Gold Standard
for the Global Goals

TEMPLATE

# KEY PROJECT INFORMATION & VPA DESIGN DOCUMENT (PDD)

PUBLICATION DATE **04.05.2022**

VERSION **v. 2.0**

RELATED SUPPORT - Programme of Activity requirements

This document contains the following Sections

# KEY PROJECT INFORMATION

| | |
|---|---|
| Type of VPA | ☒ Real case VPA<br>☐ Regular VPA |
| Scale of VPA<br><br>Note that a VPA can be of one scale. Please select applicable scale accordingly. | ☐Microscale<br>☐Small scale<br>☒Large scale |
| Title of corresponding real case VPA (if applicable) | Proyecto Mirador Enhanced Distribution of Improved Cookstoves in Latin America - First VPA for Distribution of Dos por Tres Cookstoves in Honduras |
| GS ID of real case VPA (if applicable) | GS2758 |
| GS ID of VPA | GS2758 |
| Title of VPA | Proyecto Mirador Enhanced Distribution of Improved Cookstoves in Latin America - First VPA for Distribution of Dos por Tres Cookstoves in Honduras |
| Time of First Submission Date | 29 June 2010 (Registration date of stand-alone project activity, Project ID GS690)<br>3 June 2014 (Registration date for PoA GS1988)<br>Note: At the time of PoA registration, the stand-alone project activity (GS690) became GS2758, the First VPA under PoA GS1988. |
| Date of Design Certification | 29/06/2010 |
| Version number of the VPA-DD | 2.1 |
| Completion date of version | 16/02/2023 |
| Coordinating/managing entity | Proyecto Mirador Foundation |

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| VPA Implementer (s) | Proyecto Mirador, LLC |
| Project Participants and any communities involved | Proyecto Mirador LLC (a U.S. non-profit organization with registered non-profit Affiliate in Honduras). |
| Host Country (ies) | Honduras |
| GS ID and Title of applicable Design Certified VPA | N/A |
| GS ID and Title of applicable Performance Certified VPA | N/A |
| Activity Requirements applied | ☒ Community Services Activities<br>☐ Renewable Energy Activities<br>☐ Land Use and Forestry Activities/Risks & Capacities<br>☐ N/A |
| Other Requirements applied | N/A |
| Methodology (ies) applied and version number | -Technologies and Practices to Displace Decentralized Thermal Energy Consumption (TPDDTEC), Version 4.0 |
| Product Requirements applied | ☒ GHG Emissions Reduction & Sequestration<br>☐ Renewable Energy Label<br>☐ N/A |
| VPA Cycle: | ☒ Regular<br>☐ Retroactive |

**Land-use & Forest and Agriculture - Key Project Information[1]**

N/A

[1] Please refer to 0 for detailed information on LUF projects

**Table 1 – Estimated Sustainable Development Contributions**

| Sustainable Development Goals Targeted | SDG Impact (defined inError! Reference source not found.) | Estimated Annual Average[2] | Units or Products |
|---|---|---|---|
| 13 Climate Action (mandatory) | Amount of GHGs emissions avoided or sequestered | 421,201 | VERs |
| 1 No Poverty | Average household savings i.e., decrease in expenditure on basic service such cooking, lighting, drinking | 1.94 | USD |
| 3 Good Health and Well-Being | Number of households that observed reduction in PM2.5 & carbon monoxide (CO) concentration reductions | 104 | µg/m3 |
| 4 Quality Education | Number of training hours provided for employees (full-time, part-time, or temporary), disaggregated per gender | 1,251 | Hours/year |
| 5 Gender Equality | 5.5.2 Proportion of women in managerial positions | 36% | % |
| 5 Gender Equality | Average time saving associated with cooking time and fuel collection | 98% cooking time; 48% fuel collection | % |
| 7 Affordable and Clean Energy | 7.1.2 Proportion of population with primary reliance on | 10% | % |

[2] All the estimated values, except the ERs, come from the last verification period (VP12).

| | | | |
|---|---|---|---|
| | clean fuels and technology | | |
| 8 Decent Work and Economic Growth | Total number of jobs | 174 | Number of employees |
| 15 Life on Land | Total non-renewable wood fuel saved (Net benefit from the difference of the baseline and project household fuel consumption) | Pb,y 4.79245 (0.013130 t/hh/day)<br><br>Pp,y 3.12246 (0.008554683 t/hh/day)<br><br>Pp,b,y 1.67 (0.0045754 t/hh/day) Net benefit | tonnes/hh/year |

On 13 March 2022, Gold Standard launched the SDG Impact Tool, a mandatory excel-based standardized template to monitor SDG impacts. This tool contains pre-identified impacts and SDG indicators that can be used for each project type. The updates in the project's SDGs, including but not limited to the impacts, description, unit of measurement, among others, come from aligning the project SDGs to Gold Standard SDG Impact Tool. The project updates comply with Gold Standard requirement of demonstrating contribution to at least three SDGs, one of which must be SDG13.

The project did not reassess its SDGs but rather aligned it to the standardize template. When a previously reported SDG impact was not in line with the current SDG tool, it was removed as an SDG but kept as an additional contribution and presented as a brief description below:

Additional project impacts to SDGs measured by Proyecto Mirador are SDG 2 Zero Hunger, with an estimated annual impact of 72% wood purchasers reporting they used the money saved to buy food. SDG 5 Gender Equality, with an estimated annual impact of 98% satisfaction among users-beneficiaries. SDG 7 Affordable and Clean Energy, with an estimated annual impact of 79% of reduction of PM2.5 emissions resulting from cookstove intervention. SDG 8 Decent Work and Economic Growth, with an estimated annual impact of 100% job satisfaction rate among employees.

# SECTION A. DESCRIPTION OF PROJECT

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

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**Description of the PoA**

The goal of the PoA is to provide improved cookstove (ICS) technology to the underserved populations of Central America that use inefficient cookstoves, and to facilitate the project's expansion outside Honduras to include Guatemala, Nicaragua, El Salvador, and Southern Mexico.

Since 2004 Proyecto Mirador has operated a Gold Standard certified cookstove project originally certified under a small-scale Gold Standard PDD titled "Enhanced distribution of efficient wood stoves in Honduras," effective 1 May 2009, which project became the First VPA under this Programme of Activities (PoA) on Validation in 2014. The purpose of the PoA is to disseminate improved cookstoves to households in Central America where inefficient cookstoves are in use.

Project implementation, stove construction and supply sourcing is managed locally under VPA supervision. Mirador partners with local community leaders to facilitate stove construction in each community, and local microenterprises to provide specific stove construction components.

**Description of Project Activity**

Location: Honduras
Technology: Dos por Tres improved cookstove (ICS) technology
Scale: Large scale
Project boundary: includes the physical site where the baseline and project cookstoves are installed, as well as the fuel collection area as described in the section A.2 below.

*Background*

Honduras is one of the poorest countries in the Latin America and Caribbean (LAC) region and has faced relatively slow poverty reduction in recent years, an estimated 48.3% (2018 est.) of the population is below the national poverty line, and 22.9% of

the population lives in extreme poverty. [3,4] The country's population of approximately 10 million people[5] is divided evenly between urban and rural areas. However, poverty is essentially a rural problem. Rural women, young people and indigenous groups are among the poorest and most vulnerable in Honduras. In rural areas, poverty affects 63% of the population, while 50% live under extreme poverty conditions.[6]

During annual visits as translators with a medical clinic, Proyecto's Mirador directors learned about the effects of smoke from cookfires[7] when they saw the large number of women and children seeking help for respiratory related diseases. To help solve the problem, they partnered with Doña Emilia Mendoza, Director, to found Proyecto Mirador, LLC, a U.S. based 501(c)3 non-profit organization that is also registered as a non-profit in Honduras.

When wood burns it releases several compounds into the atmosphere, including $CO_2$, methane, nitrous oxide, and particulate matter consisting of both elemental carbon (or soot) produced in flaming fires and organic carbon produced in smoldering fires. Elemental carbon (EC) has a global warming potential 680 times that of $CO_2$.[8] By burning fuel efficiently and completely, the Dos por Tres (Proyecto's Mirador improved cookstove) reduces the amount of soot or black carbon found in Particulate Matter and Products of Incomplete Combustion (PICs) as well as reduces the amount of Particulate Matter and PICs produced overall.[9]

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[3] https://www.cia.gov/the-world-factbook/countries/honduras
[4] World Bank (2020). Poverty & Equity Brief Honduras Latin America & the Caribbean April 2020. Available at: https://databank.worldbank.org/data/download/poverty/33EF03BB-9722-4AE2-ABC7-AA2972D68AFE/Global_POVEQ_HND.pdf
[5] Word Bank (2021). Population, total – Honduras https://data.worldbank.org/indicator/SP.POP.TOTL?locations=HN
[6] Rural poverty in Honduras. Available at: https://www.ifad.org/documents/38714170/39972349/Enabling+poor+rural+people+to+overcome+poverty+in+Honduras.pdf/d927f174-d4f4-4401-b0db-cdcb357f02c4?t=1517243260000
[7] Indoor air pollution kills more people each year than malaria and causes almost as many deaths as unsafe water and sanitation. In traditional wood burning stoves, wood fuel emits substantial amounts of 26 hazardous air pollutants. Fine respirable particles less than 2.5 microns can penetrate deep into the lungs. These compromise the body's defense systems and its ability to filter and remove toxic particles. Women and children are the most harmed by inefficient stoves because they do most of the cooking. Because women also care for the children, the children also suffer a high level of exposure. Indoor air pollution also has an effect on unborn children similar to smoking during pregnancy. https://www.who.int/en/news-room/fact-sheets/detail/household-air-pollution-and-health
[8] MacCarty, Bond, Still and others, Laboratory Comparison of the Global-Warming Potential of Six Categories of Biomass Cooking Stoves, Aprovecho Research Center 2007. Page 15. The document can be found in the following link (opened on 16 June 2022): https://www.betuco.be/stoves/Global_warming_full_9-6-07.pdf
[9] WHO Indoor Air Quality Guidelines: Household Fuel Combustion Review 4: Health effects of household air pollution (HAP) exposure. Document available on the following link (open on 16 June 2022): https://www.who.int/publications/m/item/who-indoor-air-quality-guidelines-household-fuel-combustion

Proyecto Mirador began building stoves in 2004 with the objective of reducing respiratory illness caused by inhalation of toxic wood smoke[10] from cookfires. Proyecto Mirador began operation as a Gold Standard project under a stand-alone PDD limited to Honduras. In 2014 the project in Honduras was upgraded to a PoA, with the original Honduras project included as the first VPA. During subsequent years the first VPA has continued the same project activity under a Gold Standard PoA utilizing the Technologies and Practices to Displace Decentralized Thermal Energy Consumption (TPDDTEC) methodology.

*Baseline scenario for the VPA crediting period renewal*

The baseline scenario stove is identified as a relatively high-emission traditional fogon stove, usually with no chimney or grate. In some cases, the traditional fogon stove may include a chimney or grate, but typically those are not designed to optimize the fuel consumption and, in all cases, lack proper structural design (no rocket combustion chamber, nor efficient air flow).

All the households (100%) included in the baseline survey use firewood as the main fuel for cooking.[11] The weighted average use of the traditional fogon was calculated with a result of 7.42 hours of use per day. Thus we conclude that the baseline scenario identified is the same as defined originally for the programme.

The baseline scenario reflects that each household uses a traditional fogon stove prior to becoming a project beneficiary and assumes that installation of the new improved stove has not yet occurred. The baseline is defined based on the assumption that, in the absence of Mirador's activity, all households in the community would continue to utilize the traditional fogon. The stoves are installed progressively during the crediting period.

[10] World Health Organization (2022), Household air pollution and health. Available: https://www.who.int/news-room/fact-sheets/detail/household-air-pollution-and-health

[11] In some cases, households report the use of electric or gas stove. Please refer to Section B.4 for further details.

Changes in the baseline scenario during the crediting period for this VPA are not expected by the project participants, for the following reasons:

- The direct fire traditional fogon model of stove is common to prevalent throughout the PoA project area.
- Current demand in the project area among fogon users far exceeds Proyecto Mirador's performance capacity and Mirador does not expect to run out of potential beneficiaries under this baseline scenario.
- Abject poverty in the rural sector is prevalent and Proyecto Mirador will continue to serve the poorest, rural areas of Honduras.

Since the baseline social, economic, and environmental conditions are not likely to consistently improve during the crediting period, a fixed baseline will be used for the duration of the crediting period.

*Project Implementation Modality*
Based on the experience of this First VPA, the stoves are highly successful from the perspective of health improvement and wood savings. Though the years, Proyecto Mirador has had tremendous grassroots support spread through word-of-mouth endorsements by local government, community leaders, religious organizations, and stove users.

Proyecto Mirador's Dos por Tres improved cookstove (ICS) technology is implemented for household applications. According to the eligible project types available under the Gold Standard, this project is classified as Community Service, End-user Energy Efficiency Improvement, defined as the reduction in the amount of energy required for delivering or producing non-energy physical goods or services.

Proyecto Mirador does not charge cash to install the Dos por Tres Improved Cookstove. The project supplies the main components of the stove including the steel plancha (cooktop), aluminium chimney, parilla (steel grill support for firewood), steel cleaning device ("El Cinco"), ceramic parts, ID plaque, Usage and Maintenance brochure, and skilled labor force. As counterpart, the project beneficiaries are required to prepare a fixed base for the stove and to contribute some materials for the stove construction including cement or adobe, gravel, steel wire, empty reused can and ashes.

Stoves are built in situ and a unique household account is created in the electronic database at the time of construction, including a GPS mark, so that if there is another similar activity within the same target area, stoves from the other project cannot possibly be counted under Mirador's activity. Likewise, Mirador stoves are not portable, so they cannot be confused with stoves disseminated by another project.

The project operates under the premise of "No Cuesta No Cuida" ("if it doesn't cost, it isn't cared for"). The contribution of time and materials made in kind by the end-users enhance that premise. The financial model of the project relies on carbon offsets.

The objective is to perpetuate and expand a successful improved cookstove project that utilizes carbon finance to provide a market-based solution that addresses the problems of deforestation, indoor air pollution, global warming and slow economic development in the poor, rural communities of Honduras. The project monetizes certified carbon savings to accelerate the dissemination of fuel-efficient stoves in rural Honduras where degraded conditions of forests, indoor air pollution and rural poverty exceed acceptable levels.

Long-term and stable funding does not exist for the significant expansion of stove distribution. Relying on donor support is not a viable long-term option. Carbon finance is a realistic source of sustainable funding that enables the enhanced distribution of cookstove stoves to continue. Proyecto Mirador utilizes carbon finance to provide a market-based solution that addresses the problems of deforestation, indoor air pollution, global warming and slow economic development in the poor, rural communities of Honduras. Proyecto Mirador markets Gold Standard carbon credits from verified reductions to provide long-term, sustainable funding.

