sua organização em 31 de dezembro do ano inventariado.

Não foi relatado

## 5. Compensações e reduções

*Campos de preenchimento opcional*

### 5.1 Compensação de emissões

A organização possui projetos de compensação de emissões?

Projeto de compensação	Quantidade compensada (tCO <sub>2</sub> e)	O projeto foi verificado?
VTRM Brazil - Parques Eólicos	8.545,000	Sim
Uberlandia Landfills I and II Project	16.340,000	Sim
Proyecto Mirador Improved Cookstoves Honduras	3.370,000	Sim
Spartanburg County Landfill Gas Project	13.793,000	Sim

### 5.2 Reduções de emissões

A organização possui projetos de redução de emissões?

Não foi relatado

## Declaração de Verificação de inventário de emissões de gases de efeito estufa

### Programa Brasileiro GHG Protocol

Esta **Declaração de Verificação**<sup>1</sup> documenta que o Organismo de Verificação (OV) citado abaixo realizou as atividades de verificação de acordo com as *Especificações de Verificação do Programa Brasileiro GHG Protocol* e a norma ABNT NBR ISO 14064-3:2007.

Todos os campos são de preenchimento obrigatório.

Organismo de Verificação (OV)	Organização Inventariante (OI)
Nome do OV: Fundação Carlos Alberto Vanzolini	Nome da OI: BANCO SANTANDER (BRASIL) S.A
Nome do verificador líder: : Valeria M. Gomes	Nome do responsável pelo inventário: Adriano Oliveira
E-mail: auditor_a402@vanzolini.org.br	E-mail: adrianoliveira@santander.com.br

As emissões de gases de efeito estufa (GEE) informadas pela Organização Inventariante em seu inventário de emissões, de 1º de janeiro até 31 de dezembro de 2023, são verificáveis e cumprem os requisitos do Programa Brasileiro GHG Protocol, detalhados nas *Especificações do Programa Brasileiro GHG Protocol de Contabilização, Quantificação e Publicação de Inventários Corporativos de Emissões de Gases de Efeito Estufa* (EPB).

### Nível de Confiança

O Organismo de Verificação (OV) atribuiu o seguinte nível de confiança ao processo de verificação:

<input checked="" type="checkbox"/> Verificação com nível de <b>confiança razoável</b> “O inventário de gases de efeito estufa da organização inventariante para o ano de 2023 está materialmente correto, é uma representação justa dos dados e informações de GEE e foi elaborado de acordo com as EPB.” As limitações do processo de verificação foram:
<input type="checkbox"/> Verificação com nível de <b>confiança limitado</b> “Não há indícios de que o inventário de gases de efeito estufa da organização inventariante para o ano de [ano] não esteja materialmente correto, não seja uma representação justa dos dados e informações de GEE e não tenha sido preparado de acordo com as EPB.” As limitações do processo de verificação foram:
<input type="checkbox"/> Inventário <b>não verificável</b> Incluir razão, por exemplo: “devido a erros de dados” ou “não está de acordo com as EPB”:

### Descrição do Escopo da Verificação

O inventário do ano de 2023 da organização inventariante foi verificado dentro do seguinte escopo:

Limites organizacionais	Limites operacionais

<sup>1</sup> Este modelo de Declaração de Verificação pode ser revisado a qualquer momento e a versão atualizada estará disponível no website do Programa Brasileiro GHG Protocol - [www.fgv.br/ghg](http://www.fgv.br/ghg)

# APÊNDICE A

<input checked="" type="checkbox"/> Controle operacional	<input checked="" type="checkbox"/> Escopo 1
<input type="checkbox"/> Participação societária	<input checked="" type="checkbox"/> Escopo 2 - abordagem baseada em localização <sup>2</sup>
	<input checked="" type="checkbox"/> Escopo 2 - abordagem baseada em escolha de compra <sup>2</sup>
	<input checked="" type="checkbox"/> Escopo 3

Foram excluídas da verificação: N.a.

## Instalações visitadas

Listar todos os locais visitados durante a verificação e a data de cada visita.

Nome do local	Relação do local com a holding	Endereço	Data da visita
Sede	Sede	AV. PRES JUSCELINO KUBITSCHKE, 2041 - CONJ 281 BLOCO A COND WTORRE J - VILA NOVA CONCEIÇÃO	08.04.24
Santander PAB 8820	Agência 2050 (no Work Cafe)	AV. PRES JUSCELINO KUBITSCHKE, 2041 - CONJ 281 BLOCO A COND WTORRE J - VILA NOVA CONCEIÇÃO	17.04.24
Santander Select	Agencia 001-7555	AV. PRES JUSCELINO KUBITSCHKE, 2041 - CONJ 281 BLOCO A COND WTORRE J - VILA NOVA CONCEIÇÃO	17.04.24
Santander Select JK	Agência 001-1652	AV. PRES JUSCELINO KUBITSCHKE, 2041 - CONJ 281 BLOCO A COND WTORRE J - VILA NOVA CONCEIÇÃO	17.04.24

## Total de emissões verificadas em toda a organização, segundo a abordagem de Controle Operacional

GEE	Emissão de GEE em toneladas de CO <sub>2</sub> equivalente (tCO <sub>2</sub> e)			
	Escopo 1	Escopo 2 Abordagem baseada em localização	Escopo 2 Abordagem baseada em escolha de compra	Escopo 3 (se aplicável)
CO <sub>2</sub>	2.276,564	9.290,931	-----	55.106,462

<sup>2</sup> Para mais informações consulte a Nota técnica "Recomendações para a contabilização de emissões de escopo 2 em inventários corporativos de gases de efeito estufa no âmbito do Programa Brasileiro GHG Protocol".



# APÊNDICE A

CH <sub>4</sub>	20,412	-	6,692	1.914,108
N <sub>2</sub> O	42,930	-	6,360	1.239,405
HFCs	2.410,905	-	-	-
PFCs	-	-	-	-
SF <sub>6</sub>	-	-	-	-
NF <sub>3</sub>	-	-	-	-
TOTAL	4.750,811	9.290,931	13,052	58.259,975
CO <sub>2</sub> biogênico	788,432		13.062,400	7.567,023

## Total de remoções verificadas em toda a organização, segundo a abordagem de Controle Operacional

Remoção de CO <sub>2</sub> biogênico (tCO <sub>2</sub> e)				
GEE	Escopo 1	Escopo 2 Abordagem baseada em localização	Escopo 2 Abordagem baseada em escolha de compra	Escopo 3 (se aplicável)
CO <sub>2</sub> biogênico				

## Total de emissões verificadas em toda a organização, segundo a abordagem de Participação Societária (se aplicável)

Emissão de GEE em toneladas de CO <sub>2</sub> equivalente (tCO <sub>2</sub> e)				
GEE	Escopo 1	Escopo 2 Abordagem baseada em localização	Escopo 2 Abordagem baseada em escolha de compra	Escopo 3 (se aplicável)
CO <sub>2</sub>				
CH <sub>4</sub>				
N <sub>2</sub> O				
HFCs				
PFCs				
SF <sub>6</sub>				
NF <sub>3</sub>				
TOTAL				
CO <sub>2</sub> biogênico				

## Total de remoções verificadas em toda a organização, segundo a abordagem de Participação Societária (se aplicável)

GEE	Remoção de CO <sub>2</sub> biogênico (tCO <sub>2</sub> e)			
	Escopo 1	Escopo 2 Abordagem baseada em localização	Escopo 2 Abordagem baseada em escolha de compra	Escopo 3 (se aplicável)
CO <sub>2</sub> biogênico				

## Comentários adicionais

O BANCO SANTANDER (BRASIL) S.A. em 2023 utilizou 100% de energia renovável de acordo com as autodeclarações de produção de energia renovável (Biogás, Cogeração, Hídrica, Solar).

## Conflito de interesse (CDI)<sup>3</sup>

Eu, Valéria Mendonça Gomes, certifico que nenhum conflito de interesse existe entre a Organização Inventariante e o Organismo de Verificação, ou qualquer dos indivíduos membros da equipe de verificação envolvidos na verificação do inventário, conforme definido no capítulo 3.2.1 das *Especificações de Verificação do Programa Brasileiro GHG Protocol*.

Valéria Mendonça Gomes, Verificador Líder

26/05/2024

Data

Reconhecimento digital da assinatura<sup>4</sup>

## Conclusão do verificador sobre o inventário de emissões de GEE<sup>3</sup>

<sup>3</sup> Se por algum motivo o verificador líder não puder assinar a declaração em nome do Organismo de Verificação (por questões de representação legal, por exemplo), então os representantes legais da empresa podem assinar/atestar em nome da empresa neste campo. Neste caso, é necessário alterar o campo [verificador líder] para "Representante Legal".

<sup>4</sup> Ao marcar a caixa "Reconhecimento digital da assinatura", concordo que esta declaração de verificação seja considerada "feita por escrito" e "assinada" para todos os fins e que quaisquer registros eletrônicos serão considerados "feitos por escrito". Renuncio expressamente a todo e qualquer direito de negar a obrigatoriedade jurídica, a validade ou a executoriedade desta declaração de verificação e de quaisquer documentos a ela relacionados com base em que tenham sido elaborados e concluídos eletronicamente.

# APÊNDICE A

Como responsáveis pelas atividades de verificação do inventário de GEE da organização inventariante, atestamos que as informações contidas neste documento são verdadeiras.

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Valéria Mendonça Gomes, Verificador Líder

26/05/2024

Data

Reconhecimento digital da assinatura<sup>4</sup>

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Ana Paula Xavier de Brito, Revisor independente

03/06/2024

Data

Reconhecimento digital da assinatura<sup>4</sup>

## Autorização

Eu, Adriano Alves de Oliveira , aceito os resultados desta declaração de verificação.

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[Assinatura do representante da OI]

04/06/2024

Data

Reconhecimento digital da assinatura<sup>5</sup>

## Revisão (se aplicável)<sup>6</sup>

Número de revisão: 0

Justificativa para a alteração: n.a.

## Equipe de verificação (opcional)

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<sup>5</sup> Ao marcar a caixa "Reconhecimento digital da assinatura", concordo que esta declaração de verificação seja considerada "feita por escrito" e "assinada" para todos os fins e que quaisquer registros eletrônicos serão considerados "feitos por escrito". Renuncio expressamente a todo e qualquer direito de negar a obrigatoriedade jurídica, a validade ou a executoriedade desta declaração de verificação e de quaisquer documentos a ela relacionados com base em que tenham sido elaborados e concluídos eletronicamente.

<sup>6</sup> Caso a Declaração de Verificação tenha que ser refeita, este campo **deve** ser utilizado para informar o número de revisão do documento e a justificativa para a alteração.



# APÊNDICE A

A equipe de verificação é composta pelos seguintes profissionais: **Valéria Mendonça Gomes** -Verificadora Líder e **Ana Paula Xavier de Brito** - revisora independente.



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VCS VALIDATION DEED OF REPRESENTATION

BY

EARTHOOD SERVICES PRIVATE LIMITED

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**THIS DEED OF REPRESENTATION** is made on 30/11/2018

**BY**

Earthood Services Private Limited, 424A, Tower B3, Spaze I-Tech Park, Sector 49, Sohna Road, Gurgaon-122018, India (as **VVB**)

**THIS DEED WITNESSES** as follows:

1. **INTERPRETATION**

1.1 In this Deed:

**"Accountholder"** means any person holding a VCU account with a VCS Registry;

**"AFOLU"** means agriculture, forestry and other land use;

**"GHG"** means greenhouse gas;

**"GHG Program"** means a formal or organized program, scheme or arrangement for the recognition of activities leading to Reductions, or the crediting or issuance of instruments representing, or acknowledging, Reductions;

**"Project"** means "VTRM Renewable Energy";

**"Project Crediting Period"** means the time period for which GHG emission reductions or removals generated by the Project are eligible for issuance as VCUs (the rules with respect to the length of such time period and the renewal of the Project Crediting Period are set out in the *VCS Standard*);

**"Project Ownership"** means the legal right to control and operate the project activities. Distinct from proof of right;

**"Project Proponent"** means an individual or organization that has overall control and responsibility for the Project, or an individual or organization that together with others, each of which is also a Project Proponent, has overall control or responsibility for the Project. The entity(s) that can demonstrate Project Ownership in respect of the Project;

**"Reduction"** means a reduction or removal of one (1) metric tonne of CO<sub>2</sub> equivalent caused by the activities of the Project during the Project Crediting Period;

**"Validation Report"** means the written report of validation in relation to the Project prepared by the VVB in accordance with the VCS Rules;

**"Validation/Verification Body"** or **"VVB"** means an organization approved by the VCSA to act as a validation/verification body in respect of providing validation and/or verification services in accordance with the VCS Rules;

**"VCS Program"** means the GHG Program operated by the VCSA which establishes the rules and requirements that operationalize the VCS to enable the validation of GHG projects and the verification of GHG emission reductions and removals;

**"VCS Project Database"** means the central project database that records all projects registered and VCUs issued under the VCS, and provides public access to all project and VCU information, including retirement and tracking of the AFOLU pooled buffer account;





**"VCS Registry"** means a registry operating within the VCS Registry System and holding a current, valid agreement with the VCSA to provide registry services on behalf of the VCSA. VCS registries interact with the VCS Project Database to issue VCUs, and hold, transfer (to and from other VCS registries), retire, suspend, cancel and provide custodial services for VCUs on behalf of its Accountholders;

**"VCS Registry System"** means the system established by the VCS Program, comprised of the VCS Project Database and the VCS Registries, to provide project proponents with the ability to register projects, and issue, transfer, hold and retire VCUs;

**"VCS Rules"** means the rules and requirements set out in the *VCS Program Guide*, the *VCS Standard* and the other VCS Program documents, as such rules and requirements may be updated from time to time;

**"VCSA"** means the Verified Carbon Standard Association; and

**"Verified Carbon Unit" (VCU)** means a unit issued by, and held in a VCS Registry representing the right of an Accountholder in whose account the unit is recorded, to claim the achievement of a Reduction that has been verified by a validation/verification body in accordance with the VCS Rules. Recordation of a VCU in the account of the Accountholder at a VCS Registry is *prima facie* evidence of that Accountholder's entitlement to that VCU.

- 1.2 Documents referred to in this Deed but not defined shall be the VCS documents, as updated from time to time, to which the relevant term relates.

## 2. REPRESENTATIONS

- 2.1 I am the Validation/Verification Body in relation to the validation of the Project.

- 2.2 I hereby represent and warrant that:

2.2.1 I have validated the Project's compliance with the VCS Program requirements as set out in the VCS Rules; and

2.2.2 All factual information that I provide in relation to this Deed or have provided in the Validation Report is to the best of my knowledge following due inquiry true, accurate and complete in all material respects and I have not made or provided, and will not make or provide, false, fraudulent or misleading statements or information in relation to this Deed or the Validation Report.

- 2.3 I hereby acknowledge and agree that:

2.3.1 The following persons may rely on and enforce the terms of this Deed:

- (a) the VCSA;
- (b) each person who is an Accountholder holding VCUs relating to the Project at any given time;
- (c) each person on whose behalf VCUs relating to the Project were retired by an Accountholder; and
- (d) each of the successors and assigns of those persons listed in clauses 1.1.1(a), 1.1.1(b) or 2.3.1(c);

2.3.2 Neither the VCSA, the VCS Registries, nor any of their respective affiliates, directors, employees, agents, licensors and/or contractors, shall be liable with

respect to any claims whatsoever arising out of this Deed or erroneous information within the Validation Report submitted to the VCS Registry System for indirect, consequential, special, punitive or exemplary damages, including, without limitation, claims brought against the VCSA or the VCS Registries by Accountholders, other VCS Registries, Project Proponents, other Validation/Verification Bodies or any other third party. This paragraph shall apply regardless of any actual knowledge or foreseeability of such damages;

2.3.3 I have read, understood and will abide by the VCS Rules; and

2.3.4 The VCSA has an absolute right to amend any of the VCS Rules at any time and shall not bear any liability for loss or damage or liability of any kind sustained by the Validation/Verification Body or any other party involved in the Project in any way under the VCS Program as a consequence of such amendment.