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

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Table 2 Eligibility for VPA inclusion as per PoA requirements

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

| | | | for inclusion |
|---|---|---|---|
| 1 | Project Boundary and VPA Location | VPA shall involve the distribution of ICS within the geographical boundary of Host Countries defined in the PoA | VPA clearly states VPA project boundary under Section A.2, "Location of VPA", and VPA project boundary falls within PoA project boundary. VPA project boundary is Honduras, which falls within PoA project boundary.<br><br>Stoves are built in situ and a unique household account is created in the electronic database at the time of construction, including a GPS mark. GPS markings are kept for each stove installed and available to VVB for verification to ensure all stoves are within VPA project boundary. |
| 2 | Avoid double counting | VPA shall apply a unique identifier to each cookstove installed and apply routine data checks and other management protocols that ensure double counting is avoided. | Stoves are built in situ and a unique household account is created in the electronic database at the time of construction, including a GPS mark, so that if there is another similar activity within the same target area, stoves from the other project cannot possibly be counted under Mirador's activity. Likewise, Mirador stoves are not portable, so they cannot be confused with stoves disseminated by another project.<br>Electronic database is available to VVB for verification containing individual records for each stove, each with a unique identifier automatically generated by database. |
| 3 | Start date | The start date of each VPA shall be the first date of stove construction. | Start date of VPA: 01/05/2009<br><br>Start date of 3rd crediting period (last renewal): 01/05/2023<br><br>All stove installations are individually tracked on an electronic database that is available to VVB for validation. |
| 4 | Methodology | VPA uses approved Gold Standard Methodology Technologies and Practices | VPA states methodology used under Section B.1, under "Reference of approved |

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| | | to Displace Decentralized Thermal Energy Consumption, Version 4.0. | methodology (ies).” This VPA renewal utilizes Gold Standard Methodology Technologies and Practices to Displace Decentralized Thermal Energy Consumption, Version 4.0<br><br>Other methodological tools applied:<br>• CDM tool for the Demonstration and Assessment of Additionality, version 7.0.0<br>• GS Cookstove Usage Rate Guidelines, Version 2.0<br>• Guideline CDM Sampling and surveys for CDM project activities and programmes of activities, version 4.0.<br><br>Applicable requirements of methodology are articulated in Section B.2, “Applicability of methodology (ies)” and documented throughout VPA. Updated baselines scenario are articulated in Section B.4, “Establishment and description of baseline scenario”; and other regulatory documents documented throughout VPA. |
| 5 | Additionality | VPA must demonstrate that the project meets additionality requirements of the Gold Standard. | This VPA demonstrates additionality using the CDM Tool for the demonstration of additionality, version 7.0.0., using Investment Barrier Analysis (Section B.5 “Demonstration of additionality”).<br><br>VPA demonstrates that in the absence of project activity, baseline conditions (installation of the traditional cookstove) would persist. |
| 6 | Local Stakeholder Consultation | VPA shall conduct a Local Stakeholder Consultation (LSC) that follows the GS LSC guidance. | This VPA held its LSC in 2008 in establishment of the PDD. Since 2012 separate community stakeholder meetings have been held in advance of stove construction in every single |

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| | | | village where stoves are built. This means Mirador has conducted numerous stakeholder meetings in all the Departments of Honduras where stoves are built, giving local government leaders, business owners, educators, beneficiaries and others the opportunity to learn about Mirador and voice any concerns. Stakeholder feedback is documented and Mirador responses are tracked on an ongoing basis. |
| 7 | Target group | VPAs shall target household or institutional users of inefficient biomass stoves. Beneficiaries may or may not include auxiliary non-biomass cookstoves to augment their cooking practices. | Kitchen surveys were conducted in 2007 (see Yale 2007 Report), in 2012 (see Third Verification Report), and in 2022 (see Baseline Report VPA1 Renewal) confirming target users are household users of inefficient biomass stoves. Mirador verifies, before installation, that each stove user is a household user of a traditional fogon. |
| 8 | Ownership of ER credits | VPA shall be developed and implemented by the CME. In case contracted entities are retained to manage future VPAs, the contractual agreements between each partner and the CME will clearly establish ownership of emission reduction credits generated through the PoA as belonging to the CME. VPA shall clearly communicate to all end user beneficiaries, verbally and in writing, that the ownership of emission reductions shall reside with the CME. | This VPA is developed and implemented by the CME. This VPA is submitted directly by the CME to VVB for inclusion. VPA is managed by CME, so it is clear ERs are owned by CME.<br><br>Project beneficiaries are consistently informed that Proyecto Mirador owns all carbon credits issued as a result of emission reductions from all stoves installed. This is first articulated at the Community Meetings staged before stove construction begins in each area. Every home is visited prior to installation of a Dos for Tres stove, there the future beneficiary is advised of the requirements for their participation and participants are made aware of the carbon claims, then reiterated when beneficiaries are individually trained. The Mirador Use and Maintenance Brochure, which is given to stove beneficiaries after |

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| | stove installation, also includes a written statement of Proyecto Mirador's ownership of carbon credits, and the consent of all beneficiaries is required as a precondition to stove installation.<br><br>"By accepting a new stove from Proyecto Mirador, you agree that any reductions in $CO_2$ emissions created by the stove are the property of Proyecto Mirador." |

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

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All stove beneficiaries are clearly informed that Proyecto Mirador owns all carbon credits issued as a result of emission reductions from all stoves installed. The consent of the stove beneficiary is required as a precondition to stove installation. This carbon credit ownership is explained and articulated to the stove beneficiaries as follows:

- Before installation, during the community meeting Proyecto Mirador conducts in each village prior to starting construction; and/or during the house-to-house visit prior to starting construction.
- During installation, when stoves beneficiaries are individually trained in the use of the stove.
- After installation, Proyecto Mirador provides to each stove beneficiary a Usage and Maintenance brochure which also includes a written statement of Proyecto Mirador's ownership of carbon credits which reads as follows (see below) (English translation): "By accepting a new stove from Proyecto Mirador, you agree that any reductions in $CO_2e$ emissions created by the stove are the property of Proyecto Mirador."

## A.2. Location of VPA

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The host country is Honduras.

The entire country of Honduras is considered as the project area.


Figure 1: Project Area, Honduras

## A.3. Technologies and/or measures

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Proyecto Mirador's Dos por Tres improved cookstove (ICS) technology is implemented for household applications.

The Dos por Tres stove uses rocket stove technology to optimize the cooking temperature across the plancha, or griddle. Fuel is burned in the rocket combustion chamber and an efficient draft is formed which spreads heat across the plancha and vents the smoke out of the house through the chimney.

The Dos por Tres maximizes the reduction of greenhouse gas emissions through its efficient design and structural improvements. Compared to other alternative stoves, the Dos por Tres Stove is, at the same time, the most effective substitute, and easily assimilable as a replacement for the traditional stove.

Figure 2: Traditional fogon stove vs. New Dos por Tres stove

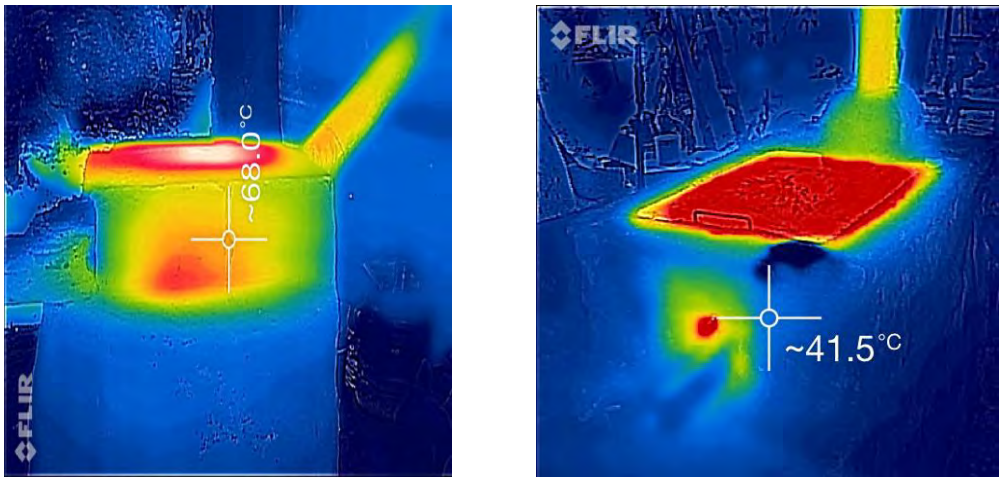


Figure 3: Traditional fogon vs. Dos por Tres under thermal Flir® camera

Life span has been proven since the original project registration in 2009. Stoves have been found in use and in good working condition after 10 years. As a conservative measures, all stoves are eliminated from the emission reduction calculations after the seventh year in use. During all the stove lifetime, the stove aging, and the drop-off rate for all the age groups are accounted.

## A.4. Scale of the VPA

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The PoA has been registered as a large-scale programme. This First VPA adheres to the same scale.

The project is considered large scale activity since the aggregated energy savings of the project activity exceeds 60 GWh per year or 180 $GWh_{thermal}$ per year in fuel input.

## A.5. Funding sources of VPA

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Long-term and stable funding does not exist for the significant expansion of stove distribution. Relying on donor support is not a viable long-term option. In the long run, carbon finance is a realistic source of sustainable funding that enables the enhanced distribution of cookstove stoves to continue. Mirador markets Gold Standard carbon credits from verified reductions of unsustainably harvested fuelwood in order

to provide long-term, sustainable funding.  Mirador's reliance on carbon offsets enables the project to serve the poorest of the poor.

The project location is Honduras, which is a country listed on the OECD Development Assistance Committee's ODA recipient list. The project previously submitted the Official Development Assistance (ODA) Declaration form.

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

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

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The methodology applied by the PoA is: 'Technologies and Practices to Displace Decentralized Thermal Energy Consumption', Version 4.0.[12] This is the latest version available at the time of renewal. This methodology is suitable for the project activities included in the program, in which low-emission cook-stoves and regimes (Dos por Tres stoves) replace relatively high-emission baseline scenarios (traditional fogon stoves). The baseline is defined based on the assumption that in the absence of Proyecto Mirador activity, all households in the community would continue to utilize the baseline stove. Their fuel consumption is defined in the KPT and applicable to the entire population. A standardized baseline is not employed.

The methodology states, under "Section 2.1 | Scope" the following:

*This methodology is applicable to project activities that introduce technologies and/or practices that reduce or displace greenhouse gas (GHG) emissions from the thermal energy consumption of households and/or residential, institutional, industrial, or commercial facilities. Throughout the methodology the term 'technology' should be read as the single or multiple technologies and/or practices applied in the project activity. Refer to Table 1 for examples of applicable technologies and practices.*

Under "Table 1: Examples of applicable technologies and practices" mentions "Improved biomass cookstoves" as an applicable technology. For this technology type, the applicable calculation methods are numbers 1 and 2.

Other methodological tools and guidelines applied:

[12] https://globalgoals.goldstandard.org/407-ee-ics-technologies-and-practices-to-displace-decentrilized-thermal-energy-tpddtec-consumption/

- CDM Tool for the Demonstration and Assessment of Additionality, version 7.0.0[13]
- CDM TOOL30 Methodological tool. Calculation of the fraction of non-renewable Biomass, version 04.0[14]- GS Cookstove Usage Rate Guidelines, Version 2.0[15]
- Guideline sampling and surveys for CDM project activities and programmes of activities, version 4.0.[16]

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

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The table below discusses how the applicability conditions of the Methodology are met by Mirador.

| **Methodology's Eligibility Criteria** | | | |
|---|---|---|---|
| **Paragraph** | **Criterion** | **Description** | **Means of Verification** |
| § 2.2.1 (a) | Project shall choose a technology design that has predictable performance in that it is proven to be efficient and durable under field conditions; for cookstoves, the rated thermal efficiency shall be at least 20% | The single stove model Dos por Tres used in the project activity can reduce fuel consumption by nearly 50%in comparison with a traditional fogon. The stove design efficiency of the Dos por Tres was tested by Aprovecho Research Centerincluding: fuel use and emissions of carbon dioxide, carbon monoxide, particulate matter, methane, and nitrous oxide measurements | Technical report from qualified 3rd party. MacCarty, Still, '*Results of Testing the Overlook Foundation Justa Stoves Including the "2 By 3" Stove: Fuel Use and Carbon Emissions And Analysis of Carbon/$CO_2$eq Savings'*, Aprovecho Research Center, April 2009.[17] |

[13] https://cdm.unfccc.int/methodologies/PAmethodologies/tools/am-tool-01-v7.0.0.pdf
[14] https://cdm.unfccc.int/methodologies/PAmethodologies/tools/am-tool-30-v4.0.pdf
[15] https://globalgoals.goldstandard.org/407g-ee-ics-tpddtec-usage-guidelines/
[16] https://cdm.unfccc.int/sunsetcms/storage/contents/stored-file-20151023152925068/Meth_GC48_%28ver04.0%29.pdf
[17] Testing methods and more details are available in the Aprovecho 2x3 Report, April 28th, 2009. Document provided to the VVB.

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| | | including comparison tests vs the traditional stove. | |
| § 2.2.1 (b) | The technology shall have continuous useful energy output of less than 150kW per unit, where "continuous useful energy output" is defined above | Each stove installed has continuous useful energy output of less than 150kW per unit.<br>The firepower of the Dos por Tres model is in the range of 4-7 kw, corresponding to low and high firepower. | Technical report from qualified 3rd party.<br>MacCarty, Still, '*Results of Testing the Overlook Foundation Justa Stoves Including the "2 By 3" Stove: Fuel Use and Carbon Emissions and Analysis of Carbon/$CO_2$eq Savings'*, Aprovecho Research Center, April 2009. |
| § 2.2.1 (c) | The project activity is implemented by a project developer and can include additional project participants listed in Appendix 2 of the PDD template. The individual households and institutions may be represented collectively by community organizations, etc., but do not individually act as project participants. | The single entity involved in the VPA is Proyecto Mirador LLC. | See description of Project Participants in Appendix 2. |
| § 2.2.1 (d) | The project developer must design incentive mechanism(s), which should be effective as fast as possible, for the elimination of inefficient baseline stoves that are replaced by the project cooking devices and describe the incentive mechanism(s) in the PDD/VPA-DD at the time of validation. | As a precondition for the installation of the Dos por Tres, beneficiaries are required to remove the traditional stove that is being replaced. Beneficiaries are made aware of the requirement to remove the traditional cookstove at the time they sign up to receive the stove. Also, during Mirador's training exercises, Stove Technicians require the | Project Brochure excerpt "Requirements and Materials for the construction of Dos por Tres Stove" (see Figures 4, 5, 18 and 19 below).<br><br>Mirador's supervisors are trained to perform follow-up visits to a household post-installation. This training includes the check on removal of the traditional |

| | | | |
|---|---|---|---|
| | | beneficiary to remove the traditional stove. Every time a Supervisor performs a follow-up visit to a household post-installation, the Supervisor enters basic data related to stove condition and maintenance and verifies user information. That data is entered using a handheld device and is used by Mirador Supervisors and Ejecutores[18] to schedule additional training or repairs, if needed, and to streamline operations. At that time, the Supervisor checks to verify the traditional fogon has been destroyed and records the result, making a note on the account to follow up if that has not yet happened. | fogon, maintenance training and reminder of the benefits of using the Dos por Tres. See training material 'Guia para la selección y preparacion de tecnicos - Proyecto Mirador 2019.pdf'. |
| § 2.2.1 (e) | To avoid double counting or double claiming, the project developer must:<br>i. clearly communicate its ownership rights and intention of claiming the emission reductions resulting from the project activity to the | i. VPA 1 for Honduras is managed by the CME. There are no contracted entities that would require agreement on emission reduction ownership.<br>There are no other participants than Proyecto Mirador. | All stove beneficiaries are clearly informed that Proyecto Mirador owns all carbon credits issued as a result of emission reductions from all stoves installed. The consent of the stove beneficiary is required as a |

[18] The ejecutores main responsibilities are to build the requisite number of stoves to the quality established by the Director of Operations, organize and execute community outreach and training of beneficiaries, and monitor the work of stove installations.

| | | | |
|---|---|---|---|
| | following parties by contract or clear written assertions in the transaction paperwork: all other project participants; project technology manufacturers; and retailers of the project technology or the renewable fuel in use; and<br>ii. inform and notify the end users that they cannot claim emission reductions from the project, and<br>iii. exclude from the project activity, cooking devices included in any other voluntary market or CDM project activity/PoA, and strive not to displace the cooking devices of another CDM or voluntary project/PoA. See data and parameters not monitored, Avoidance of double counting or double claiming with other mitigation actions, for details on this demonstration. | Project technology is built directly by Proyecto Mirador.<br>ii. No retailers of project technology are involved. All stove beneficiaries have been clearly informed of Proyecto Mirador's ownership of the carbon savings from each stove. To accomplish this, Mirador distributes a Use & Maintenance Manual to each stove beneficiary at the time of stove construction. The Use & Maintenance Manual includes a statement regarding rights to ownership of emission reductions, which reads as follows (English translation): "By accepting a new stove from Proyecto Mirador, you agree that the $CO_2$ reductions created by the stove are the property of Proyecto Mirador." (see Figure 5 below). This caveat is also explained at the community meetings Mirador conducts in each village prior to starting construction.<br><br>Stoves are built in situ and a unique household account is created in the electronic database at the time of construction. A Supervisor visits each home before | precondition to stove installation. This carbon credit ownership is explained and articulated to the stove beneficiaries before, during and after installation. See section A.1.2 above.<br><br>Mirador conducts extensive surveys to determine the prevalence of cases where carbon certified stove project has installed an ICS in homes where the Dos por Tres was already present, and the results are tabulated in Parameter ID 9 - Leakage. The emission reductions from double counting are deducted as part of the leakage emissions. |

| | | | |
|---|---|---|---|
| | | construction can begin and at that time, verifies that improved cookstove technology is not already present and that a traditional fogon is the primary cooking unit. While Mirador never builds cookstoves in homes where another ICS is in current use, we do see cases in which another carbon certified stove project has installed an ICS in homes where the Dos por Tres was already present. | |
| § 2.2.1 (f) | Project activities making use of solid fossil fuel in the project scenario or other improved fossil fuel cookstoves meeting certain conditions described in the footnote to Table 1 (e.g. switch from three-stone fire biomass stoves to LPG stoves) may only claim emission reductions for energy efficiency improvement aspect and shall assume the same baseline and project fuel for emission reduction calculations. | Project activity does not make us of solid fossil fuel in the project scenario or other improved fossil fuel cookstoves. All households included use firewood as the main fuel for cooking, and this is a requirement for participating in the project. This criterion is not applicable. | NA |
| § 2.2.1 (g) | Project activities making use of a new solid biomass feedstock in the project situation (e.g. switch to green charcoal or renewable biomass briquettes) must comply with relevant specific requirements | Project activity does not make use of a new biomass feedstock in the project scenario, so the "g." applicability condition does not apply to Mirador. | NA |

| | | | |
|---|---|---|---|
| | for biomass related project activities, as defined in the latest version of the Community Services Activity Requirements. The specific requirements apply to both plantations established for the project activity and/or existing plantations that will supply biomass feedstock. | | |
| § 2.2.1 (h) | Adequate evidence is supplied to demonstrate that indoor air pollution (IAP) levels are not worsened compared to the baseline, and greenhouse gases emitted by the project fuel/stove combination are estimated with adequate precision. Furthermore, for projects where cooking will move from outdoor to indoor or where the project technology reduces ventilation (for example, changing from a stove with chimney to improved stove with no chimney), indoor air pollution (IAP) levels shall not worsen in the project compared to the baseline, including PM 2.5 and carbon monoxide (CO) emissions. This may be demonstrated before project Design Certification or during project operation using the certification resulting from of a manufacturer's test, | Lab and field testing of baseline and project scenario stove types to quantify the reduction of harmful indoor pollution emissions of PM 2.5 and Carbon Monoxide (measurements include both ambient emissions and personal exposure).<br><br>Proyecto Mirador made measurement of the reduction of personal exposure to PM2.5 (as opposed to the overall reduction to PM2.5) resulting from cookstove intervention.<br><br>Exposure to PM2.5 was measured in real-life control and intervention households using a HAPEx Nano light scattering nephelometer. This device provides real time readings on PM2.5 and takes a new measurement every minute. It was worn by study | Technical report from qualified 3rd party.<br>See Lefebvre, Olivier, "Health Impact of Proyecto Mirador Dos por Tres Stove" (2018) |

| | | | |
|---|---|---|---|
| | report of field testing of the technology's PM 2.5 and carbon monoxide (CO) emissions, report of lab testing of the technology, or results of modelling of the technology's operation under field conditions. If none of these are available, reference from published literature or report by independent agencies may be used as evidence, provided it is not more than 5 years old.<br>To make claims on SDG 3.9.1 contributions, the project developer may apply the Gold Standard Methodology to Estimate and Verify ADALYS from Clean Household Air. | participants in control and intervention groups during a 48-hour period.<br>The study revealed a reduction of 47% to exposure to PM 2.5 brought by the project.<br>Due to the cost and complexity of such studies, PP will maintain original monitored figures unless it is determined that baseline or project conditions have materially changed or testing methodologies and/or assessment equipment have improved, in which case PP may opt to further assess the parameter. | |

The Project brochure "Requirements and Materials for the construction of Dos por Tres Stove" (excerpt, see Figure 4 below) states clearly that removal of the traditional fogon is a requirement for the construction of the project stove (English translation): "In order to have a Dos por Tres you should 3. Permanently destroy the traditional fogon right before the Dos por Tres stove is built.".


Figure 4. Project brochure where requirements to build a stove are explained.

The excerpt below from the Use & Maintenance Manual indicates the acceptance of carbon rights transfer to Proyecto Mirador.


Figure 5. Carbon rights waiver statement

## B.3. VPA boundary

>>

The project boundary includes the physical site where the baseline and project cookstoves are installed, as well as the fuel collection area as described in the section A.2 above.

The project and target boundary are defined as the geo-politic territory of Honduras.

The following diagram physically delineates the project boundary:

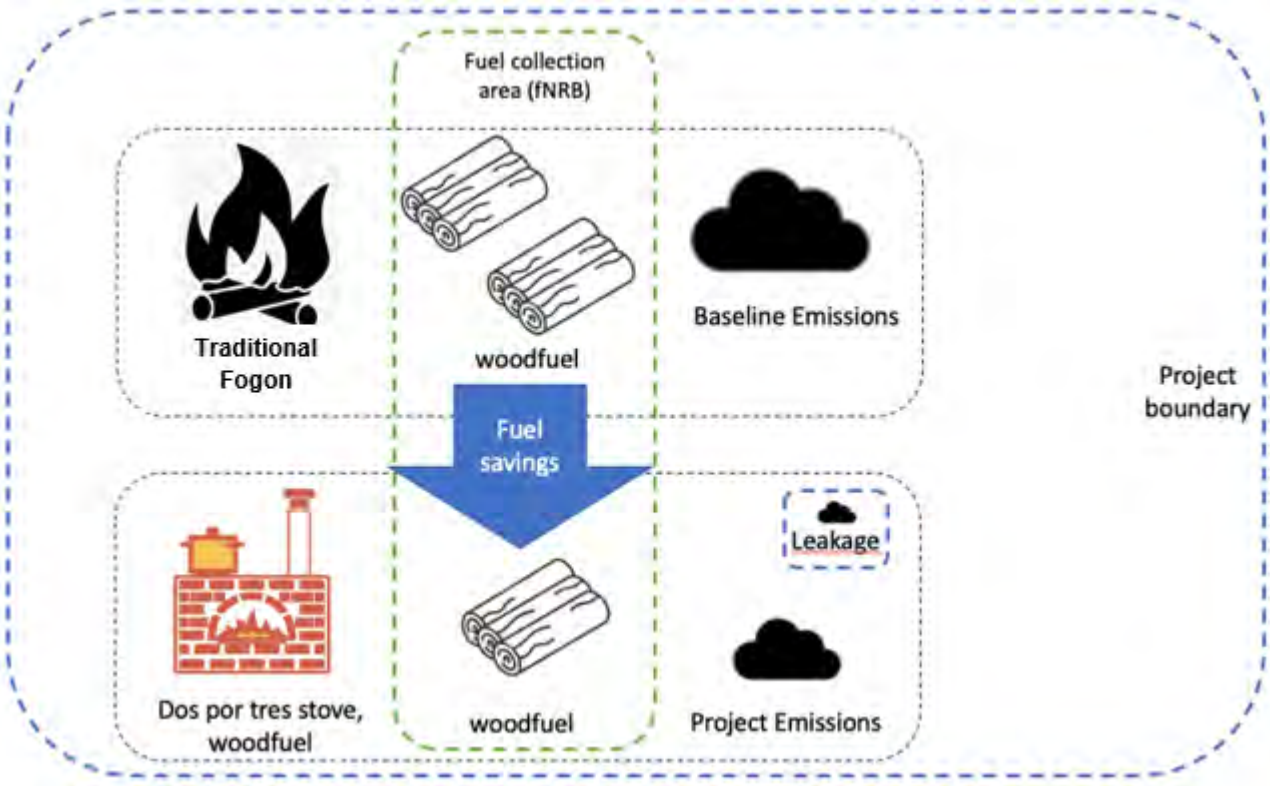


Figure 6. Flow diagram of the Project boundary

| Source | | GHGs | Included? | Justification/Explanation |
|---|---|---|---|---|
| Baseline scenario | Open fire for cooking (fogon) | $CO_2$ | Yes | Main emission source |
| | | $CH_4$ | Yes | Relevant source of emissions |
| | | $N_2O$ | Yes | Relevant source of emissions |
| Project | Open fire for cooking | $CO_2$ | Yes | Main emission source |
| | | $CH_4$ | Yes | Relevant source of emissions |

| | | | | |
|---|---|---|---|---|
| | (fogon) | $N_2O$ | Yes | Relevant source of emissions |

VPA is confined to Honduras, located within the geographical boundary of the registered PoA.

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

>>

### Baseline Stove

The baseline stove is identified as a relatively high-emission traditional fogon stove, usually with no chimney or grate. In some cases, the traditional fogon stove may include a chimney or grate, but typically those are not designed to optimize the fuel consumption and, in all cases, lack proper structural design (no rocket combustion chamber, nor efficient air flow). The different types of inefficient baseline stove models are described below in line with the baseline survey.

The tables and figures below summarize the results of the baseline survey carried out. The existing technology and fuel consumption patterns from the target population is summarized below.

| Type of baseline stoves | |
|---|---|
| Direct Fire | 45 |
| Other | 0 |
| Improve Cookstove* | 6 |
| Disc plate stove (Fogón con plancha de discos) | 2 |
| Plancha, or griddle | 252 |
| Total | 305 |

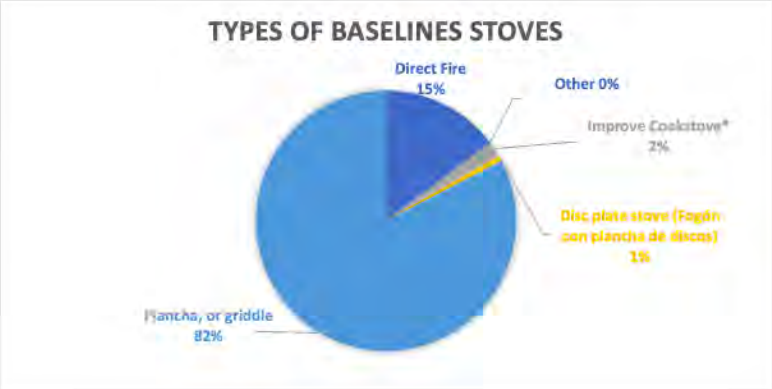


Figure 7. Baseline Survey Results, Type of baseline stove.
(*the users of improved cookstove indicated the stove was in bad shape)

| Structure of Direct Fire Fogonoges | |
|---|---|
| Adobe type "U" o Horseshoe shape | 19 |
| Three stones (cinder blocks or bricks) | 23 |
| Metal Barrel | 3 |
| Total | 45 |

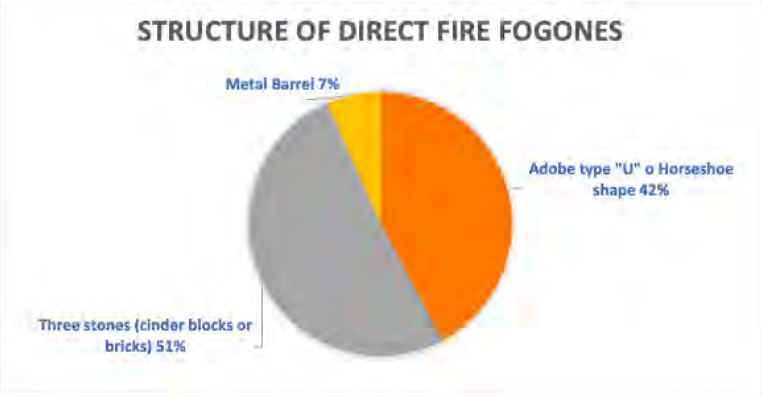


Figure 8. Baseline Survey Results, Structure of direct fire fogones

| Structure Disc plate stove (Fogón con plancha de discos) | |
|---|---|
| With chimney | 1 |
| No chimney | 1 |
| Total | 2 |


Figure 9. Baseline Survey Results, Structure of disc plate stoves

| Structure traditional fogon Plancha, or griddle | |
|---|---|
| Traditional fogon with chimney | 207 |
| Adobe type "U" o Horseshoe shape | 15 |
| Three stones (cinder blocks or bricks) | 30 |
| Total | 252 |

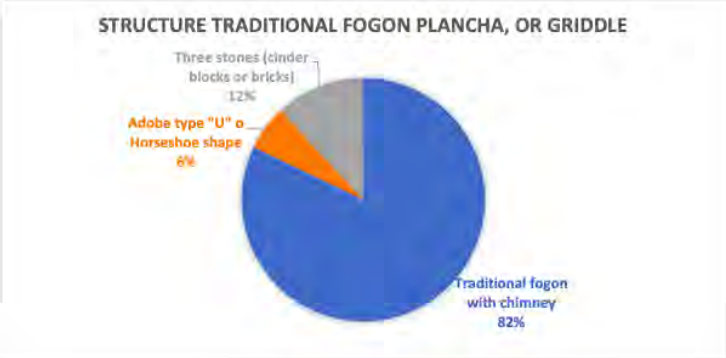


Figure 10. Baseline Survey Results, Structure of traditional fogon plancha or griddle

All the households (100%) included in the baseline survey use firewood as the main fuel for cooking. This is a requirement for participating in the project. In some cases, households report the use of electric or gas stove (see figure 11 below). In those

cases, the survey included additional questions to identify the purpose and use intensity (see figures 12 and 13).

| Do you have other type of stove? | |
|---|---|
| Traditional fogon and LPG | 99 |
| Traditional fogon amd Electric | 43 |
| Only Traditional fogon | 163 |


Figure 11. Stove stacking

| What do you use the Electric stove for? | |
|---|---|
| Heating water (coffee) | 24 |
| Cooking | 2 |
| Cooking; re-heat meals | 2 |
| Cooking; re-heat meals; heating water (coffee) | 1 |
| I don't use it | 1 |
| Re-heat meals | 1 |
| Re-heat meals heating water (coffee) | 12 |
| Total | 43 |

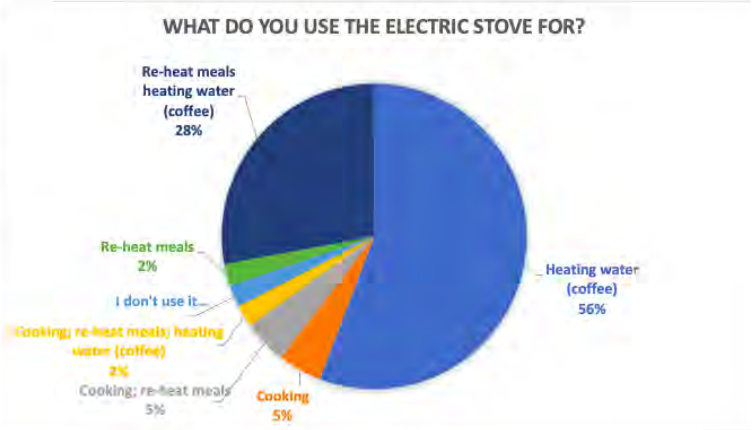


Figure 12. Specific use purpose of the electric stove.

| What do you use the Gas stove for? | |
|---|---|
| Heating water (coffee) | 46 |
| Cooking | 23 |
| I don't use it | 4 |
| Re-heat meals | 26 |
| Total | 99 |

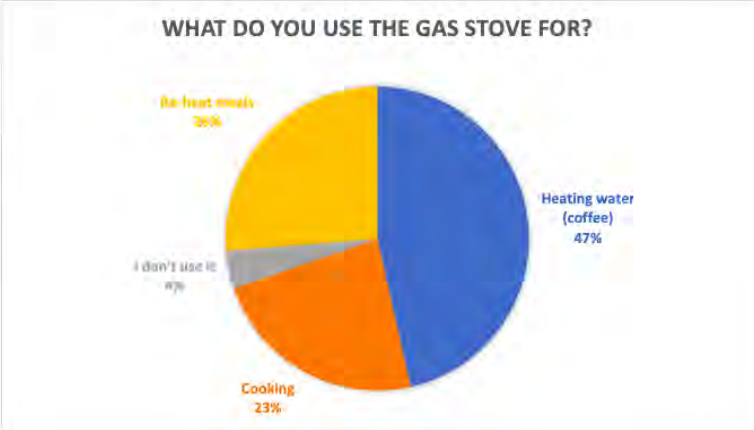


Figure 13. Specific use purpose of the electric stove.

The majority of the interviewees reported the use of the stove for simple and quick activities, mostly heating water for preparing coffee or reheating meals. Only a few reported using the electric or gas stove for cooking.[19]

In order to assess the intensity of use, the baseline survey included questions to determine the duration of use of electric and gas stoves. The figures below provide details on how long those stoves are used.

| How long per day do you use the electric stove? | |
|---|---|
| 11-15 minutes | 1 |
| 16-20 minutes | 15 |
| 26-30 minutes | 1 |
| 5-10 minutes | 11 |
| Less than 5 minutes | 15 |

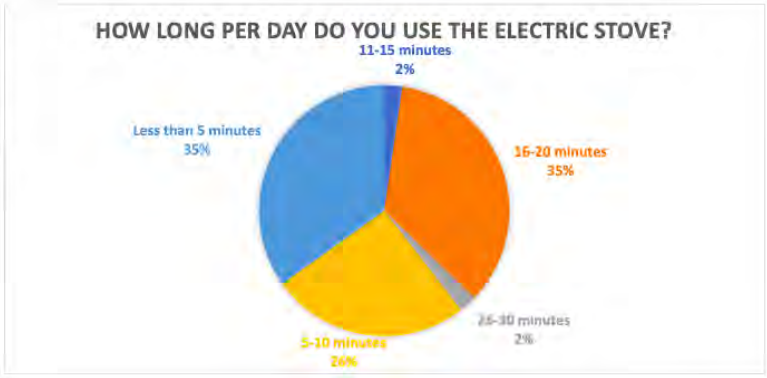


Figure 14. Duration of use, Electric stove

| How long per day do you use the gas stove? | |
|---|---|
| 11-15 minutes | 16 |
| 16-20 minutes | 10 |
| 21-25 minutes | 5 |
| 26-30 minutes | 13 |
| 5-10 minutes | 34 |
| Less than 5 minutes | 21 |

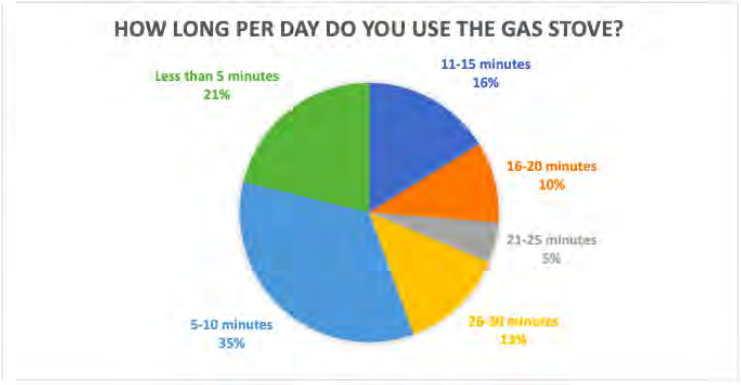


Figure 15. Duration of use, LPG stove

[19] These cooking activities are in combination with the traditional fogon; therefore, it is clear, electric or gas stove are not used as main device for cooking. See more information about time of use of these type of stoves in figures 14 and 15.