### 3. GOVERNING LAW AND JURISDICTION

This Deed is governed by and interpreted in accordance with English law, and the English courts shall have exclusive jurisdiction to settle any dispute arising from or connected with this Deed including a dispute regarding the existence, validity or termination of this Deed or the consequences of its nullity.

### 4. SOVEREIGN IMMUNITY

To the extent that the Validation/Verification Body enjoys any right of immunity from set-off, suit, execution, attachment or other legal process with respect to its assets or its obligations under this Deed, the Validation/Verification Body waives all such rights to the fullest extent permitted by law.

### 5. COUNTERPARTS

This Deed may be executed in any number of counterparts, each of which when executed and delivered is an original and all of which together evidence the same deed.

### 6. DELIVERY

This Deed is delivered on the date written at the start of the Deed.

**EXECUTED** by Earthood Services Private Limited as a deed

   
Kaviraj Singh

Signature of director

Name of director

NA

Signature of director/secretary

NA

Name of director/secretary



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VCS VALIDATION DEED OF REPRESENTATION

BY

TÜV NORD CERT GMBH

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**THIS DEED OF REPRESENTATION** is made on 2017-05-10

**BY**

TÜV NORD CERT GmbH (as **VVB**)

**THIS DEED WITNESSES** as follows:

1. **INTERPRETATION**

1.1 In this Deed:

**"Accountholder"** means any person holding a VCU account with a VCS Registry;

**"AFOLU"** means agriculture, forestry and other land use;

**"GHG"** means greenhouse gas;

**"GHG Program"** means a formal or organized program, scheme or arrangement for the recognition of activities leading to Reductions, or the crediting or issuance of instruments representing, or acknowledging, Reductions;

**"Project"** means Uberlândia Landfills I and II;

**"Project Crediting Period"** means the time period for which GHG emission reductions or removals generated by the Project are eligible for issuance as VCUs (the rules with respect to the length of such time period and the renewal of the Project Crediting Period are set out in the *VCS Standard*);

**"Project Ownership"** means the legal right to control and operate the project activities. Distinct from proof of right;

**"Project Proponent"** means an individual or organization that has overall control and responsibility for the Project, or an individual or organization that together with others, each of which is also a Project Proponent, has overall control or responsibility for the Project. The entity(s) that can demonstrate Project Ownership in respect of the Project;

**"Reduction"** means a reduction or removal of one (1) metric tonne of CO<sub>2</sub> equivalent caused by the activities of the Project during the Project Crediting Period;

**"Validation Report"** means the written report of validation in relation to the Project prepared by the VVB in accordance with the VCS Rules;

**"Validation/Verification Body"** or **"VVB"** means an organization approved by the VCSA to act as a validation/verification body in respect of providing validation and/or verification services in accordance with the VCS Rules;

**"VCS Program"** means the GHG Program operated by the VCSA which establishes the rules and requirements that operationalize the VCS to enable the validation of GHG projects and the verification of GHG emission reductions and removals;

**"VCS Project Database"** means the central project database that records all projects registered and VCUs issued under the VCS, and provides public access to all project and VCU information, including retirement and tracking of the AFOLU pooled buffer account;

**"VCS Registry"** means a registry operating within the VCS Registry System and holding a current, valid agreement with the VCSA to provide registry services on behalf of the VCSA. VCS registries interact with the VCS Project Database to issue VCUs, and hold, transfer (to and from other VCS registries), retire, suspend, cancel and provide custodial services for VCUs on behalf of its Accountholders;

**"VCS Registry System"** means the system established by the VCS Program, comprised of the VCS Project Database and the VCS Registries, to provide project proponents with the ability to register projects, and issue, transfer, hold and retire VCUs;

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**"VCSA"** means the Verified Carbon Standard Association; and

**"Verified Carbon Unit" (VCU)** means a unit issued by, and held in a VCS Registry representing the right of an Accountholder in whose account the unit is recorded, to claim the achievement of a Reduction that has been verified by a validation/verification body in accordance with the VCS Rules. Recordation of a VCU in the account of the Accountholder at a VCS Registry is *prima facie* evidence of that Accountholder's entitlement to that VCU.

1.2 Documents referred to in this Deed but not defined shall be the VCS documents, as updated from time to time, to which the relevant term relates.

## 2. REPRESENTATIONS

2.1 I am the Validation/Verification Body in relation to the validation of the Project.

2.2 I hereby represent and warrant that:

2.2.1 I have validated the Project's compliance with the VCS Program requirements as set out in the VCS Rules; and

2.2.2 All factual information that I provide in relation to this Deed or have provided in the Validation Report is to the best of my knowledge following due inquiry true, accurate and complete in all material respects and I have not made or provided, and will not make or provide, false, fraudulent or misleading statements or information in relation to this Deed or the Validation Report.

2.3 I hereby acknowledge and agree that:

2.3.1 The following persons may rely on and enforce the terms of this Deed:

- (a) the VCSA;
- (b) each person who is an Accountholder holding VCUs relating to the Project at any given time;
- (c) each person on whose behalf VCUs relating to the Project were retired by an Accountholder; and
- (d) each of the successors and assigns of those persons listed in clauses 1.1.1(a), 1.1.1(b) or 2.3.1(c);

2.3.2 Neither the VCSA, the VCS Registries, nor any of their respective affiliates, directors, employees, agents, licensors and/or contractors, shall be liable with

respect to any claims whatsoever arising out of this Deed or erroneous information within the Validation Report submitted to the VCS Registry System for indirect, consequential, special, punitive or exemplary damages, including, without limitation, claims brought against the VCSA or the VCS Registries by Accountholders, other VCS Registries, Project Proponents, other Validation/Verification Bodies or any other third party. This paragraph shall apply regardless of any actual knowledge or foreseeability of such damages;

2.3.3 I have read, understood and will abide by the VCS Rules; and

2.3.4 The VCSA has an absolute right to amend any of the VCS Rules at any time and shall not bear any liability for loss or damage or liability of any kind sustained by the Validation/Verification Body or any other party involved in the Project in any way under the VCS Program as a consequence of such amendment.

### 3. GOVERNING LAW AND JURISDICTION

This Deed is governed by and interpreted in accordance with English law, and the English courts shall have exclusive jurisdiction to settle any dispute arising from or connected with this Deed including a dispute regarding the existence, validity or termination of this Deed or the consequences of its nullity.

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### 5. COUNTERPARTS

This Deed may be executed in any number of counterparts, each of which when executed and delivered is an original and all of which together evidence the same deed.

### 6. DELIVERY

This Deed is delivered on the date written at the start of the Deed.

**EXECUTED** by TÜV NORD CERT GmbH as a deed



Signature of director

i.v. Saalman


Name of director




Signature of director/secretary

STEFAN WINTER

Name of director/secretary

		<b>Verification report for GS4GG programme of activities</b>  <b>(Gold Standard for the Global Goals)</b>	
<b>BASIC INFORMATION</b>			
<b>Title of the project</b>	Proyecto Mirador Enhanced Distribution of Improved Cookstoves in Latin America  VPA: "Proyecto Mirador Enhanced Distribution of Improved Cookstoves in Latin America: First VPA for Distribution of Dos por Tres Cookstoves in Honduras"		
<b>Gold Standard Project ID</b>	GS-1988, VPA: GS2758		
<b>Earthhood reference number</b>	GS.VER.19.18		
<b>Version number(s) of the PoA-DD(s) applicable to this report</b>	Version 6.0 dated 25 <sup>th</sup> March 2016 VPA –DD Version 6 dated 25 March 2016		
<b>Version number of the verification and certification report</b>	Version 2.0		
<b>Completion date of the verification and certification report</b>	18/03/2020		
<b>Monitoring period number</b>	10		
<b>Duration of this monitoring period</b>	01/12/2018 – 30/11/2019 (inclusive of both days)		
<b>Number and version number of the monitoring report to which this report applies</b>	Monitoring Report dated 03/03/2020 (version 3)		
<b>Crediting period of the program of activities corresponding to this monitoring period</b>	01/05/2016 — 30/04/2023		
<b>Coordinating/managing entity (CME)</b>	Proyecto Mirador Foundation		
<b>Host Party(ies)</b>	Host Party(ies) of the PoA	Is this a host Party to a CPA covered in this report? (yes/no)	
	Honduras	Yes	
<b>Sectoral scope(s)</b>	Sectoral scope 3		
<b>Selected methodology(ies)</b>	Technologies and Practices to Displace Decentralized Thermal Energy Consumption, Version 2.0		
<b>Total estimated GHG emission reductions or net GHG removals for this monitoring period in the included CPA(s) covered in this report</b>	426,606 tCO <sub>2</sub> e		

**GS-PoA-VCR-FORM**

<p><b>Total certified GHG emission reductions or net GHG removals for this monitoring period for the included CPA(s) covered in this report</b></p>	<p>1 – No Poverty US\$ 2.15 per week per household saved, and/or 44% reduction in time spent collecting fuelwood</p> <p>2 – Zero Hunger 59% of wood purchasers report they used the money saved to buy food</p> <p>3 – Good Health and Well-Being 47% reduction in personal exposure to PM2.5</p> <p>4 – Quality Education 676 annual training hours provided</p> <p>5 – Gender Equality 99% satisfaction among stove beneficiaries 99% of stove users report improved cooking times 36% of Mirador’s direct employees are women</p> <p>7 – Affordable and Clean Energy 79% reduction of PM2.5 emissions resulting from cookstove intervention</p> <p>8 – Decent Work and Economic Growth 174 jobs created; 96% job satisfaction rate</p> <p>13 – Climate Action</p> <p>275,890 tCO<sub>2e</sub></p>
<p><b>Name of VVB</b></p>	<p>Earthood Services Private Limited</p>
<p><b>Name, position and signature of the approver of the verification and certification report</b></p>	<p> Kaviraj Singh Managing Director</p>

## **SECTION A. Executive summary**

### **Description of PoA and specific case VPA**

The programme of activities titled “Proyecto Mirador Enhanced Distribution of Improved Cookstoves in Latin America” by Project Participant utilizes carbon finance to support the dissemination of improved cookstoves that address the problems of deforestation, indoor air quality, global warming and slow economic development.

VPA titled “Proyecto Mirador Enhanced Distribution of Improved Cookstoves in Latin America – First VPA for Distribution of Dos por Tres Cookstoves in Honduras” includes dissemination of highly efficient Cookstoves.

The project reduces carbon emissions by providing efficient cookstoves, which help in burning the fuel efficiently and completely. Also, it reduces soot and black carbon found in products of incomplete combustion thereby improving the environmental and health condition of the user as well. The project will lead to reduction in respiratory illness caused by inhalation of toxic smoke and will help in reducing indoor air pollution.

Proyecto Mirador Foundation has contracted Earthood Services Private Limited (Earthood) to conduct the verification and certification of emission reductions reported for the GS VPA- “Proyecto Mirador Enhanced Distribution of Improved Cookstoves in Latin America: First VPA for Distribution of Dos por Tres Cookstoves in Honduras” under the GS registered PoA 1988 “Proyecto Mirador Enhanced Distribution of Improved Cookstoves in Latin America” in Honduras for the period 01/12/2018 - 30/11/2019. This report contains the findings of the verification process and a certification statement for the certified emission reductions. The verification is the periodic independent review and *ex post* determination by Earthood of the monitored reductions in GHG emissions that have occurred as a result of the registered GS project activity during a defined monitoring period. Certification is the written assurance by Earthood that, during a specific period in time, a project activity achieved the verifiable emission reductions.

The objective of this verification was to verify and certify emission reductions reported for the VPA “Proyecto Mirador Enhanced Distribution of Improved Cookstoves in Latin America: First VPA for Distribution of Dos por Tres Cookstoves in Honduras” for the period 01/12/2018 - 30/11/2019.

### **Scope of Verification**

The verification is an independent and objective review determination of the monitored reductions in GHG emissions and improvement in sustainability parameters by the VVB. The verification includes the implementation and operation of the PoA as set out in the registered PoA-DD/1/ & its VPA-DD/2/ for the VPA in the monitoring period. The verification tests the data and assertions set out in the monitoring report based on the following:

The verification tests the data and assertions set out in the monitoring report prepared for this monitoring period by the CMEs and the review of VPA towards physical implementation of the project and it is based on the following:

- (i) The approved methodology “Technologies and Practices to Displace Decentralized Thermal Energy Consumption (TPDDTEC), Version 2.0”/11/.
- (ii) "Gold Standard for Global Goals Transition Annexure", version 1,/11/ dated September 2019
- (iii) The registered PoA-DD/1/ & registered VPA-DD/2/ and monitoring plan
- (iv) GS Passport for PoA and VPA
- (v) GS4GG Transition Annexure (approved) dated 15<sup>th</sup> March 2019
- (vi) UNFCCC criteria referred to in the Kyoto Protocol criteria and the CDM modalities and procedures as agreed in the Bonn Agreement and the Marrakech Accords
- (vii) GS4GG requirements
- (viii) The CDM Validation and Verification Standard (VVS) version 2.0
- (ix) The CDM Project Standard (PS) version 2.0 and Project Cycle Procedure (PCP) version 2.0

- (x) Relevant decisions, guidance and clarifications of the CMP and CDM Executive Board and any other information and references relevant to the project activity's reported emission reductions
- (xi) GS review of previous verification

The verification has considered both quantitative and qualitative aspects on stated/reported emission reductions. The monitoring report (all versions) and corresponding supporting documentation was assessed in accordance with the rules defined by UNFCCC and GS for GG, as appropriate to the PoA. The verification is not meant to provide any consulting or recommendations to the CME/others. However, stated requests for clarifications and/or corrective actions may provide input for improvement of the monitoring activities.

**Verification Process:**

The verification process is conducted as per internal GS Requirements, which includes the following steps;

- a) Contract with CME and appointment of verification team and technical review team (refer Section B.1 and B.2 of this report)
- b) Uploading the GS Workplan on GS registry
- c) Desk review (refer Section D.1 of this report) of Monitoring Report and corresponding ER sheet by verification team and planning of onsite audit (including sampling approach (refer Section D.4 of this report) to be applied)
- d) On site audit (refer Section D.2 of this report) (physical implementation and interview with relevant stakeholders) by verification team consisting of Team Leader, as a minimum
- e) Follow up activities e.g., interviews (refer Section D.3 of this report)
- f) Reporting and closure of findings (CARs/CLs/FARs) and preparation of draft verification report (refer Section D.5 of this report)
- g) Independent technical review (refer Section B.2 of this report) of the draft verification report and final/revised documentation (e.g., Monitoring Report, corresponding ER sheet and evidences)
- h) Reporting and closure of TR comments/findings (refer Section D.5 of this report) (CARs/CLs/FARs) and final approval for the decision made (refer Section G and H of this report).
- i) Issuance of final verification report to contracted CME (or authorized representatives) and submission of request for issuance, as appropriate.

**Verification Conclusion:**

Based on the outcome of the verification process of the PoA "Proyecto Mirador Enhanced Distribution of Improved Cookstoves in Latin America" and its VPA01 "Proyecto Mirador Enhanced Distribution of Improved Cookstoves in Latin America: First VPA for Distribution Of Dos Por Tres Cookstoves In Honduras" for the monitoring period 01/12/2018 – 30/11/2019 (including both dates) we confirm that the implementation of referenced registered PoA and its VPA is complying with applicable CDM and GS rules and regulations as stated in the Monitoring Report (final) Version 3.0,/7/ dated 03/03/2020. The GHG emission reductions were calculated correctly on the basis of the approved baseline and monitoring methodology "Technologies and Practices to Displace Decentralized Thermal Energy Consumption (TPDDTEC), Version 2.0"/11/ and the monitoring plan contained in the registered PoA-DD/1/ and VPA-DD/2/ and "Gold Standard for Global Goals Transition Annexure", version 1, dated September 2019.

Earthood Services Private Limited is able to certify that the emission reductions from the registered PoA (GS 1988) "Proyecto Mirador Enhanced Distribution of Improved Cookstoves in Latin America" and its VPA "Proyecto Mirador Enhanced Distribution of Improved Cookstoves in Latin America: First VPA for Distribution of Dos Por Tres Cookstoves In Honduras" for the monitoring period 01/12/2018 – 30/11/2019 (including both dates) amount to 275,890 tCO<sub>2</sub>e. Therefore, this is being submitted for request for issuance, as per Gold standard procedures.



**SECTION B. Verification team, technical reviewer and approver**

**B.1. Verification team members**

No.	Role	Type of resource	Last name	First name	Affiliation (e.g. name of central or other office of VVB or outsourced entity)	Involvement in			
						Desk/document review	On-site inspection	Interviews	Validation findings
1.	Team Leader	IR	Yadav	Siddharth	Central office	Y	Y	Y	Y
2.	Verifier and local expert	IR	Yadav	Siddharth	Central office	Y	Y	Y	Y
3.	Technical Expert (TA1.2 & 3.1)	IR	Garg	Shreya	Central office	Y	N	N	Y

**B.2. Technical reviewer and approver of the verification and certification report**

No.	Role	Type of resource	Last name	First name	Affiliation (e.g. name of central or other office of VVB or outsourced entity)
1.	Technical reviewer	IR	Gautam	Ashok	Central Office
2.	Technical expert	IR	Gautam	Ashok	Central Office
3.	Approver	IR	Singh	Kaviraj	Central Office

**SECTION C. Application of materiality in conducting the verification**

**C.1. Consideration of materiality in planning the verification**

No.	Risk that could lead to material errors, omissions or misstatements	Assessment of the risk		Response to the risk in the verification plan and/or sampling plan
		Risk level	Justification	
1.	Inconsistency between CME's result and VVB's observation during inspection.	Low	Considering VVB's observation are cross-check of CME's result, which were actually monitored by CME, there are usually less chances of error.	If the aggregated materiality threshold stays within the prescribed materiality threshold, no additional effort is required. However, if aggregated materiality threshold is above the prescribed threshold, additional samples are to be inspected. If additional sampling is not able to reduce the materiality threshold to reasonable level of assurance, the monitoring result by the CME for that parameter are to be discarded.

**C.2. Consideration of materiality in conducting the verification**

>> In accordance with CDM VVS for PoAs, Version 02.0 para 308 the prescribed thresholds for materiality for CDM PoAs are as under;

Type of PoA	PoAs comprising large-scale CPAs			PoAs comprising only small-scale CPAs	PoAs comprising only micro-scale CPAs
	1.				
Emission Reductions (tCO <sub>2</sub> e)/year	500,000 or more	300,001 to 499,999	300,000 or less		
Materiality Threshold (para 308)	0.5%	1.0%	2.0%	5.0%	10.0%

The applicable materiality threshold is 2% as the total Emission Reductions are 275,890 tCO<sub>2</sub>

Particulars / Monitoring Report	MR Version (Revised/Final)
Emission Reductions Achieved (tCO <sub>2</sub> e) in this monitoring period	275,890 tCO <sub>2</sub> e
Applicable Threshold (%) as per para 308 of CDM VVS for PoAs Version 02.0	2.0%

The verification team has identified the impact of minor errors observed and those were corrected by PP during verification for all monitoring parameter at individual level.

## **SECTION D. Means of verification**

### **D.1. Desk review**

Earthood conducted a desk review as under;

- A review of the data and information presented to verify their completeness;
- A review of the monitoring plan, the monitoring methodology including applicable tool(s) and, where applicable, the applied standardized baseline, paying particular attention to the frequency of measurements, the quality of metering equipment including calibration requirements, and the quality assurance and quality control procedures;
- A review of calculations and assumptions made in determining the GHG data and emission reductions;
- An evaluation of data management and the quality assurance and quality control system in the context of their influence on the generation and reporting of emission reductions;

The list of documents reviewed during the verification is provided under appendix 3 of this report.

## D.2. On-site inspection

Duration of on-site inspection: 02/12/2019 to 04/12/2019				
No	Activity performed on-site	Site location	Date	Team member
1.	<b>Opening Meeting:</b> Introduction, scope and objective of work, roles and responsibilities of audit team, resources required, and timetable of the onsite audit including venue for closing meeting and any concerns from PP	Santa Barbara	02/12/2019	Siddharth Yadav
2.	Site visit involving on-site sampling of the technology distribution and VPA implementation. Local Stakeholder especially end users interview and feedbacks	Various locations	02/12/2019 - 04/12/2019	Siddharth Yadav (Assisted by Ms. Charlotte Boulton-Trainee)
3.	Physical sampling of the technology distribution and VPA implementation & Local Stakeholder especially end users interview and, feedbacks	Various locations	02/12/2019 - 04/12/2019	Siddharth Yadav (Assisted by Ms. Charlotte Boulton-Trainee)
4.	Management and monitoring procedures followed at project site.	Various locations, Santa Barbara Office	02/12/2019	Siddharth Yadav
5.	Site visit Management and operational system: Documentation, allocation of responsibilities, qualification and training, data recording & archiving, internal audit and management review and emergency procedures.	Santa Barbara Office	03/12/2019	Siddharth Yadav
6.	Verification checklist: compliance of monitoring procedures followed at project site with registered PoA-DD and monitoring methodology.	Santa Barbara Office	03/12/2019 - 04/12/2019	Siddharth Yadav
7.	Review of monitored data and relevant document in accordance with registered monitoring plan and applied monitoring methodology.	Santa Barbara Office	03/12/2019	Siddharth Yadav
8.	Interviews with other stakeholders like suppliers and employees involved in PoA.	Santa Barbara Office	04/12/2019	Siddharth Yadav
9.	Compilation of the findings by Auditor/s (CARs/CLs)	Santa Barbara Office	04/12/2019	Siddharth Yadav
10.	<b>Closing Meeting:</b> Submission of the audit findings to the client and agreement on the issues raised and timelines.	Santa Barbara Office	04/12/2019	Siddharth Yadav

**D.3. Interviews**

**D.3.1. Interview with PP/CME/CPA Implementers**

Interviews were conducted during site visits included the households that have been using the Dos por Tres stoves and the personnel engaged by Proyecto Mirador foundation. Interviews revealed that the all the people involved with the project are well versed with monitoring plan and implementation of the project including the QA/QC procedures.

**Project staff interviewed:**

Name	Affiliation	Date	Subject	Team Member
Esther Adams	Proyecto Mirador Program Manager	02/12/2019-04/12/2019	Project monitoring and reporting, leakage, ER Calculations, Salesforce data management system	Siddharth Yadav
Elder Mendoza	Proyecto Mirador Director of Operations	02/12/2019	Surveys, general execution, training of personnel, quality assurance and quality control issues	Siddharth Yadav
Emilia Mendoza	Proyecto Mirador Director (Honduras)	03/12/2019	General execution, quality assurance and quality control issues	Siddharth Yadav
Roy Lara	Proyecto Mirador Asst. to Dir. of Ops.	04/12/2019	Training the personnel, Evaluation of personnel Transportation records	Siddharth Yadav
Jessica Vasquez	Proyecto Mirador Marketing Manager	04/12/2019	Surveys, Salesforce data management system	Siddharth Yadav
Renier Rodriguez	Proyecto Mirador Manager of I.T.	02/12/2019-04/12/2019	IT infrastructure, Surveys, Salesforce data management system	Siddharth Yadav
Juan Carlos Guzman	Proyecto Mirador Dir. of Supervision	02/12/2019-04/12/2019	Training of the personnel Surveys, general execution	Siddharth Yadav
Martin Avilez	Proyecto Mirador Human HR	04/12/2019	Personnel; quantitative Employment	Siddharth Yadav

**D.3.2. Type of questions asked by Team member – Stove users**

The households were asked the following questions;

- Usage and functionality of Dos por Tres stove
- Whether any other type of stove is installed and if yes, its hours of operation
- Physical condition of chimney, mouth piece, or if any changes were made by the households after its installation that could effect the stove efficiency
- Hours of usage
- If there were electric or gas stoves being used along with the usage of the Dos por Tres
- Users were also asked about how has the family benefitted from the installation of the Dos por Tres stove, for example: reduction in smoke or indoor air pollution, efficient cooking, reduction in time spent for collection of firewood and the quantity of the firewood collected

As mentioned above, during the site visit, the verification team checked if another type of stove is installed. Information about the type of stove/product type (make) was checked and mentioned in the survey forms used during the site visit.

Some of the households were found to have a gas or a electric stove, but when asked about the usage the families replied that they used these stoves for about 10-15 minutes a day, for 3-4 times a week for making early morning coffee or heating small amounts of water. The household also informed that the supply of electricity was not continuous, and using gas was expensive.

In general, the Dos por Tres stoves were under good maintenance, the kitchens looked clean and the users informed cooking was much easier and cleaner using Dos por Tres than the three stone fires.

**D.4. Sampling approach**

**VVB’s Sampling Approach**

The assessment team has followed a simple random sampling approach for verification purposes. Sampling was done across the PoA in a random manner, but considering the principles of proportional representation and keeping in line with “Standard for Sampling and surveys for CDM project activities and programmes of activities, Version 7.0”/28/.

184 households (end users) were randomly selected from different age groups and surveyed during the site visit. The sampling questionnaire is linked to the central database through salesforce monitoring software wherein any household listed on the entire database of all households can be called instantly for conducting the survey while on site. The real time information was checked against the IDs on site against the central database, and the information in the survey questionnaire collected through the handheld devices (mobile phones).

The list of households selected for random surveys, and a screenshot of the survey questionnaire is attached to this report/25/.

The details are as below:

<b>Age Group</b>	<b>Surveyed</b>	<b>Abandoned</b>
0-1	31	0
1-2	26	0
2-3	31	0
3-4	28	1
4-5	38	7
5-6	30	8
<b>Total</b>	<b>184</b>	<b>16</b>

16 stoves out of 184 sampled were found to be non-operational during the site visit. Some of them had their chimney pulled out, or mouthpiece broken. The drop off rate per age group is further discussed under parameter 'ID 8 / Up,y : Abandonment (drop-off) rate (the number of stoves that have fallen out of use in a given age group) expressed as % of households'

The status of the stove installed in each house was checked vis a vis the data available from salesforce.com. The location of the households, and the government IDs were also checked against the data reported. Information outlined in section D.3.2 above was checked for these households. The IDs of the households visited, their locations and the surveys are available on request.

**D.5. Clarification requests, corrective action requests and forward action requests raised**

Areas of verification findings	No. of CL	No. of CAR	No. of FAR
<b>General</b>	-	-	-
Compliance of the monitoring report with the monitoring report form	CL1	-	-
Remaining forward action requests from validation and/or previous verification	-	-	-
Specific-case CPA(s) considered for verification and covered in this report	-	-	-
<b>Programme of activities</b>	-	-	-
Compliance of the programme implementation with the registered PoA-DD	-	-	-
Implementation and operation of the management system	-	-	-
Post-registration changes	-	-	-
<ul style="list-style-type: none"> <li>Temporary deviations from the registered monitoring plan, monitoring methodology or standardized baseline</li> </ul>	-	-	-
<ul style="list-style-type: none"> <li>Corrections</li> </ul>	-	-	-
<ul style="list-style-type: none"> <li>Inclusion of a monitoring plan in a registered PoA-DD (including its generic CPA-DD(s))</li> </ul>	-	-	-
<ul style="list-style-type: none"> <li>Permanent changes to the monitoring plan as described in the registered PoA-DD, applied methodology, or applied standardized baseline</li> </ul>	-	-	-
<ul style="list-style-type: none"> <li>Changes to the programme design of the registered PoA-DD (including corresponding changes to project design of the generic CPA-DD(s)) and updates to the eligibility criteria for inclusion of specific-case CPAs in the PoA</li> </ul>	-	-	-
<ul style="list-style-type: none"> <li>Types of changes specific to afforestation and reforestation activities</li> </ul>	-	-	-
<b>Component project activity(ies)</b>	-	-	-

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Compliance of the CPA implementation with the included CPA design document	-	-	-
Post-registration changes	-	-	-
<ul style="list-style-type: none"> <li>Temporary deviations from registered monitoring plan, applied methodology or applied standardized baseline</li> </ul>	-	-	-
<ul style="list-style-type: none"> <li>Corrections</li> </ul>	-	-	-
<ul style="list-style-type: none"> <li>Changes to the start date of the crediting period</li> </ul>	-	-	-
<ul style="list-style-type: none"> <li>Inclusion of a monitoring plan to an included CPA-DD</li> </ul>	-	-	-
<ul style="list-style-type: none"> <li>Permanent changes to the monitoring plan as described in the included CPA-DD, applied methodology, or applied standardized baseline</li> </ul>	-	-	-
<ul style="list-style-type: none"> <li>Changes to the programme design of the included CPA-DD</li> </ul>	-	-	-
<ul style="list-style-type: none"> <li>Types of changes specific to afforestation and reforestation component project activities</li> </ul>	-	-	-
Compliance of the monitoring plan with the monitoring methodology including applicable tool and standardized baseline	-	-	-
Compliance of monitoring activities with the registered monitoring plan	-	-	-
<ul style="list-style-type: none"> <li>Data and parameters fixed ex ante or at renewal of crediting period</li> </ul>	-	-	-
<ul style="list-style-type: none"> <li>Data and parameters monitored</li> </ul>	CL1, CL3, CL4	CAR2	-
<ul style="list-style-type: none"> <li>Implementation of sampling plan</li> </ul>	-	-	-
Compliance with the calibration frequency requirements for measuring instruments	-	-	-
Assessment of data and calculation of emission reductions or net removals	-	-	-
<ul style="list-style-type: none"> <li>Calculation of baseline GHG emissions or baseline net GHG removals by sinks</li> </ul>	-	-	-
<ul style="list-style-type: none"> <li>Calculation of project GHG emissions or actual net GHG removals by sinks</li> </ul>	-	-	-
<ul style="list-style-type: none"> <li>Calculation of leakage GHG emissions</li> </ul>	-	-	-
<ul style="list-style-type: none"> <li>Summary of calculation of GHG emission reductions or net GHG removals by sinks</li> </ul>	-	-	-
<ul style="list-style-type: none"> <li>Comparison of actual GHG emission reductions or net GHG removals by sinks with estimates in included specific-case CPA</li> </ul>	-	-	-
<ul style="list-style-type: none"> <li>Remarks on difference from estimated value in registered VPA-DD</li> </ul>	-	-	-
Others (please specify)	-	-	-
<b>Total</b>	<b>3</b>	<b>1</b>	<b>0</b>



**SECTION E. Verification findings –**

**E.1. General**

**E.1.1. Compliance of the monitoring report with the monitoring report form**

<b>Means of verification</b>	The template used for MR is GS4GG Version 1, dated June 2017, which has been released by Gold Standard for Global Goals for the reporting of monitored data of VPAs under same PoA for GS.
<b>Findings</b>	CL1 was raised to identify the key changes between Version 1 and Version 2 of the monitoring report. The Monitoring report version 3 /7/dated 03/03/2020 is the final version with updated data and applicable corrections following CAR2, CL3 and CL4.  CL1 was closed.
<b>Conclusion</b>	The monitoring report template is appropriate for program of activities. The sections were filled in according to the guidelines.

**E.1.2. Remaining forward action requests from validation and/or previous verification**

As verified through the review of the Verification report for 9<sup>th</sup> Monitoring period (1<sup>st</sup> December 2017 to 30<sup>th</sup> November 2018) one forward action requests was issued i.e the age of the stove during usage survey should be determined using a method which is in compliance with TPDDTEC methodology. This FAR is further discussed under CAR2 (Appendix 4).

The project developers have continued to check the following through the regular Maintenance Surveys (compiled through Salesforce.com). The questions are included in these surveys in order to avoid double counting:

- Is there another improved cook stove in the home?
- Who installed the other ICS?
- Is the other ICS in use?
- Was the other ICS installed before the Dos por Tres?
- (If applicable) When did they stop using the other ICS?