As can be seen, the duration of use reported (always less than 30 minutes) are coherent with the purpose of use identified (heating water; re-heating meals) above.

In order to corroborate that the traditional fogon is the main device for cooking, the baseline survey asked how long people use the traditional fogon per day (see figure 16).

| How long per day do you use the traditional fogon? | |
|---|---|
| 3 Hours | 19 |
| 4 Hours | 7 |
| 5 Hours | 25 |
| 6 Hours | 68 |
| 7 Hours | 33 |
| 8 hours | 30 |
| 9 hours | 95 |
| 10 hours | 10 |
| 11 hours | 3 |
| 12 hours | 12 |
| 13 hours | 1 |
| 14 hours | 1 |
| 15 hours | 1 |


Figure 16. Duration of use, traditional fogon

From the figure 16 above, the weighted average use of the traditional fogon was calculated with a result of 7.42 hours per day. In comparison with the time of use from electric and gas stoves, it is clear that people intensively use the traditional fogon as the main device for cooking. The CME concluded the baseline scenario identified is the same as defined originally for the programme.

The baseline survey also includes the collection of the following fields:

- Address (town and GPS coordinates)
- Mobile/land line (whenever available)
- Government ID[20]
- Number of people served by baseline technology

[20] Proyecto Mirador has implemented a digitized system in which Government IDs are scanned thorough a phone's camera, and the information is retrieved automatically to a data base. This increases the confidence level and decreases the human error that used to come from manually typing the information.

- Frequency of use of baseline technology
- Other technology in use (electric or gas stoves)
- Sources of fuel
- Baseline stove picture
- Location of the baseline stove (kitchen, outside, etc.)
- Uses for space heating
- Specific uses (e.g., roast corn, coffee, food for selling, etc.)
- Impressions about baseline stove (like/dislike)
- Fuel collection including frequency, time spent, person in charge

Figure 17: Traditional *fogon* stove

**Project Implementation Modality**

Proyecto Mirador does not charge cash to install the Dos por Tres improved cookstove. The project supplies the main components of the stove including (see Figure 18): the steel plancha (cooktop), aluminium chimney, parilla (steel grill support for firewood), steel cleaning device ("El Cinco"), ceramic parts, ID plaque, use and Maintenance brochure, and skilled labour force. As counterpart, the project beneficiaries are required to prepare a fixed base for the stove and to contribute some materials for the stove construction including (see Figure 19): cement or adobe, gravel, steel wire, empty reused can and ashes.


Figure 18. Components supplied by Proyecto Mirador


Figure 19. Materials provided by the beneficiary

Stoves are built in situ and a unique household account is created in the electronic database at the time of construction, including a GPS mark, so that if there is another similar activity within the same target area, stoves from the other project cannot possibly be counted under Mirador's activity. Likewise, Mirador stoves are not portable, so they cannot be confused with stoves disseminated by another project.

The project operates under the premise of "No Cuesta No Cuida" ("if it doesn't cost, it isn't cared for"). The contribution of time and materials made in kind by the end-users

enhance that premise. The financial model of the project relies on carbon offsets as explained in the VPA-DD.

**Target Area of the Baseline Survey (location where the surveys were carried out)[21]**

VPA1, Honduras, Departments (6):

- Colon (COL)
- Copán (COP)
- Cortés (COR)
- Lempira (LEM)
- Valle (VAL)
- Yoro (YOR)

Villages (40):

- Alta Cruz 2022.3 Jocón YOR
- Balfate 2022.5 Balfate COL
- Bañaderos o Guadalupe 2022.5 San Pedro Sula COR
- Buenos Aires de Bañaderos 2022.4 San Pedro Sula COR
- Campamento de Coninca El Plan Grande 2021.10 Santa Cruz de Yojoa COR
- Consumidero El Caral 2022.3 Gracias LEM
- El Cenizo 2022.5 Balfate COL
- El Coyolar 2021.10 San Juan de Opoa COP
- El Espino La Esperanza 2022.3 Caridad VAL
- El Junco La Laguna Negra 2021.10 San Juan de Opoa COP
- El Olvido Concepción 2021.10 Santa Cruz de Yojoa COR
- El Porvenir 2022.5 Balfate COL
- El Rodeo 2022.3 Gracias LEM
- El Sile 2022.3 Gracias LEM

[21] The specific location (Latitude & Longitude) of each survey taken can be found in the file 'Encuestas de Línea Base 2022 Honduras 02 Sep 2022.xlsx'.

- El Tablón La Esperanza 2022.3 Caridad VAL
- Goascorancito San Antonio 2022.5 Caridad VAL
- Hacienda El Cipres Concepción 2021.10 Santa Cruz de Yojoa COR
- Jagua Abajo Tapiquil 2022.3 Jocón YOR
- La Agüita Peña Blanca 2021.10 Santa Cruz de Yojoa COR
- La Arada San Antonio 2022.5 Caridad VAL
- La Barca 2021.10 Santa Cruz de Yojoa COR
- La Cebratana 2021.10 San Juan de Opoa COP
- La Misión 2022.3 Gracias LEM
- Laguna de Bañaderos 2022.4 San Pedro Sula COR
- Las Crucitas 2022.5 Balfate COL
- Las Flores 2022.5 Balfate COL
- Las Juntas de Bañaderos 2022.4 San Pedro Sula COR
- Las Lomitas Los Caminos 2021.10 Santa Cruz de Yojoa COR
- Las Marias 2021.10 Santa Cruz de Yojoa COR
- Lis Lis 2022.5 Balfate COL
- Los Caminos 2021.10 Santa Cruz de Yojoa COR
- Los Naranjos 2021.10 Santa Cruz de Yojoa COR
- Lucinda 2022.5 Balfate COL
- Macora 2022.3 Jocón YOR
- Peña Blanca 2021.10 Santa Cruz de Yojoa COR
- Piedra Colorada Alta Cruz 2022.3 Jocón YOR
- San Antonio 2022.5 Veracruz COP
- San José del Alto 2022.3 Gracias LEM
- San Lorenzo 2021.9 San Lorenzo VAL
- Santa Cruz De Yojoa 2021.10 Santa Cruz de Yojoa COR

**Survey date**

VPA1, Honduras: From 01/09/2021 to 31/05/2022

**Sampling and Data Collection Process**

The baseline survey included 305 samples for Honduras. The methodology indicates a minimum sampling size of 100 for group size higher than 1000. Although the final group size is not yet known because the project activity includes progressive

installation throughout the crediting period, the sample size for baseline surveys done is much higher than the minimum required by the methodology.

**Representativeness**

The selected households to participate in the baseline survey should meet the following requirements:

1) Must use a traditional fogon as main cooking method.
2) Attend the socialization meeting and project training and agree to perform the steps required on the projects stove maintenance program.
3) Permanently destroy the traditional fogon right before the Dos por Tres stove is built.
4) Agree to relinquish any rights to carbon credits generated by the installation of the stove.

These requirements ensure that the households are representative of the baseline target group of rural areas.

The data collection was performed in the field with mobile phones using the TaroWorks app, which transmits the inputs directly to the Salesforce.com database. The original and raw data are available upon request. For all the records, the data collected included ID, GPS coordinates, phone number, and a picture of the stove and the person surveyed.

The following information has been gathered for the project activity to determine the baseline scenario:

- Project non-renewable biomass (NRB)
- Baseline survey (PS) of target population characteristics
- Baseline Kitchen Performance Test. The results of the test will be made available on time for each verification.

The baseline scenario reflects that each household uses a traditional fogon stove prior to becoming a project beneficiary and assumes that installation of the new improved stove has not yet occurred. This scenario is captured by assessing fuelwood supply, consumption patterns and environmental behaviors among households that use traditional wood stoves. These data define the baseline situation, which we use to

characterize conditions that would prevail in the absence of the project activity. The baseline is defined based on the assumption that, in the absence of Mirador's activity, all households in the community would continue to utilize the traditional fogon. Their fuel consumption is defined in the Kitchen Performance Test, discussed separately, and is applied to the entire population. The stoves are installed progressively during the crediting period.

Changes in the baseline scenario during the crediting period for this VPA are not expected by the project participants, for the following reasons:

- The direct fire traditional fogon[22] model of stove is common to prevalent throughout the PoA project area.
- Current demand in the project area among fogon users far exceeds Proyecto Mirador's performance capacity and Mirador does not expect to run out of potential beneficiaries under this baseline scenario.
- Abject poverty in the rural sector is prevalent and Proyecto Mirador will continue to serve the poorest, rural areas of Honduras.

Since the baseline social, economic, and environmental conditions are not likely to consistently improve during the crediting period, a fixed baseline will be used for the duration of the crediting period.

## B.5. Demonstration of additionality

>>

As explained in section A.1, the project began operation as a Gold Standard project under a stand-alone PDD limited to Honduras. In 2014 the project in Honduras was upgraded to a PoA, with the project activity in Honduras included as the first VPA. During subsequent years the first VPA has continued the same project activity under the Gold Standard PoA, which was upgraded to TPDDTEC methodology in 2016.

[22] Direct fire stove traditional model with different structures including: Adobe-made "U" shape, three stone open fire, and barrel type. The full information about baseline stoves types is included in the Baseline survey report.

Proyecto Mirador continues to build the Dos por Tres stove model wherever similar baseline conditions exist within Honduras.

This VPA demonstrates additionality using Investment Barrier Analysis. Through the arguments below, VPA demonstrates that in the absence of project activity, baseline conditions (installation of the traditional cookstove) would persist.

The development and expansion of Mirador's stove project is dependent on the extra income from the sale of carbon credits that will be generated once carbon certification from the Gold Standard is secured. Without an external revenue stream from selling carbon credits, the entire enterprise is deeply cash flow negative and would eventually halt due to lack of funds.

The VPA demonstrates additionality using the CDM Tool for the demonstration of additionality, version 7.0.0.

**Step 1. Identification of alternatives to the project activity consistent with current laws and regulations**

***Sub-step 1a. Define alternatives to the project activity***

There are two realistic and credible alternatives to the proposed project activity:

Alternative A: Continue cooking on the fogon stove. No investments needed.

Alternative B: Implementation of the project without GS VER revenues.

The alternative of implementing the project under a sales-based approach was not considered due to fundamental differences with the proposed project activity. The significant difference between other ICS projects observed in the host countries and the project proposed is that Proyecto Mirador does not sell the stoves. The project's beneficiaries contribute 'in kind' with some materials but no payments take place. Proyecto Mirador serves mostly the poorest areas where the average income is

US$67[23] a month, with the total cost per stove of US$130 (US$100 cost per stove + US$30 beneficiaries 'in kind' input) the sales model would not be affordable; this besides their lack of awareness of the cost of indoor air pollution and the dangers of deforestation and global warming. Given this substantial difference, any comparison against a sales-based project would not be applicable. Although other ICS projects may provide a similar service for cooking needs, from the investors' point of view – which is the focus of the analysis – these other projects cannot be compared with the proposed project activity. This is the reason why other ICS projects were not listed as realistic and credible alternative scenarios.

Furthermore, another substantial difference is that sales-based ICS projects, in virtually all cases, do not include monitoring. The cost of the monitoring program, including supervisory visits, surveys, kitchen performance tests, and the development and maintenance of a highly customized digital database built on the Salesforce.com platform, can only be afforded with the income from carbon revenues. On the other hand, the lack of monitoring to ensure adoption and usage will result in abandonment of the ICS technology, meaning the user returns to the traditional cooking method. The same logic applies for the GS TPPDTEC methodology; unless it is demonstrated that the ICS is still in use, it is assumed that the beneficiary has returned to the cooking practice identified in the project scenario.

From the investor perspective, it is not relevant to compare these contrasting alternatives. The proposed project activity does not generate income aside from the carbon credits, and the training and monitoring cost is significantly high, making the alternatives not financially attractive.

***Sub-step 1b. Consistency with mandatory laws and regulations***

[23] Honduras' Permanent Multipurpose Household Survey (July 2021) https://www.ine.gob.hn/V3/imag-doc/2021/11/INE-EPHPM-2021.pdf

In Honduras there is no law or regulation that applies to the efficiency of cooking stoves. There is no legislation in Honduras that requires the use of efficient stoves, and none is expected to be introduced during the project period.

The two alternatives identified comply with current law and regulations. There is no law or regulation that prohibits the use of traditional fogones or other inefficient combustion methods for cooking, nor there are regulations or efficiency acceptance levels for improved cookstoves in Honduras.

**Step 2. Financial analysis**

***Sub-step 2b: Option 1. Apply simple cost analysis***

For a project activity that produces no revenue other than carbon credits, "simple cost analysis" is the appropriate analysis to perform. Therefore, we will briefly document below the costs associated with the project activity and the alternatives identified in Step 1, and demonstrate that there is at least one alternative – "traditional fogon stove cooking" – which is less costly than the project activity. We can clearly meet the test that the proposed project activity is more costly than at least one alternative.

It has been shown that despite the availability of the new stove technology and building materials, Hondurans on their own do does not invest in the installation of efficient stoves or other similar wood saving stoves in the absence of external funding. Advancing the installation of improved stoves relies primarily on charitable donations or grants.

Proyecto Mirador's current internal cost per stove is roughly US$ 100. Mirador also asks households to contribute to the stove, to create a sense of "ownership." To that end, stove beneficiaries add 'in-kind' inputs of labor, and materials, which are estimated at a current value of US$ 30 per stove. Mirador considers this sharing of the investment to be a critical component to the success of the project.

Clearly, at US$ 100 per stove, the proposed project activity is more costly than the alternative of "traditional fogon stove cooking" which assumes that households continue to use existing stoves.

## Step 3. Barrier analysis

For the demonstration of additionality, barriers are identified which demonstrate that the project activity would not have occurred anyway due to at least one barrier. The most common barriers are: investment barrier; technological barrier; barriers due to prevailing practice. We discuss how the availability of GS VER revenue helps the project overcome these barriers that would otherwise prevent the project activity from occurring.

### *Sub-step 3a. Identify barriers that would prevent the implementation of the proposed GS VER project activity*

Potential sources for such funding from individual household beneficiaries, government institutions, or private non-governmental or business organizations are as follows:

- The households which receive a Dos por Tres stove
- Donations from non-governmental organizations (NGOs)
- A financing institution (bank) in the form of a bank loan against the collateral of expected sales of carbon credits
- International donations from individuals
- Honduras local, provincial or federal governments
- Creating a business that sells stoves

The identified possibilities are all non-viable. In the past, the initiatives to distribute the ICS, that didn't include revenues form carbon credits, basically relied on donations and subsidies and didn't include monitoring or follow-up activities.[24, 25] The chart

[24] Ver Beek et al, Quantifying the Environmental Impacts of Cookstove Transitions: A Societal Exergy Analysis Based Model of Energy Consumption and Forest Stocks in Honduras. See link: file:///Users/ivan/Downloads/energies-13-03206-v2.pdf

[25] Programa Asociación Voz para El Cambio (V4CP, 2018), 'Study of the impact of the sales tax exemption for improved cookstoves Honduras'. Original document in Spanish available in the following link: https://snv.org/cms/sites/default/files/explore/download/2018_-_estudio_exoneracion_impuestos.pdf

below analyzes the three possible sources of funding (equity investment, loan financing, and donations) and assesses their viability from the perspective of individual households, governmental institutions and private organizations (whether businesses or NGOs). The conclusion is that without an external source of funding from the sale of GS VERs, the distribution of Dos por Tres cookstoves will not be able to expand.