**E.1.3. Specific-case CPA(s) considered for verification and covered in this report**

Proyecto Mirador Enhanced Distribution of Improved Cookstoves in Latin America – Renewed VPA for “Proyecto Mirador Enhanced Distribution of Improved Cookstoves in Latin America: First VPA for Distribution of Dos por Tres Cookstoves in Honduras” (Version 06, dated 25 March, 2016)

**E.2. Programme of activities**

**E.2.1. Compliance of the programme implementation with the registered programme design document**

<b>Means of verification</b>	The programme implementation was checked by assessment team through onsite visit. The verification team conducted site visits for a total of 184 households across the VPAs to examine if the implementation of programme is as per the description provided in registered PoA-DD/1/. The end users were surveyed based on the installation, functioning, maintenance and utility of the cook stove to them. The salesforce software usage and the unique information of each sample as per the records maintained by CME was also cross-checked onsite. With each passing year, a new set of improved cook stoves enter the population count with the old
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	<p>ones being phased out, hence the overall drop off figures have reduced. The interviews with the households and the stove monitoring supervisors confirm that there is better awareness amongst the stove users than earlier, and repairs are undertaken regularly.</p> <p>No major issues in terms of stove design or project implementation were found.</p> <p><b>Grievance Mechanism:</b></p> <p>During the site visits it was checked that the households which have installed the efficient stoves are visited by the supervisors and the household feedback is recorded/25/. In general, the grievances are related to the problems faced by the stove users for example- replacement of chimney etc. or about the functionality of stove, its benefits and criticism i.e. the stove takes time to heat up as compared to an electric or gas stove. None of the concerns were of extreme nature and resolvable. The log is maintained electronically at the project office was, reviewed and an export of the stakeholder feedback log was obtained (VP10-15 Stakeholder Comment Log.xlsx)/22/.</p>
<b>Findings</b>	None
<b>Conclusion</b>	The implementation of the programme was found to be in compliance with the description provided in the registered PoA-DD/1/ and VPA-DD/2/. The unique information of each cook stove sample was found to be consistent on sales force and onsite concluding that the data management system is working efficiently and in compliance with the system mentioned in registered VPA-DD/2/.

### E.2.2. Implementation and operation of the management system

<b>Means of verification</b>	<p>The implementation and operation of management system was verified through onsite visit which included interaction with end-users and key staff members from Proyecto Mirador Foundation. As observed in each household, cookstoves bear a unique serial number which had been recorded in the PE's records on salesforce software/9/. Along with the stove model, serial number, name, address, installation date, contact number etc. had also been noted which were found to be consistent on ground.</p> <p>Trainings were provided to the staff and users of cook stove which could be verified through training records and photographs/30/.</p>
<b>Findings</b>	None
<b>Conclusion</b>	The assessment team, with the help of onsite verification and document review that implementation and operation of the management system is as per the registered PoA-DD/1/.

### E.2.3. Post-registration changes

#### E.2.3.1. Temporary deviations from the registered monitoring plan, monitoring methodology or standardized baseline

Not applicable

#### E.2.3.2. Corrections

Not applicable

**E.2.3.3. Inclusion of a monitoring plan in a registered PoA-DD (including its generic CPA-DD(s))**

Not applicable

**E.2.3.4. Permanent changes to the monitoring plan as described in the registered PoA-DD, applied methodology, or applied standardized baseline**

Not applicable

**E.2.3.5. Changes to the programme design of the registered PoA-DD (including corresponding changes to project design of the generic CPA-DD(s)) and updates to the eligibility criteria for inclusion of specific-case CPAs in the PoA**

Not applicable

**E.2.3.6. Types of changes specific to afforestation and reforestation activities**

Not Applicable.

**E.3. Component project activity(ies)**

**E.3.1. Compliance of the CPA implementation with the included CPA design document**

<b>Means of verification</b>	The programme implementation was checked by assessment team through onsite visit. A total of 184 households were visited across VPA to examine if the implementation of programme is as per the description provided in registered PoA-DD/1/. The end users were surveyed based on the installation, functioning, maintenance and utility of the cook stove to them. The unique information of each user as per the records maintained by CME was also cross-checked onsite through random sampling procedure.
<b>Findings</b>	None
<b>Conclusion</b>	The implementation of the programme was found to be in compliance with the description provided in the registered PoA-DD/1/ and VPA DD/2/. The unique information of each cookstove sample was found to be consistent onsite concluding that the data management system is working efficiently and in compliance with the system mentioned in registered design documents (PoA DD and CPA DD).

**E.3.2. Post-registration changes**

**E.3.2.1. Temporary deviations from registered monitoring plan, applied methodology or applied standardized baseline**

Not applicable

**E.3.2.2. Corrections**

There have been no corrections in the current monitoring period..

**E.3.2.3. Changes to the start date of the crediting period**

Not applicable

**E.3.2.4. Inclusion of a monitoring plan to an included CPA-DD**

Not applicable

**E.3.2.5. Permanent changes to the registered monitoring plan or permanent deviation of monitoring from the applied methodology, standardized baseline, or other applied standards or tools**

Not applicable

**E.3.2.6. Changes to the programme design or project design**

Not applicable

**E.3.2.7. Types of changes specific to afforestation and reforestation component project activities**

Not applicable

**E.3.3. Compliance of monitoring plan with the monitoring methodology including applicable tool and standardized baseline**

<b>Means of verification</b>	The monitoring plan has been registered in PoA-DD/1/ and VPA-DD/2/ at the time of validation. However, the monitoring plan was cross-checked with the applied methodology/11/ and found to be in compliance. No standardized baseline was applied as per the registered PoA-DD/1/.
<b>Findings</b>	None
<b>Conclusion</b>	The monitoring plan was found to be in compliance with the monitoring methodology/11/

**E.3.4. Compliance of monitoring activities with the registered monitoring plan**

**E.3.4.1. Data and parameters fixed ex ante or at renewal of crediting period**

**ID 1/ E<sub>fuel,CO<sub>2</sub></sub> : CO<sub>2</sub> emission factor of the fuel that is reduced**

<b>Relevant SDG Indicator</b>	13 – Climate Action <ul style="list-style-type: none"> <li>13.1.1 Number of deaths, missions persons and directly affected persons attributed to disasters per 100,000 population</li> </ul>
<b>Means of verification</b>	The value for this parameter is 112 tCO <sub>2</sub> /TJ, which was sourced from 2006 IPCC Guidelines for National Greenhouse Gas Inventories 2.1, Volume 2: Energy/27/
<b>Findings</b>	None
<b>Conclusion</b>	The value mentioned in the Monitoring Report /7/ and Emission Reduction Spreadsheet /8/ are consistent with the registered PoA DD/1/ and VPA DD/2/, The applied value is correct and justified

**ID 2/ E<sub>fuel,nonCO<sub>2</sub>,CH<sub>4</sub></sub> : CH<sub>4</sub> emission factor for the fuel that is reduce**

<b>Relevant SDG Indicator</b>	13 – Climate Action <ul style="list-style-type: none"> <li>13.1.1 Number of deaths, missions persons and directly affected persons attributed to disasters per 100,000 population</li> </ul>
<b>Means of verification</b>	The value for this parameter is 0.30 tCO <sub>2</sub> /TJ which was sourced from 2006 IPCC Guidelines for National Greenhouse Gas Inventories 2.1, Volume 2: Energy/27/
<b>Findings</b>	None
<b>Conclusion</b>	The value mentioned in the Monitoring Report /7/ and Emission Reduction Spreadsheet /8/ are consistent with the registered PoA DD/1/ and VPA DD/2/, The applied value is correct and justified

**ID 3/ E<sub>fuel</sub>,nonCO<sub>2</sub>,N<sub>2</sub>O : N<sub>2</sub>O emission factor for wood that is reduced**

<b>Relevant SDG Indicator</b>	13 – Climate Action <ul style="list-style-type: none"> <li>13.1.1 Number of deaths, missions persons and directly affected persons attributed to disasters per 100,000 population</li> </ul>
<b>Means of verification</b>	The value for this parameter is 0.004 tCO <sub>2</sub> /TJ which was sourced from 2006 IPCC Guidelines for National Greenhouse Gas Inventories 2.1, Volume 2: Energy/27/)
<b>Findings</b>	None
<b>Conclusion</b>	The value mentioned in the Monitoring Report /7/ and Emission Reduction Spreadsheet /8/ are consistent with the registered PoA DD/1/ and VPA DD/2/, The applied value is correct and justified

**ID 4/ NCV<sub>fuel</sub> : The Net Calorific Value (NCV) of the fuel that is substituted or reduced**

<b>Relevant SDG Indicator</b>	13 – Climate Action <ul style="list-style-type: none"> <li>13.1.1 Number of deaths, missing persons and directly affected persons attributed to disasters per 100,000 population.</li> </ul>
<b>Means of verification</b>	The value of this parameter 0.0186 TJ/ton was sourced from NCV for Red Oak, per Global Alliance for Clean Cookstoves, “WBT 4.2.4 Spreadsheet” ( <a href="http://cleancookstoves.org/technology-and-fuels/testing/protocols.html">http://cleancookstoves.org/technology-and-fuels/testing/protocols.html</a> ) with reference to Cheremisinoff, N. Properties of Wood. Wood for Energy Production. Ann Arbor, MI, Ann Arbor Science: 31-43. 1980
<b>Findings</b>	None
<b>Conclusion</b>	The value mentioned in the Monitoring Report /7/ and Emission Reduction Spreadsheet /8/ are consistent with the registered PoA DD/1/ and VPA DD/2/, The applied value is correct and justified

**ID 5/ f<sub>NRB,b,y</sub> : %The non-renewable fraction of the woody biomass harvested in the project collection area in year y in the baseline scenario**

<b>Relevant SDG Indicator</b>	15-Life on land <ul style="list-style-type: none"> <li>15.2.1 By 2020, promote the implementation of sustainable management of all types of forests, halt deforestation, restore degraded forests and substantially increase afforestation and reforestation</li> </ul>
<b>Means of verification</b>	The value of 69% was taken from a third-party NRB Analysis by Berkeley Air Monitoring Group (2011). The above figure of 69% has been validated in the ERM CVS validation report dated 30 <sup>th</sup> March 2016
<b>Findings</b>	None
<b>Conclusion</b>	The value mentioned in the Monitoring Report /7/ and Emission Reduction Spreadsheet /8/ are consistent with the registered PoA DD/1/ and VPA DD/2/, The applied value is correct and justified

E.3.4.2. Data and parameters monitored (Carbon & SDG)

ID 6 / N<sub>p,y</sub> : Number of project technology days

<b>Relevant SDG Indicator</b>	13 – Climate Action <ul style="list-style-type: none"> <li>13.1.1 Number of deaths, missing persons and directly affected persons attributed to disasters per 100,000 population</li> </ul>	
<b>Means of verification</b>	This is measured manually and recorded on Salesforce.com installation database	
	<b>Criteria/Requirements</b>	<b>Assessment/Observation</b>
	Measuring /Reading /Recording frequency	Ongoing
	Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	The frequency is in line with the registered PoA DD/1/ and VPA DD/2/
	Monitoring equipment	Smartphones; Salesforce.com installation database/9/
	Calibration frequency /interval:	Not Applicable
	How were the values in the monitoring report verified?	41,292,968 days The value of the parameter was verified from the sales database. The verified value of the parameter is 18,961. The ER sheet was checked for the calculations and was found to have the correct value used.
	If applicable, has the reported data been cross-checked with other available data?	Yes. The information provided in the Database was verified randomly during the site visit by interviewing the end users.  The survey results were checked by the verification team and were found acceptable. The results are reproducible in the corresponding ER sheet of final Monitoring Report.  The verification team randomly selected 184 samples for VVB's field survey and via on-site interview found out that all the stoves which were selected for sampling are installed at the household and are in working condition.
VVBs the data management ensure correct transfer of data and reporting of emission reductions and are necessary	The CME directly supervises the training of staff and provides guidelines to facilitate accurate record keeping in their database. During the site visit the sale process, record keeping was reviewed and were found reliable.	

	QA/QC processes in place?	
	In case project participants have temporarily not monitored the parameter, has either i) a deviation been approved by the CDM EB or ii) has the parameter been estimated as stipulated by Appendix 1 to the CDM Project Standard?	Not Applicable
<b>Findings</b>	None	
<b>Conclusion</b>	The parameter has been monitored appropriately, in accordance with the registered monitoring plan/1/ (as per measurement methods and procedures to be applied) and applied methodology. The monitoring results were recorded consistently as per the approved frequency in the monitoring plan/1/.	

**ID 7 / P<sub>p,b,y</sub> : Average daily dry wood fuel reduction per person-meal (tonnes/household/day)**

<b>Relevant SDG Indicator</b>	15 – Life on Land <ul style="list-style-type: none"> <li>15.2.1 By 2020, promote the implementation of sustainable management of all types of forests, halt deforestation, restore degraded forests and substantially increase afforestation and reforestation</li> </ul>	
<b>Means of verification</b>	Specific fuel savings from an individual technology of project p against an individual technology of baseline b in year y are measured through a Kitchen Performance Test. Survey data is tabulated in the attached “VP10-02 KPT Data.xlsx”/13/ and parameter flows to ER Calculations.xlsx”/8/. The data has been analysed by third party expert – Prof. Rob Bailis, currently at Stockholm Environment Institute (previously worked at Yale School of Forestry), Prof. Bailis is one of the key contributors to the methodology.	
	<b>Criteria/Requirements</b>	<b>Assessment/Observation</b>
	Measuring /Reading /Recording frequency	Annual
	Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	The frequency is in line with the registered PoA DD/1/ and VPA DD/2/

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	Monitoring equipment	Compact digital hanging scale Zipper polyethylene bag Moisture meter with digital readout
	Calibration frequency /interval:	Digital hanging scale is calibrated before every study.
	How were the values in the monitoring report verified?	It was verified from the central database and through on site surveys that all stoves beyond their 6 <sup>th</sup> year of operation are automatically removed from consideration for emission reductions.  It was also verified during the site visit that 4 days KPTs are being done for baseline and project scenario fuelwood consumption for each age group of stoves.  The value of the parameter was verified from the ER sheet, where it has been calculated using the fuel savings per personal meal grouped on the basis of age group; this data was verified from KPT data. The verified value of the parameter is 0.004601 t/household/day. The ER sheet was checked for the calculations and was found to have the correct value used.
	If applicable, has the reported data been cross-checked with other available data?	Not applicable
	VVBs the data management ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?	QA/QC procedures were found to be appropriate and reliable. The person responsible for the monitoring & survey are well trained which is evident from the site visit interview.
	In case project participants have temporarily not monitored the parameter, has either i) a deviation been approved by the CDM EB or ii) has the parameter been estimated as stipulated by Appendix 1 to the CDM Project Standard?	Not Applicable
<b>Findings</b>	No findings were raised	



<b>Conclusion</b>	The parameter has been monitored appropriately, in accordance with the registered monitoring plan/1/ (as per measurement methods and procedures to be applied) and applied methodology/11/. The monitoring results were recorded consistently as per the approved frequency in the monitoring plan/1/.
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**ID 8 / U<sub>p,y</sub> : Abandonment (drop-off) rate (the number of stoves that have fallen out of use in a given age group) expressed as %of households**

<b>Relevant SDG Indicator</b>	13 – Climate Action • 13.1.1 Number of deaths, missing persons and directly affected persons attributed to disasters per 100,000 population																																		
<b>Means of verification</b>	Cumulative abandonment rates are applied, i.e., they reflect the total rate of abandonment for a given age group. Annual rates are extrapolated and applied to ER Calculations. Survey data is exported from Salesforce and tabulated in the attached "VP10-13 Dropoff Data.xls."/20/																																		
	<b>Criteria/Requirements</b>	<b>Assessment/Observation</b>																																	
	Measuring /Reading /Recording frequency	Annual																																	
	Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	The frequency is in line with the registered PoA DD/1/ and VPA DD/2/  The project proponents have selected the usage survey participants ensuring that the stoves in the first year of use (Year 0_1) encompass stoves that have been in use on average longer than 0.5 years. For stoves in the second year of use (Year 1_2), the usage surveys were conducted with stoves that have been in use on average at least 1.5 years, and so on for every age group.																																	
	Monitoring equipment	Surveys compiled by handheld device																																	
	Calibration frequency /interval:	NA																																	
	How were the values in the monitoring report verified?	The following drop off rates were observed: <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th>Age Group</th> <th># surveys</th> <th>Reported dropoff %(in MR)</th> <th># abandoned</th> <th>Surveyed Dropoff %</th> </tr> </thead> <tbody> <tr> <td>0_1</td> <td>31</td> <td>4%</td> <td>0</td> <td>0%</td> </tr> <tr> <td>1_2</td> <td>26</td> <td>7%</td> <td>0</td> <td>0%</td> </tr> <tr> <td>2_3</td> <td>31</td> <td>15%</td> <td>0</td> <td>0%</td> </tr> <tr> <td>3_4</td> <td>28</td> <td>14%</td> <td>1</td> <td>3.57%</td> </tr> <tr> <td>4_5</td> <td>38</td> <td>38%</td> <td>7</td> <td>18.42%</td> </tr> </tbody> </table>				Age Group	# surveys	Reported dropoff %(in MR)	# abandoned	Surveyed Dropoff %	0_1	31	4%	0	0%	1_2	26	7%	0	0%	2_3	31	15%	0	0%	3_4	28	14%	1	3.57%	4_5	38	38%	7	18.42%
Age Group	# surveys	Reported dropoff %(in MR)	# abandoned	Surveyed Dropoff %																															
0_1	31	4%	0	0%																															
1_2	26	7%	0	0%																															
2_3	31	15%	0	0%																															
3_4	28	14%	1	3.57%																															
4_5	38	38%	7	18.42%																															

		5_6	30	54%	8	26.66 %
		Since the surveyed drop-off percentage is lower than the drop-off rate reported, the approach was found to be conservative. Therefore, the values of drop-off rate applied by the CME were found acceptable.				
	If applicable, has the reported data been cross-checked with other available data?	Not applicable				
	VVBs the data management ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?	QA/QC procedures were found to be appropriate and reliable. The person responsible for the monitoring & survey are well trained which is evident from the site visit interview.				
	In case project participants have temporarily not monitored the parameter, has either i) a deviation been approved by the CDM EB or ii) has the parameter been estimated as stipulated by Appendix 1 to the CDM Project Standard?	Not Applicable				
<b>Findings</b>	CAR2 was raised and resolved (Refer Appendix 4 for details). The FAR raised during the ninth monitoring period was also closed.					
<b>Conclusion</b>	The parameter has been monitored appropriately, in accordance with the registered monitoring plan/1/ (as per measurement methods and procedures to be applied) and applied methodology/11/. The monitored values were found to be conservative and therefore acceptable. The monitoring results were recorded consistently as per the approved frequency in the monitoring plan/1/.					

**ID 9 / LEp,y : Number of households**

**Assess leakage sources including (1) replacement of efficient household heating sources with less efficient fuel; (2) continued use of baseline stove after installation**

<p><b>Relevant SDG Indicator</b></p>	<p>13 – Climate Action</p> <ul style="list-style-type: none"> <li>13.1.1 Number of deaths, missing persons and directly affected persons attributed to disasters per 100,000 population</li> </ul>	
<p><b>Means of verification</b></p>	<p>Surveys are taken onsite, and the information contained on Salesforce.com database.</p>	
	<p><b>Criteria/Requirements</b></p>	<p><b>Assessment/Observation</b></p>
	<p>Measuring /Reading /Recording frequency</p>	<p>Recorded continuously and reported annually</p>
	<p>Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)</p>	<p>The frequency is in line with the registered PoA DD/1/ and VPA DD/2/</p>
	<p>Monitoring equipment</p>	<p>Questionnaires</p>
	<p>Calibration frequency /interval:</p>	<p>NA</p>
	<p>How were the values in the monitoring report verified?</p>	<p>The leakage sources including (1) replacement of efficient household heating sources with less efficient fuel; (2) continued use of baseline stove after installation; (3) double counting – all of these were checked from the salesforce dataset, and 2) and 3) were confirmed for the households visited during the site visit .</p> <p>The explanation of the procedure under ID9 of the monitoring report is deemed correct. The total leakage for the 10<sup>th</sup> Verification Period is 1%. Survey data is exported from Salesforce and tabulated in the annexure “VP9-09 Leakage Sustainability Results/16/. The ER sheet/8/ was checked for the calculations and was found to have the correct value used. The monitored value of the parameter is 2,797 tonnes.</p>
	<p>If applicable, has the reported data been cross-checked with other available data?</p>	<p>The sources of leakage identified above, including discounts to prevent double counting were crosschecked against the data records available on site</p>
	<p>Does the data management ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?</p>	<p>QA/QC procedures were found to be appropriate and reliable. The person responsible for the monitoring &amp; survey are well trained which is evident from the site visit interview.</p>
	<p>In case project participants have temporarily not</p>	<p>Not Applicable</p>

	monitored the parameter, has either i) a deviation been approved by the CDM EB or ii) has the parameter been estimated as stipulated by Appendix 1 to the CDM Project Standard?
<b>Findings</b>	None
<b>Conclusion</b>	The parameter has been monitored appropriately, in accordance with the registered monitoring plan/1/ (as per measurement methods and procedures to be applied) and applied methodology. The monitoring results were recorded consistently as per the approved frequency in the monitoring plan/1/.

**ID 10 / LEp,y – Leakage due to Transportation, in Kilometers**

<b>Relevant SDG Indicator</b>	<p>13 – Climate Action</p> <ul style="list-style-type: none"> <li>13.1.1 Number of deaths, missing persons and directly affected persons attributed to disasters per 100,000 population.</li> </ul>	
<b>Means of verification</b>	<b>Mileage records track miles driven are recorded on an ongoing basis for each vehicle using vehicle odometers, and the results are tabulated annually.</b>	
	<b>Criteria/Requirements</b>	<b>Assessment/Observation</b>
	Measuring /Reading /Recording frequency	Mileage is tracked for every transport (continuous) and is tabulated annually.
	Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	The frequency is in line with the registered PoA DD/1/ and VPA DD/2/
	Monitoring equipment	Vehicle odometer
	Calibration frequency /interval:	NA
How were the values in the monitoring report verified?	<p>The transportation records/21/ were checked on site. Transportation records for all Mirador vehicles are tabulated/21/ showing Mirador vehicles collectively drove 393,435 km during the 10th Verification Period.</p> <p>The project emitted altogether 92.92t CO<sub>2</sub>e i.e. 0.03% of total CO<sub>2</sub>e due to transportation during the current verification period which was calculated using a standard online carbon calculator/29/. Since the percentage of CO<sub>2</sub> released by transport is almost negligible, the value of the parameter as 0.0% was accepted.</p>	

	If applicable, has the reported data been cross-checked with other available data?	NA
	Does the data management ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?	QA/QC procedures were found to be appropriate and reliable.
	In case project participants have temporarily not monitored the parameter, has either i) a deviation been approved by the CDM EB or ii) has the parameter been estimated as stipulated by Appendix 1 to the CDM Project Standard?	Not Applicable
<b>Findings</b>	CL3 was raised and then closed after the issue was resolved (Refer Appendix 4 for details)	
<b>Conclusion</b>	The parameter has been monitored appropriately, in accordance with the registered monitoring plan/1/ (as per measurement methods and procedures to be applied) and applied methodology/11/. The monitoring results were recorded consistently as per the approved frequency in the monitoring plan/1/.	

**E.3.4.3. Data and parameters monitored (Sustainable Development)**

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<b>Relevant SDG Indicator</b>	<p>7 – Affordable and Clean Energy</p> <ul style="list-style-type: none"> <li>7.3.1 Energy intensity measured in terms of primary energy and GDP</li> </ul>
<b>Data/parameter</b>	<b>ID 11 / % reduction in release of PM2.5</b>
<b>Means of Verification</b>	<p>Document review and site visit Report - McCarty, Nordica &amp; Still, Dean, “Results of Testing the Overlook Foundation Justa Stoves Including the ‘2 By 3’ Stove: Fuel Use and Carbon/ CO<sub>2</sub>eq Savings” (2009)</p> <p>The parameter is measured using HAPExNano light scattering nephelometer, which measures the PM concentration in an environment. 79% was the value of the parameter obtained. It was worn by study participants in control and intervention groups during a 48-hour period, which was confirmed during on-site visit by the VVB representative. 100% of the households surveyed confirmed that there was a remarkable improvement in Air quality and soot since the new stoves were built.</p>
<b>Findings</b>	None
<b>Conclusion</b>	Sustainability criteria was found to be fulfilled. The monitoring and reporting is as per the registered PoA-DD/1/ and VPA-DD/2/. The representation of the monitored value was found to be accurate which was easily verifiable. No discrepancy in data monitoring, data management, transfer of data or QA/QC procedures was found

<b>Relevant SDG Indicator</b>	<p>3 – Good Health and Well Being</p> <ul style="list-style-type: none"> <li>3.9.1 Mortality rate attributed to household and ambient air pollution</li> </ul>
<b>Data/parameter</b>	<b>ID 12 / % reduction in personal exposure to PM2.5</b>
<b>Means of Verification</b>	<p>Document review and site visit Report - Lefebvre, Olivier, “Health Impact of Proyecto Mirador 2x3 Stove” (2018)</p> <p>The parameter is measured using HAPExNano light scattering nephelometer, which measures the PM concentration in its surroundings. 47% was the value of the parameter monitored. The nephelometer was worn by study participants in control and intervention groups during a 48-hour period, which was confirmed during on-site visit by the VVB representative through interviews.</p>
<b>Findings</b>	None
<b>Conclusion</b>	Sustainability criteria was found to be fulfilled. The monitoring and reporting is as per the registered PoA-DD/1/ and VPA-DD/2/. The representation of the monitored value was found to be accurate which was easily verifiable. No discrepancy in data monitoring, data management, transfer of data or QA/QC procedures was found

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Relevant SDG Indicator	1 – No Poverty <ul style="list-style-type: none"> <li>1.2.2 Proportion of men, women and children of all ages living in poverty in all its dimensions according to national definitions</li> </ul>
Data/parameter:	<b>ID 13 / Time saved collecting fuelwood</b>
Means of Verification	Qualitative surveys were conducted by the CME regularly. 4.52 Hours /week (a reduction of 44%), value was checked from the summary of sustainability surveys, ref. VP-09 Leakage Sustainability Results/16/. The applied value was found to be correct. End-users were interviewed during the VVB survey; results were corroborated by visual inspection and cross checked using Salesforce.com database.
Findings	None
Conclusion	Sustainability criteria was found to be fulfilled. The monitoring and reporting is as per the registered PoA-DD/1/ and VPA-DD/2/. The representation of the monitored value was found to be accurate which was easily verifiable. No discrepancy in data monitoring, data management, transfer of data or QA/QC procedures was found

Relevant SDG Indicator	1 – No Poverty <ul style="list-style-type: none"> <li>1.2.2. Proportion of men, women and children of all ages living in poverty in all its dimensions according to national definitions</li> </ul>
Data/parameter:	<b>ID 14 / Money saved purchasing fuelwood</b>
Means of Verification	Qualitative surveys were conducted regularly and tabulated in “VP9-09 Leakage Sustainability Results”/16/. US\$ 2.15 (53 Honduran Lempiras) per week per HH, a reduction of 50% was reported in the MR which was verified by the verification team using surveys taken onsite. The results were corroborated by visual inspection and cross-checked using Salesforce.com database/9/.
Findings	None
Conclusion	Sustainability criteria was found to be fulfilled. The monitoring and reporting is as per the registered PoA-DD/1/ and VPA-DD/2/. The representation of the monitored value was found to be accurate which was easily verifiable. No discrepancy in data monitoring, data management, transfer of data or QA/QC procedures was found.

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Relevant SDG Indicator	2 – Zero Hunger <ul style="list-style-type: none"> <li>2.1.1 Prevalence of undernourishment</li> </ul>
Data/parameter:	<b>ID 15 / % of people reporting they used money saved purchasing fuelwood to buy food</b>
Means of Verification	Qualitative surveys were conducted by CME to monitor if the funds saved by end-users because of the project were used for purchasing food. 59% of the population were found to be reporting that they used money saved purchasing fuelwood to buy food. The value used is correct, checked from VP9-09 Leakage Sustainability Results"/16/. This was also cross checked during on-site visit while conducting VVB surveys.
Findings	None
Conclusion	Sustainability criteria was found to be fulfilled. The monitoring and reporting is as per the registered PoA-DD/1/ and VPA-DD/2/. The representation of the monitored value was found to be accurate which was easily verifiable. No discrepancy in data monitoring, data management, transfer of data or QA/QC procedures was found.

Relevant SDG Indicator	7 – Affordable and Clean Energy <ul style="list-style-type: none"> <li>7.3.1 Energy intensity measured in terms of primary energy and GDP.</li> </ul>
Data/parameter:	<b>ID 16 / % of households that report the air inside the home is cleaner</b>
Means of Verification	Qualitative surveys were conducted by CME to monitor the number of households which reported to have cleaner air in their homes. 100% of the population were found to be reporting the same. The value used is correct, checked from VP9-09 Leakage Sustainability Results"/16/. This was also cross checked during on-site visit while conducting VVB surveys and interviews of end-users.
Findings	None
Conclusion	Sustainability criteria was found to be fulfilled. The monitoring and reporting is as per the registered PoA-DD/1/ and VPA-DD/2/. The representation of the monitored value was found to be accurate which was easily verifiable. No discrepancy in data monitoring, data management, transfer of data or QA/QC procedures was found.



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Relevant SDG Indicator	4 – Quality Education <ul style="list-style-type: none"> <li>4.3.1 Participation rate of youth and adults in formal and non-formal education and training in the previous 12 months by sex.</li> </ul>
Data/parameter:	<b>ID 17 / Individual training hours provided per year</b>
Means of Verification	Documented records and training data verified on site, and checked with the database available on salesforce.com. The value 676 hours/year is correct as checked with 'VP9-17 training data'/30/.
Findings	None
Conclusion	Sustainability criteria was found to be fulfilled. The monitoring and reporting is as per the registered PoA-DD/1/ and VPA-DD/2/. The representation of the monitored value was found to be accurate which was easily verifiable. No discrepancy in data monitoring, data management, transfer of data or QA/QC procedures was found.

Relevant SDG Indicator	5 – Gender Equality <ul style="list-style-type: none"> <li>5.5.2 Proportion of women in managerial positions.</li> </ul>
Data/parameter:	<b>ID 18 / Proportion of employees who are women</b>
Means of Verification	Employment records show the proportion of women employed, by job type, 36% of the direct employees are women, while 7% of the overall workforce including field personnel. Qualitative surveys, on site interviews & documents- VP9-09 Leakage Sustainability Results/16/ and VP9-12 Quantitative Employment/19/ were cross checked to verify this information.
Findings	None
Conclusion	Sustainability criteria was found to be fulfilled. The monitoring and reporting is as per the registered PoA-DD/1/ and VPA-DD/2/. The representation of the monitored value was found to be accurate which was easily verifiable. No discrepancy in data monitoring, data management, transfer of data or QA/QC procedures was found.

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<b>Relevant SDG Indicator</b>	5 – Gender Equality <ul style="list-style-type: none"> <li>5.c.1 Proportion of countries with systems to track and make public allocations for gender equality and women’s empowerment.</li> </ul>
<b>Data/parameter:</b>	<b>ID 19 / Improvement in Cooking Times</b>
<b>Means of Verification</b>	99% of respondents say the Dos por Tres cooks faster. It was verified from on-site surveys and interviews conducted by the verification team that all end-users surveyed reported in reduction of time taken to cook. Findings from VVB survey was later cross-checked with survey database from Salesforce.com and therefore, monitored data was found appropriate by the VVB.
<b>Findings</b>	None
<b>Conclusion</b>	Sustainability criteria was found to be fulfilled. The monitoring and reporting is as per the registered PoA-DD/1/ and VPA-DD/2/. The representation of the monitored value was found to be accurate which was easily verifiable. No discrepancy in data monitoring, data management, transfer of data or QA/QC procedures was found.