The proposed project activity does not generate Income other than through the sale of carbon credits, and the training and monitoring costs are significantly high. From the investor perspective the project proposed is not financially attractive; therefore, as explained above, the barriers faced prevent this alternative.

Since no investment is needed for the alternative of continued cooking on the fogon stove, there are no barriers that prevent this alternative scenario.

| **Source of funding** | **Project developer** | | |
|---|---|---|---|
| | **Individual households** | **Governmental Institutions** | **Private organization (business oriented or non-profitable)** |
| Equity investment upon expectation of certain returns (i.e. tangible or intangible) | Hondurans on their own do does not invest or invest very little in the installation of new efficient stoves. Honduran household income doesn't support purchase of the stove, particularly among the poorest of the poor. Efforts done in the past by the government remain isolated.[26] | It is demonstrated that local authorities (not to mention central government) do not have designated budgets for this type of program. The scarce funds they manage to invest are assigned to other priorities such as improving roads, | In many countries, businesses have been created to sell stoves. The problem is that in the poorest areas, people do not have hard cash with which to buy them, or income levels to support purchase, or access to the cities where the stoves are distributed. |

[26] Programa Asociación Voz para El Cambio (V4CP, 2018), 'Study of the impact of the sales tax exemption for improved cookstoves Honduras'. Original document in Spanish available in the following link: https://snv.org/cms/sites/default/files/explore/download/2018_-_estudio_exoneracion_impuestos.pdf

| Source of funding | Project developer | | |
|---|---|---|---|
| | **Individual households** | **Governmental Institutions** | **Private organization (business oriented or non-profitable)** |
| | The unlikeliness of individual households making an equity investment is best evidenced by the lack of people who have approached us on an individual basis to buy the Dos por Tres cookstove.<br><br>This reflects a lack of understanding of the savings involved, as well as a lack of interest in getting rid of indoor air pollution, which in turn reflects a lack of knowledge about the danger it poses to their health. This also illustrates the fact that individuals cannot allocate funds to slow deforestation and forest degradation or make an impact on slowing global warming. This is particularly true in the villages where we operate, which are far from urban centers and represent the poorest of the poor. | electrification, and providing water.<br><br>Local municipal governments in limited cases have supported our work. For example, they have provided warehousing for our materials for free, and in some cases they have contributed part of the distribution costs that comprise between 10-15% of our contribution.<br><br>But in no case has a local municipal government been in a position to fund the total cost of the dissemination of the stoves. In no case has a local, provincial or national government program given Mirador any financial support besides non-cash services. Our 16 years of experience have shown that municipal | Therefore, this becomes an unattractive course of action for entrepreneurs who might be interested in selling stoves to the rural poor of Honduras.<br><br>The feasibility of attracting private businesses into the stove business in Honduras is hindered by the lack of cash resources of customers, the lack of awareness of customers of the cost of indoor air pollution and the lack of awareness of the dangers of either deforestation or global warming.[27] It is also hurt by the requirement to fund the bulk of the US$ 100 per stove without any real willingness on the part of its customer base to pay an amount in excess of US$ 30, the |

[27] Marco de Asistencia de las Naciones Unidas para el Desarrollo Honduras 2017-2021, Sistema de Naciones Unidas. See link: https://honduras.un.org/sites/default/files/2019-08/MANUD%202017-2021.pdf

| Source of funding | Project developer | | |
|---|---|---|---|
| | **Individual households** | **Governmental Institutions** | **Private organization (business oriented or non-profitable)** |
| | To further illustrate, frequently the citizens of the communities approached did not purchase and install the Dos por Tres stoves on their own despite the high level of satisfaction among Dos por Tres stove owners and Mirador´s willingness to sell the Dos por Tres stoves at cost. Even the wealthy in some communities have not purchased the improved stoves without Mirador's assistance. | governments do not have budgets for this type of work. | approximate value of the beneficiaries' contribution of raw materials. These facts make the business a very unprofitable operation.<br><br>Attracting private businesses that could fund the losses with carbon credits might someday be possible, but the direct upfront cost of certification makes the business untenable. With local salaries in rural Honduras of US$ 2.23/day,[28] customers and potential entrepreneurs do not have sufficient resources. |
| Financing institution (bank) in the form of a bank loan | The rural poor of Honduras do not have access to bank credit and there is no banking institution that makes credit available to the project beneficiaries. | Proyecto Mirador knows of no government loan Program that would lend funds to beneficiaries for the purchase of the stoves. There are | No loans or financing are identified to be available from banks to business oriented or non-profitable activities with no |

[28] Honduras' Permanent Multipurpose Household Survey (July 2021) https://www.ine.gob.hn/V3/imag-doc/2021/11/INE-EPHPM-2021.pdf

| Source of funding | Project developer | | |
|---|---|---|---|
| | **Individual households** | **Governmental Institutions** | **Private organization (business oriented or non-profitable)** |
| | Active loan rates for June 2009 were reported by the Central Bank of Honduras as 3.00%.[29] Interest Rates are around 11.7% [30]commercial banks which makes the cost of borrowing prohibitive. Furthermore, in Mirador's experience, we have encountered no bank willing to lend money to the village people.<br><br>The lack of fixed full time employment also detracts from the individuals' ability to borrow money to fund the purchase of a fuel-efficient cook stove. The vast majority of people in the areas where Mirador operates have seasonal jobs related to agriculture.<br><br>The few trials done to explore micro-financing have not been demonstrated to be an option to scale-up the activities as Mirador intends. Also, the | also no known precedents in which the Honduran government successfully manages a loan for these type of projects from international multilateral lending institutions. | revenues other than carbon credits. |

[29] Current Interest Rate established by the Central Bank of Honduras as of 13 Sep 2022. See https://www.bch.hn/
[30] International Monetary Fund, International Financial Statistics and data files using World Bank data on the GDP deflator. Real interest rate (%) Honduras, (link opened 13 sep. 2022) https://data.worldbank.org/indicator/FR.INR.RINR?locations=HN

| Source of funding | Project developer | | |
|---|---|---|---|
| | **Individual households** | **Governmental Institutions** | **Private organization (business oriented or non-profitable)** |
| | impacts and results of those few initiatives are unknown. | | |
| Donations | There is virtually no history of individual donations at the local level to fund the installation of fuel efficient stoves.<br><br>There have been cases of mix of donations and sales. However, their traditional way of implementation lacks technical support in the long term, which results in very low performance or failure (refer to technical barriers for more details).<br>Donations would be very much a "start and stop" option.<br><br>International donations are heavily reliant on the<br>fundraising efforts of Proyecto Mirador Foundation, and the success of such efforts to date have been minimal. | Government aid, whether domestic, bilateral or multilateral, has not been a long-term source of funding. Such resources do not provide the consistency and predictability needed to sustain a project such as Mirador, the integrity of which depends on having consistently employed directors and technicians to oversee its operations.<br>Government aid is generally short term and can even end unpredictably because it varies with the political and economic climates, neither of which are predictable in Honduras. Mirador can only sustain its operations over the long term<br>given a steady and predictable source of funding. | Additional fund raising in the USA and Europe is not a sustainable long-term solution for the Dos por Tres distribution. In the current economic crisis, the challenge of securing steady funding is even more acute. Mirador has received some donations over the years from family and friends, but outside donations amount to less than 1% of the<br>full cost of this ambitious program. |

**Conclusion of Investment Barrier Analysis**

Households, local village governments and provincial governments do not have funds at their disposal which can be adapted to Mirador's purposes and are not willing to switch to the Dos por Tres stove without Proyecto Mirador Foundation's financial support and technical support provided by project staff. There have been limited attempts at making efficient stove selling a profitable business, but they have failed to be sustainable. The main difference with those few initiatives based on sales-based models is that they do not include the training, monitoring and maintenance activities that set Proyecto Mirador apart.

Other sources of ongoing charity have been explored but are not available. Therefore, the current mode of the 'Dos por Tres' stove distribution cannot be a sustainable business model without external sustainable funding. Absent funding from carbon revenues Proyecto Mirador cannot sustain the long-term expansion of the project.

*Technological barrier*
External funds are needed to help the project overcome numerous technical barriers, including stove design, stove testing, access to remote areas; transportation of materials; need of qualified personnel; adaptation to different conditions on site like positioning of the stove, chimney, etc; inadequate operation of stoves; lack of maintenance by beneficiaries and so forth. All of the above require human, financial and technological resources that are not consistently available to local beneficiaries without a sustainable source of funding.

The Dos por Tres stove was specifically designed for Central American cooking habits, with input from local users and stove builders. Its design is one of the most effective and easily assimilated replacements of the type of stove already prevalent in Honduras. Furthermore, the stove design was optimized by laboratory testing at Aprovecho Research Lab, with the research funded by Proyecto Mirador. This testing enabled design improvements that increased the GHG emission savings. This subsequently increased the amount of VERs that can be earned per stove and increased the feasibility of the project. The Dos por Tres stove was developed, tested, adapted and improved, entirely financed by through Mirador which subsidized the pilot phase.

Since inception Mirador has modelled the consistency and integrity necessary to achieve success. To demonstrate, Mirador has carried out the technical research surrounding carbon credits. It has attracted the involvement of leading institutions such as the Yale School of Forestry & Environmental Studies, Stockholm Environmental Institute, Zamorano University, The Grantham Foundation for the Protection of the Environment, and Aprovecho Research Center. Mirador has invested funds to constantly improve the design of the stove and committed time and funds to manage all aspects of the project. It has operated with core principles such as "No Cuesta, No Cuida," maintained a commitment to operate in areas inhabited by the "poorest of the poor," and demonstrated an active commitment to improving the stove with functional developments such as the "Cinco" maintenance tool, and upgrading to the improved current model Dos por Tres.

Mirador's thorough approach to training stove beneficiaries could also produce a side benefit of increased carbon savings due to changes in cultural practice. Beneficiaries are taught to operate the stove efficiently, and many will improve upon existing practice. For some households this may ultimately result in a further savings in firewood used, as well as cleaner combustion.

Corruption and crime are also major constraints to business, and avoidance of local corruption is difficult at best. Poor infrastructure can also present a barrier to the project; for example, the roads leading to many of the areas we serve are still unpaved and hard to reach.

Carbon credit financing is a necessary element to overcoming technical barriers (e.g., marketing expertise, which also would not be provided in the absence of income from the sale of carbon credits), so that Mirador can sustain the level of commitment and grow the project with a sustainable commitment to the level of quality it has already established.

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

Alternative A 'Continue cooking on the fogon stove' does not face a barrier.

## Step 4. Common practice analysis

### *Sub-step 4a. Analyze other activities similar to the proposed project activity*

In the past, there have been similar activities that distributed ICS, most of them were implemented under a carbon certification (Under CDM or GS, etc.), others under donation-based programs. Below is a summary of the activities identified, where Proyecto Mirador is included, being a relevant actor in the country in said area.

| Entity | Starting date of operation | Stoves installed until 2017[31] |
|---|---|---|
| Asociación Hondureña para el Desarrollo de Honduras (AHDESA) | 1999 | 50,000 |
| Fundación para el desarrollo integral de Honduras (FUNDEIH) | 2011 | 34,407 |
| ENVIROFIT | 2013 | 256,679 |
| Proyecto Mirador | 2004 | 155,000 |
| Total until December.2017 | | 496,086 |

Table. Estimated number of ICS installed from 1999 to 2017.[32]

This estimation shown in the table above is consistent with other sources that indicate the estimated number of ISC installed up to date is about 500,000.[33]

It is important to understand that not all those stoves installed remain operational. For example, for FUNDEIH and ENVIROFIT that are part of the CDM PoA "Improved

[31] No more projects/activities that report installation of ICS in Honduras after 2017.
[32] Programa Asociación Voz para El Cambio (V4CP, 2018), 'Study of the impact of the sales tax exemption for improved cookstoves Honduras'. Original document in Spanish available in the following link: https://snv.org/cms/sites/default/files/explore/download/2018_-_estudio_exoneracion_impuestos.pdf
[33] Estrategia Nacional para la Adopción de Estufas Mejoradas (ENAEM), (National Strategy for the Adoption of Improved Stoves). The full document in Spanish is available in the following link. https://icf.gob.hn/wp-content/uploads/2022/02/ESTRATEGIA-NACIONAL-INCLUSIVA-PARA-LA-ADOPCION-DE-ESTUFAS-MEJORADAS-EN-HONDURAS.pdf

Cookstoves Program in Honduras "Vida Mejor con Ecofogones de Alto Rendimiento",[34] as per the latest Monitoring report, the number of stoves reported as still in use is 143,651.[35] For Proyecto Mirador (a certified GS PoA), the total number of operational stoves (average) as of November 2021 is 103,585[36,37]. Regarding AHDESA,[38] no specific usage data was found, but considering this is the oldest activity identified, it is likely a significant portion of the stoves have dropped-off.

Conservatively, we can consider that 300,000 improved cook stoves are still in operation. The coverage reached by the above mentioned activities is very modest as compared with the demand in Honduras, a country where 23% of urban households and more than 85% of rural households use fuelwood as the main fuel for cooking.[39] Based on the latest population data from 2020, this is 1.18 million people in urban areas and 3.57 million people in rural areas rely on fuelwood as their main fuel for cooking.[40]

Another important activity in Honduras is the 'National Strategy for the Adoption of Efficient Stoves' (hereafter the ICS NAMA). This mitigation action aims to reach 1,125,000 Honduran families.[41] Currently this NAMA is seeking support for preparation. It is not implemented yet; no records are available on the support

[34] CDM PoA No. 9176, available in the following link: https://cdm.unfccc.int/ProgrammeOfActivities/poa_db/MN1FPHAXIBV8SR9QWYOGU7K3C06L54/view
[35] Monitoring Report for period 15/06/2016 – 14/06/2017. See section E. 4, Page 16, Stove population expected operational proportion (SoF). The full report is available in the following link: https://cdm.unfccc.int/filestorage/4/I/6/4I61CEVZTKMYH3W8QXLSF90UNP7AD2/9176%20Monitoring%20Report09.pdf?t=aFF8cmV2cHEwfDArhS9CbrVFUV9oTXRrrEon
[36] Data retrieved from the 12th Verification Period 01/12/2020 to 30/11/2021 (latest verified data at the time of submission)
[37] Proyecto Mirador has installed 217,957 stoves (most recently verified data at the time of submission, which corresponds to the last Verification Period [12th VP, from 01/12/2020 to 30/11/2021]).
[38] AHDESA is currently being implemented in conjunction with TWP (Trees, Water & People) a pilot project called "Improving access to clean energy in Latin America," which is funded by the US Department of State (DOS) and ECPA. Details indicated in the Clean Cooking Alliance webpage available in the following link: https://cleancooking.org/sector-directory/asociacion-hondurena-para-el-desarrollo-ahdesa/
[39] Data from the ' State Ministry Energy Supply, Energy Balance year 2021, Section 4.1.5 Fuelwood' (Secretaría de Estado en el Despacho de Energía Balance Energético 2021, Sección 4.1.5 Leña). Full document in Spanish available in the following link: https://sen.hn/balance-energetico-nacional/
[40] Data from the Natitional Institute of Statistics, Country figures 2020 (Instituto Nacional de Estadística, Cifras de País 2020), Población Rural y Población Urbana. Full document in spanish avaiable in the following link: https://www.ine.gob.hn/V3/imag-doc/2021/11/cifras-de-pais-datos-2020.pdf
[41] See the Public NAMA registry: https://www4.unfccc.int/sites/PublicNAMA/_layouts/un/fccc/nama/NamaSeekingSupportForPreparation.aspx?ID=200&viewOnly=1

received.[42] Considering the current status and that support required is for preparation, it is not expected that this NAMA will be implemented in the short term.

Besides the NAMA, there has not been a specific national or regional policy to articulate the dissemination of the ICS or to reduce the consumption of fuelwood for cooking purposes.

**Conclusion**

Without some source of external funding Hondurans do not switch to fuel-efficient stoves, distribution agencies do not provide stoves to families, and laboratories do not conduct extensive research on how to improve the performance of stoves. The additional income from VERs serves to overcome these barriers by providing funding that can be used to develop a sustainable business model for rapid expansion of efficient stove distribution.

### B.5.1. Prior Consideration

>>

Regular VPAs, such as this, are exempt from any kind of prior consideration of carbon revenue checks.[43]

### B.5.2. Ongoing Financial Need

>>

As explained in the financial analysis above, Proyecto Mirador does not have sources of income other than carbon revenues. The project beneficiaries do not make cash payments to Mirador. In the absence of carbon revenues, the project would depend on donations and grants, which has been demonstrated as not being financially viable in the long term, and will likely include only resources for stove construction but not for monitoring, training and follow up.