<b>Relevant SDG Indicator</b>	5 – Gender Equality <ul style="list-style-type: none"> <li>5. C.1 Proportion of countries with systems to track and make public allocations for gender equality and women’s empowerment.</li> </ul>
<b>Data/parameter:</b>	<b>ID 20 / % of users who say there is something they don’t like about the stove</b>
<b>Means of Verification</b>	1% of the users of all have something which they have not liked about the stove. The same has been verified at the time of on-site surveys and interviews conducted by the verification team. Findings from VVB survey was later cross-checked with survey database from Salesforce.com and therefore, monitored data was found appropriate by the VVB.
<b>Findings</b>	None
<b>Conclusion</b>	Sustainability criteria was found to be fulfilled. The monitoring and reporting is as per the registered PoA-DD/1/ and VPA-DD/2/. The representation of the monitored value was found to be accurate which was easily verifiable. No discrepancy in data monitoring, data management, transfer of data or QA/QC procedures was found. The value of the monitored parameter has been cross-checked from the ER sheet/8/

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<b>Relevant SDG Indicator</b>	8 – Decent Work and Economic Growth <ul style="list-style-type: none"> <li>8.5.2 Unemployment rate by sex, age and person with disabilities.</li> </ul>
<b>Data/parameter:</b>	<b>ID 21 / % of Mirador employees and microenterprises who report they are satisfied with their jobs</b>
<b>Means of Verification</b>	96% of the respondents of monitoring survey reported job satisfaction. The responses in the annual qualitative survey were verified during VVB's on site-visit by conducting survey and interviews. All respondents reported to be happy with their jobs. The raw data for the employees' survey provided by the CME/17/ was also used for cross-checking of VVB findings and was found appropriate.
<b>Findings</b>	None
<b>Conclusion</b>	Sustainability criteria was found to be fulfilled. The monitoring and reporting is as per the registered PoA-DD/1/ and VPA-DD/2/. The representation of the monitored value was found to be accurate which was easily verifiable. No discrepancy in data monitoring, data management, transfer of data or QA/QC procedures was found.

<b>Relevant SDG Indicator</b>	8 – Decent Work and Economic Growth <ul style="list-style-type: none"> <li>8.5.2 Unemployment rate by sex, age and person with disabilities.</li> </ul>
<b>Data/parameter:</b>	<b>ID 22 / Quantitative employment by job type</b>
<b>Means of Verification</b>	Annual surveys and on-site interviews were conducted by CME to monitor this parameter and it was found that 174 people were employed due to the project activity. This was verified by the verification team during on-site visit as checked from the employment records on site
<b>Findings</b>	None
<b>Conclusion</b>	Sustainability criteria was found to be fulfilled. The monitoring and reporting is as per the registered PoA-DD/1/ and VPA-DD/2/. The representation of the monitored value was found to be accurate which was easily verifiable. No discrepancy in data monitoring, data management, transfer of data or QA/QC procedures was found.

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<b>Relevant SDG Indicator</b>	13 – Climate Action <ul style="list-style-type: none"> <li>13.1.1 Number of deaths, missing persons and directly affected persons attributed to disasters per 100,000 population</li> </ul>
<b>Data/parameter:</b>	<b>ID 23 / Tonnes of CO<sub>2</sub> reduced</b>
<b>Means of Verification</b>	It was found that 275,890 tCO <sub>2e</sub> has been reduced due to the project activity. This was verified by the verification team during on-site visit as checked from the emission reduction calculations.
<b>Findings</b>	None
<b>Conclusion</b>	Sustainability criteria was found to be fulfilled. The monitoring and reporting is as per the registered PoA-DD/1/ and VPA-DD/2/. The representation of the monitored value was found to be accurate which was easily verifiable. No discrepancy in data monitoring, data management, transfer of data or QA/QC procedures was found.

**E.3.4.4. Implementation of sampling plan**

As per the VPA1, registered under this PoA, the following sampling plan has been applied:

The CME has applied the sampling plan in accordance with the Gold Standard methodology Technologies and Practices to Displace Decentralized Thermal Energy Consumption, Version 2.0/11/ and the CDM EB 69, Annex 4, Standard for Sampling and Surveys for CDM Project Activities and Programme of Activities. The sales/project database is the sampling frame for the sampling of the project population.

During the current monitoring period, 924 Leakage and Sustainability surveys were conducted in 415 villages in 14 Departments. In case of the older stoves, the households were selected at random from the villages that are nearby and on the route of the current monitoring.

For the parameters under ID 8, the management team has generated a list of villages containing the stove within a given age group. The actual drop-off survey sample size for the current verification period are as follows:

Stove Group	Age	# of surveys	Drop-off	# of villages included	Minimum size achieved?
0_1 Years		13,768		621	Yes
1_2 Years		3,857		285	Yes
2_3 Years		1,508		160	Yes
3_4 Years		50		8	Yes
4_5 Years		88		20	Yes
5_6 Years		52		4	Yes

Under the aforesaid monitoring, the CME has defined the stove use and non-use, conducted the Household Usage Survey and has also performed Verification checks for the monitoring of the parameters. The CME has also ensured end-user Training and follow up visits and the awareness campaign for quality monitoring of the parameters.

For the parameters to be calculated under ID 7, as per the provisions of the TPDDTEC, Baseline and Performance filed tests have been performed to evaluate the performance in the field. In order to calculate the consumption, the CMR has adopted the Kitchen Performance Technique.

The CME has then performed the analysis of the calculated data and has evaluated the leakage and the usage surveys results.

The PP has selected the stove age groups for usage survey to comply with the following requirement of the applied methodology TPDDTEC: "to ensure conservativeness, participants in a usage survey with technologies in the first year of use (age 0-must have technologies that have been in use on average longer than 0.5 years. For technologies in the second year of use (age 1-2), the usage survey must be conducted with technologies that have been in use on average at least 1.5 years, and so on"

<b>Means of verification</b>	It was verified through on site visit that a sampling method of Simple Random Sampling was followed through VPA which is in compliance with the registered VPA-DD/2/
<b>Findings</b>	FAR(5) was raised during the review of data for the 9 <sup>th</sup> Monitoring period. CAR was raised and closed.
<b>Conclusion</b>	The Sampling Plan implemented is inline to the method mentioned in PoA DD/1/.

**E.3.4.5. Compliance with the calibration frequency requirements for measuring instruments**

The calibration related information for the equipment used in the project is outlined in the Monitoring report Section C.

The devices and equipment used in the project have been detailed below:

<b>S.no.</b>	<b>Device</b>	<b>Make</b>	<b>Accuracy</b>	<b>Usage</b>	<b>Calibration Frequency</b>
1.	Humidity Meter	Delhorst BD-2100	± 0.2% (in moisture range 6% to 40%)	Kitchen Performance Test	The device is checked for calibration before every use using calibration check key/31/
2.	Digital Scale	MadBite-Digital Hanging Fish Scale	± 1 ounce (to 110 lbs / 50 kg)	Kitchen Performance Test	Calibrated prior to each measurement by checking that the scale is reset to 0/32/.
3.	GPS marking device	Smartphone	± 3 meters	Mark stove locations	Calibration not required

The copies of relevant pages from the brochures supplied by the equipment manufacturers were checked:

GPS Device -Garmin eTrex 20/30/:

- Page 10 – Increasing the accuracy of a waypoint location
- Page 47 – GPS accuracy

Humidity Meter Specification/31/:

- Page 3 – Calibration Check Key & instructions
- Page 6 – Meter reset instructions

Digital Scale Specification/32/:

- Panel 1 – Tare/zero instructions
- Comments corroborate accuracy of ± 1 ounce, customer reviews available at [www.amazon.com](http://www.amazon.com)

The procedures prescribed by the manufacturers and the instruments were verified during the site visit, and no equipment were found to be out of range.

**E.3.4.6. Safeguarding principles assessment**

Means validation of	The analysis of social, economic and environmental impacts:			
	Safeguarding principles	Assessment questions	Assessment of relevance to the project by CME (Yes/potentially/No)	Justification by VVB
	3.2 Gender Equality and Women's Rights	1. The Project shall complete the following gender assessment questions in order to inform Requirements 2-4, below:		Based on the registered GS documentation, including PoA-DD/1/ and transition document/33/, from review and assessment of the PoA it is evident that the Programme enables the beneficiaries in using efficient cookstoves for cooking. Therefore, the activity helps in reducing the time wasted collecting firewood, along with the physical labour. Based on the gender roles, it is mostly women who shall be benefitted from the programme therefore the safeguarding principle is relevant to the programme in a positive manner. It was found in this verification period that 99% of respondents of annual survey reported a faster cooking speed of project stove. Hence, it was found acceptable by the assessment team.
		a) Is there a possibility that the Project might reduce or put at risk women's access to or control of resources, entitlements and benefits?	a. No	
		b) 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)?	b. No	
		c) Is there a possibility that the Project might not take into	c. No	



		<p>account gender roles and the abilities of women or men to participate in the decisions/signs of the project's activities (such as lack of time, child care duties, low literacy or educational levels, or societal discrimination)?</p> <p>d) 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)?</p> <p>e) Does the Project design contribute to an increase in women's workload that adds to their care responsibilities or that prevents them from</p>	<p>d. Yes</p> <p>e. No</p> <p>f. No</p> <p>g. No</p>		
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		<p>engaging in other activities?</p> <p>f) 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?</p> <p>g) 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?</p> <p>h) Is there likelihood that the proposed Project would expose women and</p>	<p>h. No</p>		
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		girls to further risks or hazards?		
	3.4.3 Land Tenure and Other Rights	a. Does the Project require any change to land tenure arrangements and/or other rights?	No	The safeguarding principle is not impacted by the VPA since the inclusion of VPA and distribution of biogas digesters does not require any change to land tenure arrangements. It only requires the beneficiary to own a house, where the stove can be built. Therefore, the CME is not monitoring. Since safeguarding principle is not impacted, the verification team found it acceptable for CME to not monitor this principle.
	3.6.2 Negative Economic Consequences	a. The Project Developer shall demonstrate the financial sustainability of the Projects implemented, also including those that will occur beyond the Project Certification period.  b. The Projects shall consider economic impacts and demonstrate a consideration of potential risks to the local economy and how these have been taken into account in Project design, implementation, and operation and after the Project.	No	The safeguarding principle is not impacted by the VPA because the project does not impact the local economy. The cookstoves are constructed, have little operation cost and the project is public funded, therefore, the CME is not monitoring. Since safeguarding principle is not impacted, the verification team found it acceptable for CME to not monitor this principle.

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		Particular focus shall be given to vulnerable and marginalised social groups in targeted communities and that benefits are socially-inclusive and sustainable.		
	4.1.1 Emissions	Will the Project increase greenhouse gas emissions over the Baseline Scenario?	No	The programme reduces the amount of fuel used for cooking and therefore mitigates GHGs. The parameter is monitored based on the operational status of the project units
	4.1.2 Energy Supply	Will the Project use energy from a local grid or power supply (i.e., not connected to a national or regional grid) or fuel resource (such as wood, biomass) that provides for other local users?	Yes	The safeguarding principle is impacted by the VPA because the project stoves use lesser fuel from community pool which provides for other local users. Monitored parameter $P_{p,b,y}$ indicates that on an average 0.004601 tonnes of fuel is saved per household per day. The impact is positive. Therefore, assessment by the CME was found appropriate by the verification team.
	4.2.1 Impact on natural water patterns and flow	Will the Project affect the natural or pre-existing pattern of watercourses, ground-water and/or the watershed(s) such as high seasonal flow variability, flooding potential, lack of aquatic connectivity or water scarcity?	No	The safeguarding principle is not impacted by the VPA except reduction in degradation of forest causing to keep ground water aquifers better supplied. Since safeguarding principle is not directly or significantly impacted, the verification team found it acceptable for CME to not monitor this principle.

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	4.2.2 Erosion and/or water body stability	Could the Project directly or indirectly cause additional erosion and/or water body instability or disrupt the natural pattern of erosion?	No	The safeguarding principle is not impacted by the VPA in a negative way. Therefore, the CME is not monitoring. Since safeguarding principle is not impacted, the verification team found it acceptable for CME to not monitor this principle.
	4.2.3 Landscape modification and soil	Does the Project involve the use of land and soil for production of crops or other products?	No	The safeguarding principle is not impacted by the VPA because the project doesn't involve use of land and soil for any project related purpose. It's a household level stove installation activity, therefore the CME is not monitoring. Since safeguarding principle is not impacted, the verification team found it acceptable for CME to not monitor this principle.
	4.3.2 Vulnerability to Natural Disaster	Will the Project be susceptible to or lead to increased vulnerability to wind, earthquakes, subsidence, landslides, erosion, flooding, drought or other extreme climatic conditions?	No	The safeguarding principle is not negatively impacted by the VPA. It will protect the ecosystem around the activity area, which in turn will protect against natural disasters. Therefore, the CME is not monitoring. Since safeguarding principle is not impacted negatively, the verification team found it acceptable for CME to not monitor this principle.
	4.3.3 Genetic Resources	Could the Project be negatively impacted by the use of genetically modified organisms or GMOs (e.g., contamination,	No	The safeguarding principle is not impacted by the VPA, therefore the CME is not monitoring. Since safeguarding principle is not impacted, the verification team found it acceptable for CME to not monitor this principle.

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		collection and/or harvesting, commercial development)?		
	4.3.4 Release of pollutants	Could the Project potentially result in the release of pollutants to the environment?	Yes	The safeguarding principle is impacted by the VPA; the project can potentially lead to release of gases like ozone, nitrous gases and carbon monoxide from welding during the production of planchas. Although the CME is not involved in production of this steel, the CME has taken measures to ensure that the employees are protected from such gases. Since the amount of gas released is negligible and some of these gases would also have released in the baseline scenario, therefore, the verification team found it acceptable for CME to not monitor this principle.
	4.3.5 Hazardous and Non-hazardous Waste	Will the Project involve the manufacture, trade, release, and/ or use of hazardous and non-hazardous chemicals and/or materials?	No	The safeguarding principle is not impacted by the CPAs because the stove construction and usage doesn't involve any process which can release hazardous or non-hazardous waste. Therefore, the CME is not monitoring. Since safeguarding principle is not impacted, the verification team found it acceptable for CME to not monitor this principle.
	4.3.6 Pesticides and fertilizers	Will the Project involve the application of pesticides and/or fertilisers?	No	The safeguarding principle is not impacted by the VPA because project doesn't use pesticides or fertilizers, therefore the CME is not monitoring. Since safeguarding principle is not impacted, the verification team found it acceptable for CME to not monitor this principle.

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	4.3.7 Harvesting of forests	Will the Project involve the harvesting of forests?	No	The safeguarding principle is not impacted by the VPA because no forests are harvested during this project; therefore, the CME is not monitoring. Since safeguarding principle is not impacted, the verification team found it acceptable for CME to not monitor this principle.
	4.3.8 Food	Does the Project modify the quantity or nutritional quality of food available such as through crop regime alteration or export or economic incentives?	No	The safeguarding principle is only affected in manner that the money previously spent in purchasing fuelwood can be used for purchasing food. Since the impact is positive, the CME is not monitoring it. The verification team found it acceptable for CME to not monitor this principle.
	4.3.9 Animal Husbandry	Will the Project involve animal husbandry?	No	The safeguarding principle is not impacted by the VPA, therefore the CME is not monitoring. Since safeguarding principle is not impacted, the validation team found it acceptable for CME to not monitor this principle.
<b>Findings</b>	None			
<b>Conclusion</b>	All the safeguarding principles have been monitored appropriately by the implementer.			

**E.3.5. Assessment of data and calculation of emission reductions or net removals**

**E.3.5.1. Calculation of baseline GHG emissions or baseline net GHG removals by sinks**

<b>Means of verification</b>	<p>Baseline emission was calculated using the approach given in the applied methodology/11/. The formula used for baseline estimation is as follows:</p> $ER_y = \sum_{b,p} (N_{p,y} * U_{p,y} * P_{p,b,y} * NCV_{b,fuel} * (f_{NRB,b,y} * Eff_{fuel,CO_2} + Eff_{fuel,nonCO_2})) - \sum_{b,p} Lep,y$ <p>Where,</p> <p><math>\sum_{b,p}</math>: Sum over all relevant (baseline b/project p) couples</p> <p><math>N_{p,y}</math>: <i>Parameter ID6</i>- Cumulative number of project technology-days included in the project database for project scenario p against baseline scenario b in year y</p>
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	<p><math>U_{p,y}</math>: <i>Parameter ID8</i>- 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)</p> <p><math>P_{p,b,y}</math>: <i>Parameters ID7</i>- Specific fuel savings for an individual technology of project p against an individual technology of baseline b in year y, in tons/day, as derived from the statistical analysis of the data collected from the field tests</p> <p><math>f_{NRB,b,y}</math>: <i>Parameter ID5</i>- Fraction of biomass used in year y for baseline scenario b that can be established as non-renewable biomass (drop this term from the equation when using a fossil fuel baseline scenario)</p> <p><math>NCV_{b,fuel}</math>: <i>Parameter ID4</i>- Net calorific value of the fuel that is substituted or reduced (0.0186 TJ/ton, NCV for Red Oak)</p> <p><math>EF_{b,fuel,CO2}</math>: <i>Parameter ID1</i>- CO2 emission factor of the fuel that is substituted or reduced. 112 tCO2/TJ for Wood/Wood Waste, or the IPCC default value of other relevant fuel <math>EF_{b,fuel,nonCO2}</math> Non-CO2 emission factor of the fuel that is reduced</p> <p><math>LE_{p,y}</math>: <i>Parameters ID9 &amp; ID10</i>- Leakage for project scenario p in year y (tCO2e/yr)</p> <p><math>E_{fuel,nonCO2}</math>: <i>Parameters ID2 &amp; ID3</i>- Non-CO2 emission factor of the fuel that is reduced</p> <p>The formula was checked with methodology and registered PoA-DD and VPA-DDs.</p>
<b>Findings</b>	None
<b>Conclusion</b>	<p>The verification team verified that</p> <ol style="list-style-type: none"> <li>a) A complete set of data for the monitoring period was available and the verification of each monitoring parameter is elaborated in this report. The complete monitoring data is also presented in the corresponding ER calculations sheet/8/ of final Monitoring Report /7/.</li> <li>b) The information provided in the monitoring report was crosschecked with other sources, wherever appropriate and available, and such information is also included under Section E.3.4.2 of this report.</li> <li>c) The calculations of overall GHG emissions as presented in the corresponding ER calculations sheet/8/ of final Monitoring Report /7/ were checked and found to be consistent with the formulae and methods described in the registered monitoring plan of VPA-DD/2/, registered PoA-DD/1/ and the applied methodology/11/.</li> <li>d) All assumptions used in the emission calculations were found appropriate and therefore justified</li> <li>e) Appropriate emission factors, IPCC default factors and other reference values have been correctly applied. This has also been elaborated under Section E.3.4.1 of this report.</li> <li>f) No standardized baseline was prescribed in the registered PoA DD/1/ and therefore it has not been applied.</li> <li>g) There is no pro-rata approach was applied in the current monitoring period as entire monitoring period falls into period that is after the end of first commitment period of Kyoto Protocol.</li> </ol>



**E.3.5.2. Calculation of project GHG emissions or actual net GHG removals by sinks**

<b>Means of verification</b>	Not applicable as per the methodology and also no source of project emission could be identified.
<b>Findings</b>	Not applicable
<b>Conclusion</b>	Not applicable

**E.3.5.3. Calculation of leakage GHG emissions**

<b>Means of verification</b>	The leakage was calculated as a parameter and the overall leakage was found to be 2,807 t CO <sub>2</sub> e. Please see section E.3.4.2 and E.3.5.1.
<b>Findings</b>	Please see section E.3.4.2 and E.3.5.1.
<b>Conclusion</b>	Please see section E.3.4.2 and E.3.5.1.

**E.3.5.4. Summary of calculation of GHG emission reductions or net GHG removals by sinks**

<b>Means of verification</b>	<p>The value of overall GHG emissions obtained by applying the equations provided in the registered PoA-DD is 275,890 tCO<sub>2</sub>e.</p> <p>The calculations presented in this regard in the final monitoring report/6/ and corresponding ER calculations sheet/8/ were found appropriate and complying with the provisions prescribed in the registered monitoring plan of VPA DD/2/, registered PoA-DD/1/ and applied methodology/11/.</p> <p>The verification team confirms that an audit trail that contains the evidence and records that validated the stated figures were checked and found acceptable.</p>
<b>Findings</b>	No finding was raised.
<b>Conclusion</b>	<p>The verification team confirms that</p> <ul style="list-style-type: none"> <li>a) The complete data was available and is duly reported;</li> <li>b) As indicated above, the description with regard to cross-check of reported data is included under respective parameter (refer Section E.3.4 of this report);</li> <li>c) Appropriate methods and formulae for calculating net GHG removals and leakage emissions were followed;</li> <li>d) Appropriate emission factors, IPCC default factors and other reference values were correctly applied.</li> <li>e) There is no pro-rata approach was applied in the current monitoring period as entire monitoring period falls into period that is after the end of first commitment period of Kyoto Protocol.</li> </ul> <p>The total number of ERs achieved during the current monitoring period is 275890 tCO<sub>2</sub>e.</p>

Specific case CPA reference number	Baseline emissions or baseline net GHG removals by sinks (tCO <sub>2</sub> e)	Project emissions or actual net GHG removals by sinks (tCO <sub>2</sub> e)	Leakage (tCO <sub>2</sub> e)	GHG emission reductions or net GHG removals by sinks (tCO <sub>2</sub> e) achieved in the monitoring period		
				Up to 31/12/2012	From 01/01/2013	Total amount
18. VPA1	*	*	1%	N/A	275,890	275890

<b>Total</b>	*	*	1%	N/A	275890	275890
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*\*Since emission reductions are conducted with respect to fuel savings per unit, rather than by comparing overall emissions in the baseline and project scenarios, the 2<sup>nd</sup> and 3<sup>d</sup> columns in the table above are left blank.*

**E.3.5.5. Comparison of actual GHG emission reductions or net GHG removals by sinks with estimates in included specific-case CPA**

<b>Means of verification</b>	Review of VPA-DD /2/and ER calculation spreadsheets/8/ demonstrated that In the VPA-DD, 406,231 tonnes were estimated to be reduced between 1 <sup>st</sup> December 2018 – 30 Nov. 2019. 275890 tonnes are reduced during the current monitoring period, which led to the conclusion that actual emission reductions achieved are less than the amount estimated.
<b>Findings</b>	None
<b>Conclusion</b>	The actual emission reductions are lower than the value estimated in VPA-DD/2/. Therefore, it has been accepted by the verification team.

**E.3.5.6. Remarks on difference from estimated value in registered VPA -DD**

<b>Means of verification</b>	The achieved ERs are lower than the estimates in registered VPA-DD for each VPA. It is explained by PP in monitoring report explicitly and VVB has accepted the justification.
<b>Findings</b>	None
<b>Conclusion</b>	It was verified that the difference is due to a reduction in 2018-2019 stove build quotas, excessive rains in Fall 2018, which affected access to many of the rural areas; many roads remain in poor condition and there had been delays in the transport of materials. Also, project is installing new stoves in Nicaragua and Guatemala, hence some resources are diverted to those new countries.

**E.3.6. Assessment of reported sustainable development co-benefits**

<b>Means of verification</b>	Reported in section E.3.4.3
<b>Findings</b>	CL4 was raised (Refer Appendix 4 for details)
<b>Conclusion</b>	CL4 was closed (Refer Appendix 4 for details)

**E.3.7. Global stakeholder consultation**

<b>Means of verification</b>	Not Applicable
<b>Findings</b>	Not Applicable
<b>Conclusion</b>	Not Applicable

**SECTION F. Internal quality control**

The draft verification report that is prepared by verification team is reviewed by an independent technical review team (one or more members) to confirm if the internal procedures established and implemented by Earthood were duly complied with and such opinion/conclusion is reached in an objective manner that complies with the applicable CDM rules/requirements. The technical review team is collectively required to possess the technical expertise of all the technical area/sectoral scope the project activity relates to. All team members of technical review team are independent of the verification team.

During the technical review process additional findings may be identified or the closed-out findings may be opened, which needs to be satisfactorily resolved before the request for issuance is submitted to UNFCCC. The independent technical reviewer may either approve the report as such or reject/return the same in such case providing the comments/findings/issues that needs to be resolved by the

verification team. The decision taken by the Technical Reviewer is final and is authorized on behalf of Earthood Services Private Limited.

### **SECTION G. Verification opinion**

Earthood Services Private Limited (Earthood), contracted by Proyecto Mirador Foundation, has performed the independent verification of the emission reductions for the GS PoA 1988 “Proyecto Mirador Enhanced Distribution of Improved Cookstoves in Latin America” in Honduras for the monitoring period 01/12/2018 to 30/11/2019 (Inclusive of both days) as reported in the Monitoring Report Version 3.0 dated 03/03/2020, Proyecto Mirador Foundation is responsible for the collection of data in accordance with the monitoring plan and the reporting of GHG emissions reductions from the project activity.

The VVB commenced the verification on the basis of the baseline and monitoring methodology Technologies and Practices to Displace Decentralized Thermal Energy Consumption (TPDDTEC), Version 2.0, "Gold Standard for Global Goals Transition Annexure", version 1, dated September 2019 the monitoring plan contained in the PoA-DD and VPA-DD, both Version 6.0, dated 25/03/2016, Monitoring Report Version 3.0 dated 03/03/2020.

VVB’s verification approach is based on the understanding of the risks associated with reporting of GHG emission data and the controls in place to mitigate these. Earthood planned and performed the verification by obtaining evidence and other information and explanations that Earthood considered necessary to give reasonable assurance that reported GHG emission reductions are fairly stated.

The verification team confirms that:

- The PoA was found completely implemented as per the description given in the registered VPA -DD.
- The actual operation conforms to the description in the registered PoA - DD and VPA- DD

### **SECTION H. Certification statement**

Earthood Services Private Limited (Earthood), contracted by Proyecto Mirador Foundation, has performed the independent verification of the emission reductions for “Proyecto Mirador Enhanced Distribution of Improved Cookstoves in Latin America: First VPA for Distribution of Dos por Tres Cookstoves in Honduras” for the monitoring period 01/12/2018 to 30/11/2019 (Inclusive of both days) as reported in the Monitoring Report Version 3.0 dated 03/03/2020, Proyecto Mirador Foundation is responsible for the collection of data in accordance with the monitoring plan and the reporting of GHG emissions reductions from the project activity. It is our responsibility to express an independent verification statement on the reported GHG emission reductions from the project activity.

VVB commenced the verification on the basis of the baseline and monitoring methodology Technologies and Practices to Displace Decentralized Thermal Energy Consumption (TPDDTEC), Version 2.0, the monitoring plan contained in the VPA: “Proyecto Mirador Enhanced Distribution of Improved Cookstoves in Latin America: First VPA for Distribution of Dos por Tres Cookstoves in Honduras”, Monitoring Report Version 3.0 dated 03/03/2020.

VVB’s verification approach is based on the understanding of the risks associated with reporting of GHG emission data and the controls in place to mitigate these. Earthood planned and performed the verification by obtaining evidence and other information and explanations that Earthood considered necessary to give reasonable assurance that reported GHG emission reductions are fairly stated.

In our opinion the GHG emissions reductions reported for the project activity for the period 01/12/2018 to 30/11/2019 (Inclusive of both days) are fairly stated in the Monitoring Report Version 3.0 dated 03/03/2020. The GHG emission reductions were calculated correctly on the basis of the approved baseline and monitoring methodology Technologies and Practices to Displace Decentralized Thermal Energy Consumption (TPDDTEC), Version 2.0, the monitoring plan contained in the VPA: "Proyecto Mirador Enhanced Distribution of Improved Cookstoves in Latin America: First VPA for Distribution of Dos por Tres Cookstoves in Honduras". Earthood Services Private Limited is able to certify that the emission reductions from the GS VPA: "Proyecto Mirador Enhanced Distribution of Improved Cookstoves in Latin America: First VPA for Distribution of Dos por Tres Cookstoves in Honduras" during the period 01/12/2018 to 30/11/2019 (Inclusive of both days) amount to 275,890 tCO<sub>2</sub>e.

**Verified and certified emission reductions as per commitment period:**

<b>Commitment period</b>	<b>Amount</b>
Up to 31/12/2012 (1 <sup>st</sup> commitment period)	Not Applicable/Nil
From 01/01/2013 onwards	275890 tCO <sub>2</sub> e

## Appendix 1. Abbreviations

Abbreviations	Full Texts
CAR	Corrective Action Request
CDM	Clean Development Mechanism
CER	Certified Emission Reduction
CL	Clarification Request
CME	Coordinating and Managing Entity
CO <sub>2</sub>	Carbon dioxide
CO <sub>2e</sub>	Carbon dioxide equivalent
CP	Crediting Period
DNA	Designated National Authority
VVB	Designated Operational Entity
DR	Document Review
EB	Executive Board
ER	Emission Reduction
ER	Emission Reduction
ESPL	Earthood Services Private Limited (Earthood)
FAR	Forward Action Request
GHG	Green House Gas
GS	Gold Standard
IPCC	Intergovernmental Panel on Climate Change
IR	Internal Resource
ODA	Official Development Assistance
PCP	Project Cycle Procedure
PDD	Project Design Document
PFA	Pre-Feasibility Assessment
PMU	Project Management Unit
PoA	Programme of Activities
PP	Project participant
PS	Project Standard
SFR	Stakeholders Feedback Round
UNFCCC	United Nations Framework Convention on Climate Change
VER	Verified Emission Reductions
PO	Partner Organisation

## Appendix 2. Competence of team members and technical reviewers

Competence Statement			
<b>Name</b>	Shreya Garg		
<b>Country</b>	India		
<b>Education</b>	M.Sc. (Climate Science & Policy), TERI University		
<b>Experience</b>	6 Years +		
<b>Field</b>	Climate Change		
Approved Roles			
<b>Team Leader</b>	YES		
<b>Validator</b>	YES		
<b>Verifier</b>	YES		
<b>Methodology Expert</b>	AMS.I.A., AMS.I.C., AMS.I.D., AMS.I.F., AMS.II.D., AMS.II.G., AMS.II.J., AMS.III.AV., ACM0002, ACM0012		
<b>Local expert</b>	YES (India)		
<b>Financial Expert</b>	NO		
<b>Technical Reviewer</b>	YES		
<b>TA Expert</b>	YES (TA 1.2, TA 3.1)		
<b>Reviewed by</b>	Abhishek Mahawar	<b>Date</b>	01/03/2018
<b>Approved by</b>	Ashok Gautam	<b>Date</b>	01/03/2018

Competence Statement	
<b>Name</b>	Ashok Gautam
<b>Country</b>	India
<b>Education</b>	M. Sc. (Environmental Sciences) M. Tech. (Energy & Environmental Management)
<b>Experience</b>	16 Years +
<b>Field</b>	Energy, Climate Change & Environment
Approved Roles	
<b>Team Leader</b>	YES
<b>Validator</b>	YES
<b>Verifier</b>	YES
<b>Methodology Expert</b>	AMS-I.D., AMS-I.A., AMS-I.C., AMS-I.E, AMS-II.D., AMS-II.G., AMS-III.E., AMS-III.H., AMS-III.Q, AMS-III.Z., AMS-III.AV., AM0029, AM0025, AM0056, ACM0001, ACM0002, ACM0004, ACM0012, ACM0006, AM0018, ACM0009, AM0034, AMS.I.B, ACM0003
<b>Local expert</b>	YES (India)
<b>Financial Expert</b>	YES
<b>Technical Reviewer</b>	YES
<b>TA Expert</b>	YES (TA 1.1, TA 1.2, TA 3.1, TA 13.1)

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<b>Reviewed by</b>	Shreya Garg	<b>Date</b>	23/10/2019
<b>Approved by</b>	Anshika Gupta	<b>Date</b>	23/10/2019

<b>Competence Statement</b>			
<b>Name</b>	Siddharth Yadav		
<b>Country</b>	England (UK)		
<b>Education</b>	Masters (Oxford University) B. Tech. – Civil Engineering		
<b>Experience</b>	14 Years, More than 10 GS projects		
<b>Field</b>	Energy, Climate Change & Environment Complete more than 30 CDM projects and various GS projects		
<b>Approved Roles</b>			
<b>Team Leader</b>	YES		
<b>Validator</b>	YES		
<b>Verifier</b>	YES		
<b>Financial Expert</b>	NO		
<b>Technical Reviewer</b>	NO		
<b>TA Expert (1.2)</b>	YES		
<b>TA Expert (13.1)</b>	YES		
<b>Reviewed by</b>	Abhishek Mahawar	<b>Date</b>	10/11/2014
<b>Approved by</b>	Kaviraj Singh	<b>Date</b>	11/11/2014

<b>Competence Statement</b>	
<b>Name</b>	Kaviraj Singh
<b>Country</b>	India
<b>Education</b>	Ph.D. (Environmental Engineering), IIT Delhi Masters (Energy & Environmental), DAVV Indore
<b>Experience</b>	15 Years +
<b>Field</b>	Climate Change & Environment
<b>Approved Roles</b>	
<b>Team Leader</b>	YES
<b>Validator</b>	YES
<b>Verifier</b>	YES
<b>Methodology Expert</b>	AMS-I.D., AMS-II.D., ACM0006, AMS-I.A., AMS-I.C., AMS-II.B., AMS-III.H, ACM0002, ACM0001, AM0080
<b>Local expert</b>	YES (India)
<b>Financial Expert</b>	YES
<b>Technical Reviewer</b>	YES

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<b>TA Expert</b>	YES (TA 1.1, TA 1.2, TA 3.1, TA 13.1, TA 13.2)		
<b>Reviewed by</b>	Abhishek Mahawar	<b>Date</b>	26/09/2019
<b>Approved by</b>	Ashok Gautam	<b>Date</b>	26/09/2019

NOTE: Ms Charlotte Boulton assisted Siddharth Yadav during the site visit surveys (under training). Charlotte Bolton is a British citizen, and has a good level (speaking and understanding) of Spanish language.