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[42] Ibid.
[43] GS4GG PRINCIPLES & REQUIREMENTS v1.2 published October 2019. Principle 5: Financial Additionality & Ongoing Financial Need, 4.1.50 For PoA/VPAs, (a) Regular VPAs are exempt from any kind of prior consideration of carbon revenue checks.

It is clear there is ongoing financial need of carbon credits for the financial viability and continuity of the project, as carbon credit revenues provide the single source of income of the project.

The table below discusses the suggested items from the GS Principles and Requirements (v1.2) to discuss the OFN (Principle 5: Financial Additionality & Ongoing Financial Need, (b) ONGOING FINANCIAL NEED):

| Item | Explanation |
|---|---|
| Information highlighting the key categories and amounts or relative proportions (%) of project income and outgoings, including the relative proportion of certification related cost and revenue. | As mentioned before, nearly 100% of the project income corresponds to the carbon revenues. Beside the costs of the stove materials and installation labor, a significant proportion of the project's costs includes the monitoring, training, certification and transaction cost (Consultancy, validation and verification audits, monitoring technology, certification fees, etc.).<br>Without the carbon revenues, it would be impossible to implement and operate the project. |
| Description on how finance derived Gold Standard Certification contributes to or is being used to sustain or enhance the project. | The Gold Standard certification is the backbone of the project. In the absence of the carbon revenues, the project will collapse and cease. |
| Where no revenue is realised from Gold Standard certification during a given period, this would be considered a FAR for the next Issuance. | Because of the dependence on carbon revenues as the single source of income, there have not been periods with no carbon revenues. Consecutive and continuous verification have been taken place since project inception. |

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

Relevant Target/Indicator for each of the three SDGs

| Sustainable Development Goals Targeted | Most relevant SDG Target | SDG Impact<br>Indicator (Proposed or SDG Indicator) |
|---|---|---|

| | | |
|---|---|---|
| 13 Climate Action (mandatory) | 13.2 Integrate climate change measures into national policies, strategies and planning | Amount of GHGs emissions avoided or sequestered |
| 1 No Poverty | 1.1 By 2030, eradicate extreme poverty for all people everywhere, currently measured as people living on less than $1.25 a day | Average household savings i.e., decrease in expenditure on basic service such cooking, lighting, drinking |
| 3 Good Health and Well-Being | 3.9 By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination | Number of households that observed reduction in PM2.5 & carbon monoxide (CO) concentration reductions |
| 4 Quality Education | 4.4 By 2030, substantially increase the number of youth and adults who have relevant skills, including technical and vocational skills, for employment, decent jobs and entrepreneurship | Number of training hours provided for employees (full-time, part-time, or temporary), disaggregated per gender |
| 5 Gender Equality | 5.5 Ensure women's full and effective participation and equal opportunities for leadership at all levels of decision-making in political, economic and public life | 5.5.2 Proportion of women in managerial positions |
| 5 Gender Equality | 5.4 Recognize and value unpaid care and domestic work through the provision of public services, infrastructure and social protection policies and the promotion of shared responsibility within the household and the family as nationally appropriate | Average time saving associated with cooking time and fuel collection |
| 7 Affordable and Clean Energy | 7.1 By 2030, ensure universal access to affordable, reliable and modern energy services | 7.1.2 Proportion of population with primary reliance on clean fuels and technology |
| 8 Decent Work and Economic Growth | 8.5 By 2030, achieve full and productive employment and decent work for all women and men, including for young people and persons with disabilities, and equal pay for work of equal value | Total number of jobs |

| | | |
|---|---|---|
| 15 Life on Land | 15.1 By 2020, ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains and drylands, in line with obligations under international agreements | Total non-renewable wood fuel saved (Net benefit from the difference of the baseline and project household fuel consumption) |

On 13 March 2022, Gold Standard launched the SDG Impact Tool, a mandatory excel-based standardized template to monitor SDG impacts. This tool contains pre-identified impacts and SDG indicators that can be used for each project type. The updates in the project's SDGs, including but not limited to the impacts, description, unit of measurement, among others, come from aligning the project SDGs to Gold Standard SDG Impact Tool. The project updates comply with Gold Standard requirement of demonstrating contribution to at least three SDGs, one of which must be SDG13.

The project did not reassess its SDGs but rather aligned it to the standardize template. When a previously reported SDG impact was not in line with the current SDG tool, it was removed as an SDG but kept as an additional contribution and presented as a brief description below:

Additional project impacts to SDGs measured by Proyecto Mirador are: SDG 2 Zero Hunger, with an estimated annual impact of 72% wood purchasers reporting they used the money saved to buy food. SDG 5 Gender Equality, with an estimated annual impact of 98% satisfaction among users-beneficiaries. SDG 7 Affordable and Clean Energy, with an estimated annual impact of 79% of reduction of PM2.5 emissions resulting from cookstove intervention. SDG 8 Decent Work and Economic Growth, with an estimated annual impact of 100% job satisfaction rate among employees.

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

>>

The table below shows the approach followed to define the net impact. In order to ensure consistency, the methodological approaches follow the same assumptions and methods applied in the verifications of the previous crediting period.

| SDG Goal | Methodological approach for estimating SDG outcome defined in the PoA-DD |
|---|---|
| 1 – No Poverty | Monitoring approach:<br>• For clients who purchase fuelwood, PP will gather qualitative surveys to monitor how much money clients save due to the reduction in fuelwood consumption and track how the saved funds are spent.<br><br>This indicator is defined though the monitoring survey.<br><br>Formula:<br>USD saved per week per household = Wood cost w/2x3/wk - Wood cost w/Traditional/wk |
| 2 – Zero Hunger | Monitoring approach:<br>• For clients who purchase fuelwood, PP will gather qualitative surveys to monitor how much money clients save due to the reduction in fuelwood consumption and track how the saved funds are spent. For many families, this includes purchasing food.<br><br>This indicator is defined though the monitoring survey. No specific formula or calculation applied. |
| 3 – Good Health and Well-Being | Monitoring approach:<br>• Lab and field testing of baseline and project scenario stove types to quantify the reduction of harmful indoor pollution emissions of PM 2.5 and Carbon Monoxide (measurements include both ambient emissions and personal exposure). |
| 4 – Quality Education | Monitoring approach:<br>• Maintain detailed training records for all training provided to staff, contractors and technicians. |
| 5 – Gender Equality | Monitoring approach:<br>• Maintain records showing quantitative employment generated by the project, including a breakdown of the gender balance by job type.<br>• Show that the stove provides women with more discretionary time by presenting the % time saved by using the Dos por Tres<br>• Provide data to show that women are satisfied with their cookstove, thus easing their burden of difficulty.<br>• Document the number of stoves built, keeping in mind that Mirador's no-cash model enables women to receive a stove without having to ask for a spouse's approval to spend household money—thus placing decision making power in the woman's hands.<br>• For clients who collect their own wood, PP will monitor how much time they have saved, and how they invest their time (which often includes more time dedicated to work). |

| | |
|---|---|
| 7 – Affordable and Clean Energy | Monitoring approach:<br>• Quantify the number of stoves built and multiply by the average people per household to obtain the number of people using the technology, then divide by the most recent data of the total population in Honduras. |
| 8 – Decent Work and Economic Growth | Monitoring approach:<br>• Maintain records showing quantitative employment generated by the project, including Mirador's direct employees and all related microenterprises.<br>• Conduct employee surveys to assess job satisfaction and confirm alignment with work regulations. |
| 13 – Climate Action | • Document and report reduction of GHGs through annual reporting of emission reduction calculations.<br>Monitor baseline and project scenario fuelwood consumption through 4-day Kitchen Performance Tests (KPTs) for each age group of stoves included, aggregating new data annually. |
| 15 – Life on Land | Monitoring approach:<br>• Monitor baseline and project scenario fuelwood consumption through 4-day Kitchen Performance Tests (KPTs) for each age group of stoves included, aggregating new data annually. A reduction in fuelwood consumption indicates mitigation of forest degradation.<br>• Document and report reduction of GHGs through annual reporting of emission reduction calculations.<br>• Assess the non-renewable fraction of the woody biomass harvested in the project collection area in the baseline scenario (fNRB) as required per TPDDTEC methodology. |

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

**SDG13**

| **Data/parameter ID ICS 1** | |
|---|---|
| Data/parameter | Baseline scenario survey results |
| Unit | NA |
| Description | Report of the results of the baseline scenario survey |
| Source of data | The report presents the results of the Baseline Scenario Survey, including:<br>Baseline scenario defined, existing baseline technology and fuel consumption patterns. |

| | |
|---|---|
| Value(s) applied | See summary in section in B.4 above. |
| Choice of data or Measurement methods and procedures | Survey method aligned with the GS TPDDTEC v4.0, Section 4.3 Baseline scenario survey. |
| Purpose of data | Definition of baseline scenario. |
| Additional comment | The complete Baseline Survey Report, analysis and raw data are submitted to the VVB. |

| **Data/parameter ID ICS 2** | |
|---|---|
| Data/parameter | Project technology description |
| Unit | NA |
| Description | The detailed description of the project technology shall include as a minimum:<br>- Manufacturer name,<br>- product name (if applicable),<br>- technology type,<br>- capacity characteristics,<br>- continuous useful energy output demonstration,<br>- rated thermal efficiency, for the following cases:<br>- improved biomass cookstoves, fuel-based ovens, water heaters, improved fossil fuel cookstoves (solid fuel or existing liquid & gaseous fuel projects), and renewable fuel fired stoves.<br>- Any performance certifications from National Standards body or certification body recognised by national standards body also shall be provided. |
| Source of data | Technical report from qualified 3rd party.<br><br>MacCarty, Still, 'Results of Testing the Overlook Foundation Justa Stoves Including the "2 By 3" Stove: Fuel Use and Carbon Emissions And Analysis of Carbon/$CO_2$eq Savings', Aprovecho Research Center, April 2009. |
| Value(s) applied | - Manufacturer: Proyecto Mirador<br>- Product name: Dos por Tres |

| | |
|---|---|
| | - Technology type: In situ Improved biomass cookstoves<br>- Continuous useful energy output: 4-7kw (low and high firepower respectively).<br>- Rated thermal efficiency: 47%<br>- No national standards available in Honduras. |
| Choice of data or Measurement methods and procedures | 2003 UCB Water Boiling Test (WBT); Shell Foundation/UCB Water Boiling Test, and laboratory testing of emissions measurements. The complete information about measurement methods and procedures can be found in the full report mentioned in "Source of data". |
| Purpose of data | Definition of project technology. |
| Additional comment | NA |

| **Data/parameter ID ICS 3** | |
|---|---|
| Data/parameter | Expected technical life of project technology |
| Unit | Years |
| Description | The expected technical life the individual project technology. |
| Source of data | Periodic verification reports, including field reports that meet the sampling requirements from the methodology. |
| Value(s) applied | 7 years |
| Choice of data or Measurement methods and procedures | The lifespan of the stove is seven years. Life span has been proven since the original project registration in 2009. Stoves have been found in use and in good working condition after 10 years. As a conservative measure, all the stoves are discarded for emission reduction calculations after the seventh year in use. During the entire stove lifetime, the stove aging and the drop-off rate for all the age groups are accounted for. |
| Purpose of data | Definition of project technology. |
| Additional comment | Once the 7-year lifespan is over, the project technology is not accounted anymore in the calculations, and Mirador may replace it with a new stove. It is important to mention that replacement is not done immediately, the |

| | |
|---|---|
| | construction of a new stove is scheduled and it depends on the users' willingness to receive a new stove. They must also fulfil all the requirements that Proyecto Mirador has in place to receive a stove (e.g. carbon waiver, etc.). |

| **Data/parameter ID ICS 4** | |
|---|---|
| Data/parameter | Indoor air pollution (IAP) levels of the project technology |
| Unit | NA |
| Description | For projects where cooking will move from outdoor to indoor or where the project technology reduces ventilation (for example, changing from a stove with chimney to improved stove with no chimney), demonstration that Indoor air pollution (IAP) levels are not worsened in the project scenario compared to the baseline, including PM 2.5 and carbon monoxide (CO) emissions. |
| Source of data | Technical report from qualified 3rd party.<br>See Lefebvre, Olivier, "Health Impact of Proyecto Mirador Dos por Tres Stove" (2018) |
| Value(s) applied | 47% reduction to exposure to PM2.5 thanks to the project. |
| Choice of data or Measurement methods and procedures | Proyecto Mirador made measurement of the reduction of personal exposure to PM2.5 (as opposed to the overall reduction to PM2.5) resulting from cookstove intervention.<br>Exposure to PM2.5 was measured in real-life control and intervention households using a the HAPEx Nano light scattering nephelometer. This device provides real time readings on PM2.5 and takes a new measurement every minute. It was worn by study participants in control and intervention groups during a 48-hour period. |
| Purpose of data | Definition of project technology. |
| Additional comment | The project does not include changing from a stove with chimney to improved stove with no chimney. In some cases, a move from outdoor to indoor can happen. |

| | |
|---|---|
| | Project stove includes a chimney and proper testing has been carried out to ensure there is no increase of IAP. |

| **Data/parameter ID ICS 5** | |
|---|---|
| Data/parameter | Avoidance of double counting or double claiming among project participants |
| Unit | NA |
| Description | Evidence of avoidance of double counting or double claiming with other parties directly involved with the project or programme. |
| Source of data | Written assertions of the project developer of the ownership rights and intention of selling the emission reductions resulting from the project activity directed at or signed with all the applicable parties of the following:<br>- all other project participants. |
| Value(s) applied | Double counting addressed. |
| Choice of data or Measurement methods and procedures | Written assertion. |
| Purpose of data | Definition of project technology. |
| Additional comment | At the moment, Proyecto Mirador is the single project participant included in the programme, and no written assertion is required from other project participants.<br><br>Since Proyecto Mirador is the project technology builder, no written assertion is required from technology producers. The suppliers of specific stove components (e.g. plancha, ceramic part, chimney, etc.) are not required since isolated parts cannot reduce emissions alone but only when assembled following the specific design.<br><br>Proyecto Mirador does not work with retailers, so no written assertion is required from this group. |

| Data/parameter ID ICS 6 | |
|---|---|
| Data/parameter | Avoidance of double counting or double claiming with other mitigation actions |
| Unit | NA |
| Description | Review and analysis of mitigation actions in other voluntary market or UNFCCC/compliance mechanisms.<br><br>Since the previous crediting period, the CME has accounted double counting from other mitigation projects as part of the leakage. The CME will follow the same approach accepted by GS at previous verifications. |
| Source of data | Registries of CDM and other voluntary carbon standards, minimum GS and VCS. |
| Value(s) applied | Double counting addressed. |
| Choice of data or Measurement methods and procedures | When the presence of another ICS is found in project households, the following calculation will take place: Leakage due to double counting = (total number of HHs surveyed for the presence of another ICS ÷ total number of HHs surveyed in which another ICS was present) * net stoves in operation * annualized average of ERs/stove |
| Purpose of data | Definition of project technology. |
| Additional comment | Additionally, the PoA inclusion criteria and methodology's applicability criteria includes other considerations to address double counting. |

| Data/parameter ID ICS 7 | |
|---|---|
| Data/parameter | Regulatory framework for provision of thermal energy services |
| Unit | NA |
| Description | Evidence that the project does not undermine or conflict with any national, sub-national or local regulations or |

| | |
|---|---|
| | guidance for thermal energy supply/devices or fuel supply or use |
| Source of data | List and provide a summary of any national, sub-national and local regulations or guidance for provision of thermal energy services/devices of the type the project provides in the project boundary, including any tariff requirements. |
| Value(s) applied | No national, sub-national, or local regulations, nor guidance for provision of thermal energy services/devices of this project type have been identified in Honduras. The single related activity identified is the ICS NAMA. As explained above in Sub-step 4a. of the additionality demonstration, this initiative is seeking support for preparation. |
| Choice of data or Measurement methods and procedures | NA |
| Purpose of data | Definition of project technology. |
| Additional comment | Undertake at the start of each crediting period. |

| **Data/parameter ID ICS 8** | |
|---|---|
| Data/parameter | $EF_{b,f,CO_2}$ |
| Unit | $tCO_2/TJ$ |
| Description | $CO_2$ emission factor of the fuel that is reduced (Wood) |
| Source of data | Methodology default https://globalgoals.goldstandard.org/407-ee-ics-technologies-and-practices-to-displace-decentrilized-thermal-energy-tpddtec-consumption/ |
| Value(s) applied | Wood. Methodology default, 112 $tCO_2/TJ$ |
| Choice of data or Measurement methods and procedures | Methodology default |

| | |
|---|---|
| Purpose of data | Calculation of baseline and project emissions |
| Additional comment | N/A |