### Appendix 3. Documents reviewed or referenced

No.	Author	Title	References to the document	Provider
1.	Proyecto Mirador Foundation	PoA-DD, Version 6.0	Dated 25/03/2016	CME
2.	Proyecto Mirador Foundation	1. VPA-DD, Version 6.0	Dated 25/03/2016	CME
3.	Gold Standard Foundation	4-week review renewal crediting period GSv2.2 VER	Dated 20/04/2016	CME
4.	Proyecto Mirador Foundation	VPA Passport 2016	Dated 25/03/2016	CME
5.	Proyecto Mirador Foundation	Monitoring Report, Version 1	Dated 20/11/2019	CME
6.	Proyecto Mirador Foundation	Monitoring Report Version 1.1 (interim version) Monitoring Report Version 2 (interim version)	Dated 03/12/2019 Dated 17/12/2019	CME
7.	Proyecto Mirador Foundation	Monitoring Report Version 3 (final)	Dated 03/03/2020	CME
8.	Proyecto Mirador Foundation	ER calculations	Dated 20/11/2019, 03/12/2019 Dated 18/12/2019	CME
9.	Proyecto Mirador Foundation	VP10-06 Sales Records (salesforce.com)	Dated 18/12/2019	CME
10.	Proyecto Mirador Foundation	VP10-07 Stoves installed by month	Dated 18/12/2019	CME
11.	The Gold Standard Foundation	The Gold Standard Simplified Methodology Technologies and Practices to Displace Decentralized Thermal Energy Consumption, version 2.0  Gold Standard for Global Goals Transition Annexure, version 1, dated September 2019	Dated 17/01/2018  Dated September 2019	Others
12.	The Gold Standard Foundation	GS webpage for the project: <a href="https://mer.markit.com/br-reg/public/master-project.jsp?project_id=103000000001450">https://mer.markit.com/br-reg/public/master-project.jsp?project_id=103000000001450</a>	Last accessed on 06/01/2020	Others
13.	Proyecto Mirador Foundation	VP10-02 KPT Data	Dated 21/11/2019	CME

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14.	Gold Standard Foundation	Toolkit Version 2.2	-	Other
15.	Proyecto Mirador Foundation	VP10-08 Training Brochure	-	CME
16.	Proyecto Mirador Foundation	VP10-09 Leakage Sustainability Results	Dated 21/11/2019	CME
17.	Proyecto Mirador Foundation	VP10-10 Employee Survey Export	Dated 28/10/2019	CME
18.	Proyecto Mirador Foundation	VP10-11 Employee questionnaire contract	Dated 02/10/2019	CME
19.	Proyecto Mirador Foundation	VP10 -12 Quantitative Employment	Dated 14/11/2019	CME
20.	Proyecto Mirador Foundation	VP10-13 Dropoff data	Dated 18/12/2019	CME
21.	Proyecto Mirador Foundation	VP10 -14 Transportation summary	Dated 18/12/2019	CME
22.	Proyecto Mirador Foundation	VP10-15 Stakeholder Comment Log (Excel file)	Dated 18/12/2019	CME
23.	Proyecto Mirador Foundation	VP10-16 Double Counting Data (Excel File)	Dated 26/02/2020	CME
24.	Proyecto Mirador Foundation	User Manuals (pdf) – digital scale meter, humidity meter, GPS Device – Garmin	Dated 16/01/2017	CME
25.	ESPL	List of households surveyed by VVB, including a screenshot of survey questionnaire	-	Others
26.	Proyecto Mirador Foundation	Log of feedback from users	-	CME
27.	IPCC	IPCC Guidelines for National Greenhouse Gas Inventories 2.1 ( <a href="http://www.ipcc-nggip.iges.or.jp/public/2006gl/pdf/2_Volume2/V2_2_Ch2_Stationary_Combustion.pdf">http://www.ipcc-nggip.iges.or.jp/public/2006gl/pdf/2_Volume2/V2_2_Ch2_Stationary_Combustion.pdf</a> )	Vol. 2	Others
28.	UNFCCC	Standard for Sampling and surveys for CDM project activities and programmes of activities	Ver.7	Others
29.	Proyecto Mirador Foundation	<a href="http://www.nativeenergy.com/travel.html">http://www.nativeenergy.com/travel.html</a>	-	CME
30.	Proyecto Mirador Foundation	VP10-17 training data'	Dated 28/10/2019	CME
31.	Proyecto Mirador Foundation	Garmin eTrex 20 (gps device)	-	CME
32.	Proyecto Mirador Foundation	Humidity Meter Specifications (Calibration check key and instructions)	-	CME
33.	Amazon	Digital Scale Specification	-	CME
34.	Proyecto Mirador Foundation	GS transition document	30/01/2019	CME

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

Table 1. CLs from this verification

CL ID	01	Section no.	E.1.1, E.3.4.2	Date : 10/12/2019
Description of CL				
Please provide information on key changes between the version 1 and version 2 of the monitoring reports dated 20th November 2019 and 3rd December 2019 submitted to Earthood, including the changes in the corresponding list of annexures.				
Project participant response				Date : 17 Dec. 2019
<p>The following figures were updated in the Monitoring Report and annexes:</p> <ul style="list-style-type: none"> <li>• November 2019 final stove construction figure</li> <li>• Stove abandonment figures (updated to reflect the adjusted survey universe, to comply with mid-year average per TPDDTEC footnote 33, as per CL2 below)</li> <li>• Leakage and double counting figures</li> <li>• Total gross and net ERs, and ERs by vintage</li> <li>• Stakeholder comments were added to include end of MP</li> <li>• Transportation figures were updated as per CL3 below</li> </ul>				
Documentation provided by project participant				
<p>The following key supporting attachments were revised according to the revisions enumerated above:</p> <ul style="list-style-type: none"> <li>• VP10-01 ER Calculations.xlsx</li> <li>• VP10-06 Sales Record.xls</li> <li>• VP10-07 Stoves Installed by Month.pdf</li> <li>• VP10-13 Dropoff Data.xlsx</li> <li>• VP10-14 Transportation Summary.xls</li> <li>• VP10-15 Stakeholder Comment Log.xls</li> </ul> <p>Additionally, supporting document "Leakage Calc.xlsx" is supplied to illustrate revised leakage calculation</p>				
VVB assessment				Date: 20/12/2019
The revisions to the files are accepted. CL1 Closed				
CL ID	03	Section no.	E 3.4.2	Date : 04/12/2019
Description of CL				
<p>ID 10 / LEp,y – Leakage due to Transportation</p> <p>Transportation records for all Mirador vehicles are tabulated in the attached "VP10-14 Transportation Summary.xlsx" showing Mirador vehicles collectively drove 398,673 km (or 247,724 miles) during the 10th Verification Period.</p> <p>The reported value does not factor in the emissions during the period of November 2019. Please update the figures.</p>				
Project participant response				Date : 17 Dec. 2019
Transportation figures have been updated in the MR and are still <i>de minimis</i> .				
Documentation provided by project participant				
Revised transportation figures (VP10-14 Transportation Summary.xls)				
VVB assessment				Date: 20/12/2019

CL3 was closed following the revised calculations, and the value being *de minimus*. This approach has been applied by the project participants in 2018-19, and the same has been accepted by Gold Standard.

CL ID	4	Section no.	E.3.4.2	Date : 04/12/2019
Calculation of net benefits baseline and project values or direct calculation for each SDG outcome should be a quantitative value for each parameter applicable to the project. Please clarify how this requirement is met.				
Project participant response				Date : 17 Dec. 2019
This issue was already addressed in the Gold Standard Review for VP9- please see C/R 4. The issue was closed satisfactorily by the GS.				
Documentation provided by project participant				
Gold Standard Performance Review, VP9 ( _GS1988_GS2758_Performance Review_MP9_final_21062019.pdf)				
VVB assessment				Date: 20/12/2019
CL4 was closed as there is precedence of the procedure/approach applied by the project developer from the last year's GS Review Report.				

**Table 2. CARs from this verification**

CAR ID	02	Section no.	E.3.4.2	Date : 04/12/2019
Description of CAR : The usage surveys need to be re-selected to ensure compliance with the methodological requirements described below. The correction should address the FAR issued during the Gold Standard's review of data for the 9 <sup>th</sup> Verification period (01/12/2017-30/11/2018) in its report 'GS1988_GS2758_Performance Review_MP9_final_21062019.pdf' (as described below):				
Data and Parameters Monitored ID 8 / Up,y : Abandonment (drop-off) rate (the number of stoves that have fallen out of use in a given age group)				
The methodology applied (ref. 401.13-TPDDTEC-V3.1_20170823-1.pdf) requires 'Usage Survey - Completed annually, or more frequently, and in all cases on time for any request of issuance. The usage survey provides a single usage parameter that is weighted based on drop off rates that are representative of the age distribution for project technologies in the total sales record (footnote 33). A usage parameter must be established to account for drop off rates as project technologies age and are replaced. Prior to a verification, a usage parameter is required that is weighted to be representative of the quantity of project technologies of each age being credited in a given project scenario. For example, if only technologies in the first year of use (age0-1) are being credited, a usage parameter must be established through a usage survey for technologies age0-1. If an equal number of technologies in the first year of use (age0-1) and second year of use (age1-2) are credited, a usage parameter is required that is weighted to be equally representative of drop off rates for technologies age0-1 and age1-2. Footnote 33 says : To ensure conservativeness, participants in a usage survey with technologies in the first year of use(age0-1 ) must have technologies that have been in use on average longer than 0.5 years. For technologies in the second year of use (age1-2), the usage survey must be conducted with technologies that have been in use on average at least 1.5 years, and so on.				
Project participant response				Date : 17/12/2019
This was a simple oversight due to document version confusion. Surveys on the newer stoves in each age group are omitted such that each survey group reflects a mid-year average per TPDDTEC Footnote 33. The document "VP10-13 Dropoff Data.xlsx," supplied herewith, reflects the correct abandonment figures and these were integrated into the updated ER Calculations.				
Documentation provided by project participant				
Revised drop off survey file (VP10-13 Dropoff Data.xlsx)				
VVB assessment				Date: 20/12/2019

The revised drop off surveys are in compliance with the above methodological requirements. CAR 2 and the FAR raised during the 9<sup>th</sup> Monitoring period (01/12/2017-30/11/2019) is Closed

**Table 3. FARs from this verification**

<b>FAR ID</b>	-	<b>Section No.</b>	-	<b>Date : DD/MM/YYYY</b>
<b>Description of FAR</b>				
NA				
<b>Project participant response</b>				<b>Date : DD/MM/YYYY</b>
NA				
<b>Documentation provided by project participant</b>				
NA				
<b>VVB assessment</b>				<b>Date: DD/MM/YYYY</b>
NA				

The FAR issued from previous verification (MP9) regarding the age of the stove during usage survey to be determined using a method which is in compliance with TPDDTEC methodology has been addressed under CAR2 above..

**Document information**

<i>Version</i>	<i>Date</i>	<i>Description</i>
01.0	5 June 2015	Initial publication.
Decision Class: Regulatory		
Document Type: Form		
Business Function: Issuance		
Keywords: programme of activities, verifying and certifying		

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VCS VALIDATION DEED OF REPRESENTATION

BY

FIRST ENVIRONMENT, INC.

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**THIS DEED OF REPRESENTATION** is made on March 13, 2012

**BY**

First Environment, Inc., a New Jersey Corporation headquartered at 91 Fulton Street, Boonton, NJ 07005 (as **VVB**)

**THIS DEED WITNESSES** as follows:

**1. INTERPRETATION**

1.1 In this Deed:

"**Accountholder**" means any person holding a VCU account with a VCS Registry;

"**Project**" means Blue Source Spartanburg County Landfill Gas Combustion Project;

"**Validation Report**" means the written report of validation titled "Validation Report for the Blue Source Spartanburg County Landfill Gas Combustion Project, Version 1.0," dated March 13, 2012 and prepared by the VVB in accordance with the VCS Rules;

"**Validation/Verification Body**" means an organization approved by the VCSA to act as a validation/verification body in respect of providing validation and/or verification services in accordance with the VCS rules;

"**VCSA**" means the Verified Carbon Standard Association;

"**VCS Program**" means the GHG program operated by the VCSA which establishes the rules and requirements that operationalize the VCS to enable the validation of GHG projects and the verification of GHG emission reductions and removals;

"**VCS Registry**" means a registry operating within the VCS registry system and holding a current, valid agreement with the VCSA to provide registry services on behalf of the VCSA. VCS registries interact with the VCS project database to issue VCUs, and hold, transfer (to and from other VCS registries), retire, suspend, cancel and provide custodial services for VCUs on behalf of its account holders;

"**VCS Rules**" means the rules and requirements set out in the *VCS Program Guide*, the *VCS Standard* and the other VCS Program documents, as such rules and requirements may be updated from time to time; and

"**VCU**" means a verified carbon unit;

**2. REPRESENTATIONS**

2.1 I am the Validation/Verification Body in relation to the validation of the Project.

2.2 I hereby represent that:

2.2.1 I have validated the Project's compliance with the VCS Program requirements as set out in the VCS Rules; and

2.2.2 All information which I have provided in the Validation Report is true and accurate in all material respects.

2.3 Notwithstanding any other provisions contained in the Validation Report, I hereby acknowledge that a VCS Registry shall hold this Deed for the benefit of Accountholders holding VCUs relating to the Project at any given time.

**3. GOVERNING LAW AND JURISDICTION**

This Deed is governed by and interpreted in accordance with English law, and the English courts shall have exclusive jurisdiction to settle any dispute arising from or connected with this Deed including a dispute regarding the existence, validity or termination of this Deed or the consequences of its nullity.

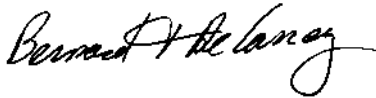
**4. COUNTERPARTS**

This Deed may be executed in any number of counterparts, each of which when executed and delivered is an original and all of which together evidence the same deed.

**5. DELIVERY**

This Deed is delivered on the date written at the start of the Deed.

**EXECUTED** by First Environment, Inc. as a deed



\_\_\_\_\_

Signature of director

B. Tod Delaney

Name of director



\_\_\_\_\_

Signature of director/secretary

Elizabeth Delaney

Name of director/secretary