| **Data/parameter ID ICS 9** | |
|---|---|
| Data/parameter | $EF_{b,f,nonCO_2}$ ($CH_4$ and $N_2O$) |
| Unit | $tCO_2e/TJ$ |
| Description | Non-$CO_2$ emission factor arising from use of fuels in baseline scenario |
| Source of data | Wood. Methodology default:<br>9.46 $tCO_2e/TJ$ (AR5 GWP)<br>https://globalgoals.goldstandard.org/407-ee-ics-technologies-and-practices-to-displace-decentrilized-thermal-energy-tpddtec-consumption/ |
| Value(s) applied | 9.46 $tCO_2e/TJ$ |
| Choice of data or Measurement methods and procedures | Methodology default, based on IPCC values. |
| Purpose of data | Calculation of baseline and project emissions |
| Additional comment | N/A |

| **Data/parameter ID ICS 10** | |
|---|---|
| Data/parameter | $EF_{p,f,CO_2}$ |
| Unit | $tCO_2/TJ$ |
| Description | $CO_2$ emission factor of the fuel that is reduced (Wood) |
| Source of data | Methodology default<br>https://globalgoals.goldstandard.org/407-ee-ics-technologies-and-practices-to-displace-decentrilized-thermal-energy-tpddtec-consumption/ |
| Value(s) applied | Wood. Methodology default, 112 $tCO_2/TJ$ |

| | |
|---|---|
| Choice of data or Measurement methods and procedures | Methodology default |
| Purpose of data | Calculation of baseline and project emissions |
| Additional comment | N/A |

| **Data/parameter ID ICS 11** | |
|---|---|
| Data/parameter | $EF_{p,f,nonCO_2}$ ($CH_4$ and $N_2O$) |
| Unit | $tCO_2e/TJ$ |
| Description | Non-$CO_2$ emission factor arising from use of fuels in baseline scenario |
| Source of data | Wood: Methodology default:<br>9.46 $tCO_2e/TJ$ (AR5 GWP)<br>https://globalgoals.goldstandard.org/407-ee-ics-technologies-and-practices-to-displace-decentrilized-thermal-energy-tpddtec-consumption/ |
| Value(s) applied | 9.46 $tCO_2e/TJ$ |
| Choice of data or Measurement methods and procedures | Methodology default, based on IPCC values. |
| Purpose of data | Calculation of baseline and project emissions |
| Additional comment | N/A |

| **Data/parameter ID ICS 12** | |
|---|---|
| Data/parameter | $NCV_{b,\_fuel\_}$ |
| Unit | TJ/ton |
| Description | Net calorific value of the fuels used in the baseline |
| Source of data | "Fuelwood types & Average NVCs 20 Jul 2022" Ghilardi, Adrian (2022) with reference to: |

| | |
|---|---|
| | 1. NAS (1980). Firewood Crops. Washington DC, National Academy of Sciences.<br>2. Cheremisinoff, N. (1980). Properties of Wood. Wood for Energy Production. Ann Arbor, MI, Ann Arbor Science: 31-43.<br>3. Harker, A. P., A. Sandels, et al. (1982). Calorific values for wood and bark and a bibliography for fuelwood. London, Tropical Products Institute: 20.<br>4. FAO (1993). Energy and Environment Basics. Bangkok, Regional Wood Energy Development Program (RWEDP): 85. |
| Value(s) applied | 0.01947 TJ/ton |
| Choice of data or Measurement methods and procedures | The database presents calorific values in kilojoules per kilogram of wood (and terajoules per metric ton) of 79 types of woods (fuelwood mix representative of household consumption in Honduras), either grouped by hardness or by species |
| Purpose of data | Calculation of baseline and project emissions |
| Additional comment | N/A |

| **Data/parameter ID ICS 13** | |
|---|---|
| Data/parameter | $NCV_{p,\_fuel\ \_}$ |
| Unit | TJ/ton |
| Description | Net calorific value of the fuels used in the project |
| Source of data | "Fuelwood types & Average NVCs 20 Jul 2022" Ghilardi, Adrian (2022) with reference to:<br>1. NAS (1980). Firewood Crops. Washington DC, National Academy of Sciences.<br>2. Cheremisinoff, N. (1980). Properties of Wood. Wood for Energy Production. Ann Arbor, MI, Ann Arbor Science: 31-43.<br>3. Harker, A. P., A. Sandels, et al. (1982). Calorific values for wood and bark and a bibliography for fuelwood. London, Tropical Products Institute: 20. |

| | |
|---|---|
| | 4. FAO (1993). Energy and Environment Basics. Bangkok, Regional Wood Energy Development Program (RWEDP): 85. |
| Value(s) applied | 0.01947 TJ/ton |
| Choice of data or Measurement methods and procedures | The database presents calorific values in kilojoules per kilogram of wood (and terajoules per metric ton) of 79 types of woods (fuelwood type representative of household consumption in Honduras), either grouped by hardness or by species |
| Purpose of data | Calculation of baseline and project emissions |
| Additional comment | N/A |

| **Data/parameter ID ICS 17** | |
|---|---|
| Data / Parameter | $fNRB,\_i,\_y\_$ |
| Unit | Percentage |
| Description | Fractional non-renewability status of woody biomass fuel during year y, in case the baseline fuel is biomass or charcoal |
| Source of data | Determined by following the CDM TOOL30, Calculation of the fraction of non-renewable biomass |
| Value(s) applied | 63.70% |
| Measurement methods and procedures | As per the requirements of the CDM TOOL30 |
| Monitoring frequency | Determined ex-ante and fixed for the entire crediting period. |
| QA/QC procedures | As per the requirements of the CDM TOOL30 |
| Purpose of data | Calculate the emission reductions |
| Additional comment | NA |

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

>>

The emission reductions are calculated following Method 1 described in the methodology as per paragraph 3.10.1, shown below:

a. Method 1. Baseline and project fuel(s) are identical and emission reductions are exclusively from improved efficiency

The emission reductions calculation is well documented based on verifiable data including publicly available or primary data collected by the project developer. It is important to confirm the project does not include fuel production; therefore, respective emissions are not considered.

The present project activity is large-scale; however, Method 1 chosen does not make distinctions of scale, so the method in all cases is the same.

The equation shown below is the one that corresponds to Method 1 chosen:

$$ER_y = \sum_{b,p} (N_{b,p,y} \times U_{p,y} \times SFS_{p,b,y} \times NCV_{b,fuel} \times (f_{NRB,b,y} \times EF_{b,f,CO2} + EF_{b,f,nonCO2})) - \sum LE_{p,y} \quad \text{Eq. 1}$$

Where:

| | | |
|---|---|---|
| $ERy\_$ | = | Emission reduction for total project activity in year y ($tCO_2e/yr$) |
| $\Sigma b,\_p\_$ | = | Sum over all relevant baseline b/project p pairs |
| $Nb,\_p,\_y\_$ | = | Number of project technology-days included in the project database for baseline b/project p pair in year y (days) |
| $Up,\_y\_$ | = | Cumulative Usage rate for technologies in project scenario p in year y (fraction) |
| $SFSp,\_b,\_y\_$ | = | Specific fuel savings for an individual project technology of baseline b/project p pair in year y (mass or volume units/technology*day) |
| $NCVb,\_fuel\_$ | = | Net calorific value of the fuel(s) that is substituted or reduced in baseline b (TJ/mass or volume units) |
| $fNRB,\_b,\_y\_$ | = | Fractional non-renewability status of woody biomass fuel during year y (fraction). For biomass, it is the fraction of woody biomass that can be established as non-renewable. This parameter is omitted when f is a fossil fuel. |
| $EFb,\_f,\_CO_2\_\_$ | = | $CO_2$ emission factor from use of fuel f ($tCO_2/TJ$) |
| $EFb,\_f,\_nonCO_2\_\_$ | = | Non-$CO_2$ emission factor arising from use of fuel f, when the baseline fuel f is biomass or charcoal ($tCO_2e/TJ$). This parameter is omitted when f is a fossil fuel. |
| $LEp,\_y\_$ | = | Leakage for project scenario p in year y ($tCO_2e/yr$) |

The section B.7 includes all the details on how each of the parameters included in Equation 1 shown above are defined.

**Leakage Emissions**

Based on the paragraph 3.11.2 of the methodology, the leakage emissions will be calculated following the option 2, which is elaborated as follows:

The project developer must evaluate the following potential sources of leakage and provide an evidence-based description and preliminary quantification of each potential source and its relevance for the project. The table below explains how the potential source of leakage is assessed.

| Potential source of leakage | Assessment |
|---|---|
| a) The displaced baseline technologies are reused outside the project boundary in place of lower emitting technology or in a manner suggesting more usage than would have occurred in the absence of the project. | Baseline stoves are built in situ, cannot be relocated, and therefore cannot be reused in another location. Mirador requires as a precondition of installation that the client agree to destroy the old fogón, and Mirador monitors the presence or absence of a fogón on every follow-up visit.<br><br>The baseline stoves are not used outside the project boundary, but in some cases, the stove continues being used by the project beneficiaries. Regardless, the project accounts for leakage due to the continued presence of a baseline stove.<br><br>Although one of the requirements for the beneficiaries to join the project is to destroy the baseline stove, because some beneficiaries refuse to destroy the stove and the construction of an open fire is extremely easy (e.g it only requires three cinder block or bricks), the presence of a baseline stove will be monitored via the annual monitoring surveys.<br><br>This source of leakage is calculated as follows: |

| | |
|---|---|
| | Leakage due baselines stove = % of homes that have a fogón * net stoves in operation * cooking time the fogón is in use in those HHs * annualized<br>average of ERs/stove<br><br>This approach has been approved by VVBs and GS/SC in previous verifications from the previous crediting period. |
| b) Members of the population who do not participate in the project, and previously used lower emitting energy sources, instead use the non-renewable biomass or fossil fuels saved under the project activity. | There is no such distinction between a low emitting energy and non-renewable biomass from the firewood consumed in project area. Areas of fuelwood collection, fuelwood suppliers and fuel type are the same for both project users and non-project users. This potential source of leakage is not considered relevant for the project. |
| c) The project significantly reduces the NRB fraction within an area where other GHG mitigation project activities account for NRB fraction in their baseline scenario. | Although fuelwood reduction does have a mitigating effect on forest degradation, Mirador's construction activities are not at a level that would reduce NRB significantly enough to affect other projects. Based on our average build rate to date (~24,000 stoves/year), we estimate 1000 hectares of forest are protected annually as a result of Mirador's project activity, as compared to a total of 4,648,000 hectares of forest cover in Honduras.[44]<br><br>The project does not expect to create a negative impact on NRB; if anything, the impact would be positive since the project saves fuelwood reducing the demand. This potential source of leakage is not considered relevant for the project. |
| d) The project population compensates for loss of the | The project will carry out an annual survey to assess leakage due to the replacement of |

[44] Mongabay Environmental News, "Honduras." http://rainforests.mongabay.com/deforestation/archive/Honduras.htm

| | |
|---|---|
| space heating effect of inefficient technology by adopting some other form of heating or by retaining some use of inefficient technology. | efficient household heating. The project users will be asked if they use their Dos por Tres to heat the home outside of regular cooking activity.<br><br>Mirador's Leakage & Sustainability Survey includes questions to determine whether or not the beneficiaries use/used their project/baseline stoves to heat their homes, and whether or not there is/was an auxiliary heater present in the project/baseline scenario.<br><br>For the past verifications completed in the previous crediting period this source of leakage was determined to be zero. For the renewed crediting period, this potential source of leakage will continue to be assessed. |
| e) By virtue of promotion and marketing of a new technology with high efficiency, the project stimulates substitution within households who commonly used a technology with relatively lower emissions, in cases where such a trend is not eligible as an evolving baseline. | One of the requirements for the beneficiaries to join the project is to use firewood as the main fuel for cooking. Users of technology with relatively lower emissions are not eligible. The Dos por Tres is built in situ and Mirador sends an Inspector to every household in advance of stove construction to assess its suitability to receive a Dos por Tres; thus, we are able to verify in every case that the Dos por Tres is replacing a traditional fogón and that the fogón is the primary stove used for cooking.<br>This potential source of leakage is not considered relevant for the project. |
| Other potential sources of leakage.<br><br>Double counting was determined as follows. | Besides the sources of leakages required by the methodology, Mirador accounts for other sources of leakage that are described below:<br><br>This source of leakage happens when the presence of another ICS is found in project households. This source of leakage will be determined as follows:<br><br>Leakage due to double counting =(total number of HHs surveyed for the presence of another ICS ÷ total number of HHs surveyed in which another ICS was present ) * net stoves |

| | |
|---|---|
| Leakage due to Transportation. | in operation * annualized average of ERs/stove<br><br>This approach has been approved by VVBs and GS/SC in previous verifications from the previous crediting period.<br><br>Transportation and maintenance records will be kept. Records include all vehicle types in use by the project at all levels (large trucks, light trucks and motorcycles). Mileage records track miles driven on an ongoing basis for each vehicle, and the results are tabulated annually. A standard online carbon calculator is used to calculate the total $CO_2$ produced from driving the total distance driven. That figure is compared against the total emissions being claimed during the verification period in order to determine leakage.<br><br>In all previous verifications from the previous crediting period for VPA1, leakage due to transportation was determined to be less than 0.1% of the total ERs (de minimis).<br><br>This approach has been approved by VVBs and GS/SC in previous verifications from the previous crediting period. |

**Adjustment factors**

No adjustment factors are anticipated for the crediting period. The project activity has been working in a steady manner incorporating improvements in operation, management and monitoring.

**Changes required for methodology implementation in 2nd and 3rd crediting periods**

The present VPA-DD corresponds to the third crediting period of the activity. The baseline fuel consumption is reassessed following the latest version of the applicable methodology available.

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

**Ex ante calculations related to the outcomes of SDG 13, SDG15**

A detailed ex-ante calculation of the outcome for SDG 13 and SDG15 is provided in a separate excel file. For data/parameters available before design certification, values contained in section B.6.3 are used and for data/parameters not available before design certification, the estimates contained in section B.7.1 have been used.

**Ex ante calculations related to the outcomes of SDG1, SDG2, SDG3, SDG4, SDG5, SDG7, SDG8**

The impact monitoring relating to those SDGs is also made through a qualitative evaluation of the sample families during the annual Usage Survey, Kitchen Performance Test, and project management data as described above in section B.6.2.

| Year | Baseline estimate | Project estimate[45] | Net benefit |
|---|---|---|---|
| 2023 | 658,789 | 437,512 | 221,277 |
| 2024 | 1,016,351 | 674,976 | 341,375 |
| 2025 | 1,101,423 | 731,475 | 369,948 |
| 2026 | 1,261,836 | 838,007 | 423,829 |
| 2027 | 1,390,407 | 923,394 | 467,013 |
| 2028 | 1,428,465 | 948,669 | 479,796 |
| 2029 | 1,441,492 | 957,321 | 484,171 |
| 2030 | 479,339 | 318,337 | 161,002 |
| **Total** | **8,778,102** | **5,829,692** | **2,948,410** |
| **Total number of crediting years** | **7** | | |
| **Annual average over the crediting period** | 1,254,015 | 832,813 | 421,201 |

[45] Including leakage

The crediting period defined for this VPA1 follows the GS POA requirements that states the following (see GS PROGRAMME OF ACTIVITY REQUIREMENTS AND PROCEDURES, v 2.0, Section 8.9 | Renewal of PoA & VPAs, paragraph 8.9.4, option a)

> *8.9.4 | All VPAs shall also be renewed following 5 year certification cycle. The VPAs that were included in the PoA - registered under earlier versions of Gold Standard;*
>
> *a. VPAs included within the first crediting cycle of PoA (i.e., 7 years) shall follow the same 7 year, twice renewal model.*

This is the case for VPA1, which was included in the PoA registered under earlier version of the standard. Therefore, the duration of the crediting period is 7 years.

## B.7. Monitoring plan

B.7.1. Data and parameters to be monitored

**SDG 13**

| **Data/parameter ID ICS 15** | |
|---|---|
| Data / Parameter | Avoidance of double counting or double claiming among project technology end users |
| Unit | NA |
| Description | Evidence of avoidance of double counting or double claiming with project technology end users |
| Source of data | Samples of carbon title waiver forms signed by end users ('Use & Maintenance Manual') |
| Value(s) applied | NA |
| Measurement methods and procedures | The CME provides a 'Use & Maintenance Manual' to every project beneficiary. This manual indicates the acceptance of carbon rights transfer to Proyecto Mirador.<br><br>The project follows the GS Community Services Activities Requirements including the following requirements (3. GENERAL ELIGIBILITY CRITERIA, 3.1.4, page 7) regarding the legal ownership. |

| | |
|---|---|
| | Proyecto Mirador discusses the transfer of carbon rights in the LSC meeting, during the socialization meetings before works begin in a specific community, during the supervisory visit before the stove is installed, and at the time of the construction, meeting the FPIC and LSC meeting requirements.<br><br>Section B.2 above, shows an excerpt from the manual where the carbon rights waiver statement is included. |
| Monitoring frequency | Monitored whenever project technology is built. |
| QA/QC procedures | All the ejecutores and supervisors are trained to always deliver this information to people interested to join the program. Training manuals are made available to the VVB. |
| Purpose of data | Meet eligibility criterion. |
| Additional comment | NA |

| **Data/parameter ID ICS 16** | |
|---|---|
| Data / Parameter | Presence of stove stacking |
| Unit | NA |
| Description | Descriptive statistics of the presence and usage practices of baseline and other non-project-technology by project technology end users |
| Source of data | Usage Survey- use of other stoves, to capture cooking habits and stove usage of households in the region, including quantification of use of baseline devices, by formulating questions and/or collecting evidences to determine the frequency of usage of both the project devices and baseline devices, or monitoring surveys to capture the number of meals cooked. |
| Value(s) applied | NA |
| Measurement methods and procedures | Annual monitoring survey |
| Monitoring frequency | Annual |
| QA/QC procedures | - |
| Purpose of data | Meet monitoring criterion. |
| Additional comment | The baseline assessment includes insights on the use of other cooking technologies (LPG and Electric stoves). The |

| | |
|---|---|
| | baseline survey revealed that the vast majority of the interviewees reported using of the stove only for simple and quick activities, mostly, heating water for preparing coffee or reheating meals. Regarding the intensity of use, LPG and electric stove are not used more than 30 minutes per day, whereas the weighted average use of the traditional fogon was calculated as 7.42 hours per day (see details in the section B.4 above and the Baseline Report). In comparison with the time of use from electric and gas stoves, it is clear that people intensively use the traditional fogon as the main device for cooking. The CME concluded the baseline scenario identified is the same as defined originally for the programme.<br>The annual monitoring survey will include a question about the use of other stoves and time of use.<br>It is not expected that the pattern of use of LPG and Electric stoves will change, especially as regards an increase in the intensity of use. In any case, it is likely the use of these stoves is reduced thanks to the project.<br>Since the baseline and project fuel consumption is based on the tonnes of fuel per household per day, there is no need to make adjustments based on the percentage of meals or cooking performed with other technologies. |

| **Data/parameter ID ICS 18** | |
|---|---|
| Data / Parameter | $Pb,\_y\_$ |
| Unit | Tonnes per household per day (t/hh/day) |
| Description | Quantity of fuel that is consumed in baseline scenario b during year |
| Source of data | Baseline performance field tests |
| Value(s) applied | 0.013130 |
| Measurement methods and procedures | Baseline performance field tests aligned with the methodology requirements. |
| Monitoring frequency | At the start of crediting period (fixed for the entire crediting period) |
| QA/QC procedures | Compliance with the general requirements for sampling as per the Section 4.4, general requirements for QA/QC of the Section 4.5 and Annex 2 Kitchen performance test of the methodology. |
| Purpose of data | Calculate the emission reductions |

| | |
|---|---|
| Additional comment | Although the project includes progressive installation, no changes are expected in the characteristics of the end users related to cooking practices and/or living standards. Therefore, the value of this parameter is fixed for the entire crediting period.<br>Although this parameter is fixed, it has been included in this monitoring section to follow the same order from the methodology, where it is included in the monitoring section 4.2.<br>The value shown (0.013130 t/hh/day) will be updated once fresh baseline KPTs are done on time for the first periodic verification. This is aligned with the monitoring schedule in Annex 3 of the methodology, which indicates monitoring tasks must be completed prior to the first verification during which the given project or baseline scenario is used for crediting. |

| **Data/parameter ID ICS 19** | |
|---|---|
| Data / Parameter | $Pp,\_y\_$ |
| Unit | Tonnes per household per day (t/hh/day) |
| Description | Quantity of fuel that is consumed in project scenario b during year |
| Source of data | Project performance field tests |
| Value(s) applied | 0.008554683 |
| Measurement methods and procedures | Project performance field tests aligned with the methodology requirements. |
| Monitoring frequency | Updated every two years, or more frequently.<br>The KPT values are valid for two years and may be applied before or after the period; however, the gap between the start dates of first KPTs and second KPTs shall not be more than two years. |
| QA/QC procedures | Compliance with the general requirements for sampling as per Section 4.4, general requirements for QA/QC of Section 4.5 and Annex 2 Kitchen Performance Test. |
| Purpose of data | Calculate the emission reductions |
| Additional comment | The value shown is the weighted Project fuel consumption calculated in the last verification from the previous crediting period. The value will be updated once fresh project KPTs are done on time for the first periodic verification. This is aligned with the monitoring schedule in the Annex 3 of the methodology which indicates |

| | |
|---|---|
| | monitoring tasks must be completed prior to the first verification during which the given project or baseline scenario is used for crediting. |

| **Data/parameter ID ICS 20** | |
|---|---|
| Data / Parameter | $SFSp,\_b,\_y\ \_$ |
| Unit | Tonnes per household per day (t/hh/day) |
| Description | Specific fuel savings for an individual project technology of baseline b/project p pair in year y |
| Source of data | Calculated from Pb,y, Pp,y |
| Value(s) applied | 0.0045754 |
| Measurement methods and procedures | Project performance field tests aligned with the methodology requirements. Weighted Average Fuel Saving (all stove ages inclusive). |
| Monitoring frequency | Updated every two years, or more frequently |
| QA/QC procedures | Compliance with the general requirements for sampling as per the Section 4.4, general requirements for QA/QC of the Section 4.5 and Annex 2 Kitchen performance test of the methodology. See details of KPTs procedure below in the section B.7.<br>Cross-check with proportional efficiency of baseline and project technology. |
| Purpose of data | Used to calculate Specific Fuel Savings. |
| Additional comment | The baseline and project field test data must be analysed in combination to estimate the average fuel savings per technology unit. Whenever the baseline fuel and project fuel are the same, the statistical analysis can be conducted with respect to fuel savings per technology unit. |

| **Data/parameter ID ICS 26** | |
|---|---|
| Data / Parameter | $Up,\_y\ \_$ |
| Unit | Percentage |

| | |
|---|---|
| Description | Weighted average usage rate in project scenario p during year y (the number of stoves that have fallen out of use in a given age group) |
| Source of data | Annual monitoring survey (usage survey) |
| Value(s) applied | 92.98% |
| Measurement methods and procedures | Surveys compiled by handheld device and uploaded to Salesforce.com database |
| Monitoring frequency | Annual |
| QA/QC procedures | Compliance with the general requirements for sampling (Section 4.4) and general requirements for QA/QC (Section 4.5) |
| Purpose of data | Calculate emission reductions |
| Additional comment | The usages rates will be in alignment with the GS<br><br>Requirements and Guidelines: Usage Rate Monitoring for carrying out usage surveys for projects implementing improved cooking devices. |

| **Data/parameter ID ICS 27** | |
|---|---|
| Data / Parameter | ID 6 / $Np,\_y\ \_$ |
| Unit | days |
| Description | Number of project technology-days included in the project database for baseline b/project p pair in year y |
| Source of data | Salesforce.com installation database. The value of Np,y is a function of the total stoves in use times days in operation and is updated on a monthly basis in the ER Calculations spreadsheet. |
| Value(s) applied | Value to be provided in Monitoring Report under the corresponding parameter |
| Measurement methods and procedures | Stoves are built in situ and a unique household account is created in the electronic database at the time of construction. Data integrity is checked and maintained by the Director of Technology in Honduras on an ongoing |

| | |
|---|---|
| | basis. Throughout the process by which data is gathered and verified in the field, the office team, under the supervision of the Director of Technology, cross checks and reviews the data with various data de-duplication tools, checking the data for quality, eliminating duplicates if found, and making sure that the required data is being captured on all records. The electronic database is automatically backed up. If any data is modified or changed, a record history is tracked.<br>The Salesforce.com database holds the following information to identify each household using project technology:<br>- Installation record<br>- Date of installation<br>- Location of installation<br>- Model/type of stove installed<br>- Model of use prior to installation of project stove<br>- Name of beneficiary<br>- Government ID number of client<br>- Unique serial number applied to each stove |
| Monitoring frequency | Ongoing, calculated monthly, reported annually. |
| QA/QC procedures | Cross check the results of the usage survey with the contents of the project database to confirm whether the project technology units surveyed are present at end user locations as expected, or not. Any discrepancy will be explained or corrected. |
| Purpose of data | Calculation of emission reductions |
| Additional comment | NA |

| **Data/parameter ID ICS 28** | |
|---|---|
| Data / Parameter | $LEp,\_y\ \_$ |
| Unit | $tCO_2e$ per year |
| Description | Assess leakage sources including:<br>(1) replacement of efficient household heating sources with less efficient fuel;<br>(2) continued use of baseline stove after installation;<br>(3) double counting |

| | |
|---|---|
| Source of data | Annual monitoring survey (sustainability and leakages survey) |
| Value(s) applied | Value to be provided in Monitoring Report under the corresponding parameter |
| Measurement methods and procedures | Survey, on an ongoing basis, 1 of every 100 new Dos por Tres stove owners. Questionnaires to be administered by Mirador Supervisors and data kept in Salesforce.com database |
| Monitoring frequency | Every two years.<br>The CME can monitor and report leakage more frequently e.g., annually. |
| QA/QC procedures | Compliance with the general requirements for sampling of the applied methodology. |
| Purpose of data | Calculation of leakage |
| Additional comment | N/A |

| **Data/parameter ID ICS 30** | |
|---|---|
| Data / Parameter | $LEp,\_y\ \_$ – Leakage due to Transportation |
| Unit | $tCO_2e$ per year |
| Description | Assess leakage due to transportation |
| Source of data | Mileage records; transportation and maintenance records |
| Value(s) applied | Value to be provided in Monitoring Report under the corresponding parameter |
| Measurement methods and procedures | Vehicle odometer checks at each instance of reporting, compiled and tabulated by support staff in central office |
| Monitoring frequency | Mileage records track miles driven on an ongoing basis for each vehicle, and the results are tabulated annually |
| QA/QC procedures | Vehicle odometer checks at each instance of reporting |
| Purpose of data | Calculate emission reductions |
| Additional comment | It should also be noted that due to the reduction in fuelwood use, the project is expected to result in reduced leakage emissions due to the reduced need for transportation of fuel |

**SDG 1**

| **Data/parameter ID SDGs 31** (SDG 1) | |
|---|---|
| Data / Parameter | Average household savings, i.e., decrease in expenditure on basic services such cooking, lighting, drinking |
| Unit | US Dollars |
| Description | For clients who purchase fuelwood, PP will monitor how much money clients save due to the reduction in fuelwood consumption and track how the saved funds are spent |
| Source of data | Responses to qualitative surveys |
| Value(s) applied | Value to be provided in Monitoring Report under the corresponding parameter |
| Measurement methods and procedures | Using handheld devices, Supervisors collect surveys which are stored and reported in a Salesforce.com database. Randomness of sample maintained by surveying every nth client who receives a supervisory visit from Mirador |
| Monitoring frequency | Ongoing |
| QA/QC procedures | Surveys are taken onsite, results are corroborated by visual inspection and tracked using Salesforce.com database |
| Purpose of data | Assess sustainability |
| Additional comment | N/A |

**SDG 3**

| **Data/parameter ID SDGs 32** (SDG 3) | |
|---|---|
| Data / Parameter | Number of households that observed reduction in PM2.5 & carbon monoxide (CO) concentration reductions |
| Unit | µg/m3 |
| Description | Measurement of the reduction of personal exposure to PM2.5 (as opposed to the overall reduction to PM2.5) resulting from cookstove intervention |
| Source of data | Lefebvre, Olivier, "Health Impact of Proyecto Mirador 2x3 Stove" (2018) |
| Value(s) applied | 104 |

| | |
|---|---|
| | The exposure to PM2.5 is reduced from 221 µg/m3 to 117 µg/m3 (47% reduction) = 221 – 117 = 104 |
| Measurement methods and procedures | Exposure to PM2.5 was measured in real-life control and intervention households using a the HAPEx Nano light scattering nephelometer. This device provides real time readings on PM2.5 and takes a new measurement every minute. It was worn by study participants in control and intervention groups during a 48-hour period. |
| Monitoring frequency | Measured once (see "source of data"), reported annually. |
| QA/QC procedures | - |
| Purpose of data | Assess sustainability |
| Additional comment | Due to the cost and complexity of such studies, PP will maintain original monitored figures unless it is determined that baseline or project conditions have materially changed or testing methodologies and/or assessment equipment have improved, in which case PP may opt to further assess the parameter. |

**SDG 4**

| **Data/parameter ID SDGs 33** (SDG 4) | |
|---|---|
| Data / Parameter | Number of training hours provided for employees (full-time, part-time, or temporary), disaggregated per gender |
| Unit | Hours/year |
| Description | Demonstrate the transfer of useful and marketable job skills to local direct and indirect employees through training records |
| Source of data | Human resource training records |
| Value(s) applied | Value to be provided in Monitoring Report under the corresponding parameter |
| Measurement methods and procedures | Human resources specialist tracks all hours spent by Mirador employees and associates in various types of training and/or certification programs |
| Monitoring frequency | Ongoing |

| | |
|---|---|
| QA/QC procedures | Human resources specialist tracks all hours spent by Mirador employees and associates in various types of training and/or certification programs |
| Purpose of data | Assess sustainability |
| Additional comment | As of 2021, Proyecto Mirador has adopted online trainings for theoretical aspects for technicians and inspectors, making such training processes more efficient for the candidates and Proyecto Mirador in time, learning and resources.[46] |

**SDG 5**

| **Data/parameter ID SDGs 34** (SDG 5) | |
|---|---|
| Data / Parameter | 5.5.2 Proportion of women in managerial positions |
| Unit | % |
| Description | Employment records showing the proportion of women employed, by job type |
| Source of data | Human resources specialist |
| Value(s) applied | Value to be provided in Monitoring Report under the corresponding parameter |
| Measurement methods and procedures | Ongoing documentation of direct and indirect employee universe by human resources specialist |
| Monitoring frequency | Ongoing |
| QA/QC procedures | Human resource specialist maintains ongoing log of direct and indirect employees by employee type |
| Purpose of data | Assess sustainability |
| Additional comment | While the gender balance of Mirador's managerial and office positions is rather even, despite sincere efforts it is extremely difficult to find women who are willing to fill stove construction jobs—partly because it is physically |

[46] Details provided in document Descriptive summary NeoLMS Platform, available to VVB.

| | |
|---|---|
| | very taxing, but especially because it involves long periods of time away from home and family. We are continually striving to find ways to creatively address this issue. |

| **Data/parameter ID SDGs 35** (SDG 5) | |
|---|---|
| Data / Parameter | Average time saving associated with cooking time and fuel collection |
| Unit | % |
| Description | Refers to the time saved due to the adoption of project technology.<br><br>While saving time on unpaid tasks like collecting fuel can be beneficial for both men and women, it can be especially important for women, as they often bear a much larger portion of the household's unpaid care work burden than men (e.g., caring for family members, homestead food production, cleaning, and cooking).<br><br>In order to understand whether clean and/or efficient cookstove or fuel is contributing to more gender-equitable development, it is important to know how users are spending their saved time and whether the act of saving time on fuel collection actually contributes to their well-being and empowerment, or if that time is just replaced with another household chore. |
| Source of data | Responses to qualitative surveys |
| Value(s) applied | Value to be provided in Monitoring Report under the corresponding parameter |
| Measurement methods and procedures | Using handheld devices, Supervisors collect surveys which are stored and reported in a Salesforce.com database. Randomness of sample maintained by surveying every nth client who receives a supervisory visit from Mirador |
| Monitoring frequency | Ongoing |
| QA/QC procedures | Surveys are taken onsite, results are corroborated by visual inspection and tracked using Salesforce.com database |
| Purpose of data | Assess sustainability |
| Additional comment | N/A |

**SDG 7**

| **Data/parameter ID SDGs 36** (SDG 7) | |
|---|---|
| Data / Parameter | 7.1.2 Proportion of population with primary reliance on clean fuels and technology |
| Unit | % |
| Description | This indicator is defined as the number of people using clean fuels and technologies for domestic cooking, heating and lighting divided by total population reporting any cooking, heating or lighting. It is expressed as a percentage. |
| Source of data | Responses to qualitative surveys |
| Value(s) applied | Value to be provided in Monitoring Report under the corresponding parameter |
| Measurement methods and procedures | Using handheld devices, Supervisors collect surveys which are stored and reported in a Salesforce.com database. Randomness of sample maintained by surveying every nth client who receives a supervisory visit from Mirador. |
| Monitoring frequency | Ongoing |
| QA/QC procedures | Surveys are taken onsite, results are corroborated by visual inspection and tracked using Salesforce.com database |
| Purpose of data | Assess sustainability |
| Additional comment | Since project inception, 217,957 stoves[47] (Including both first and second crediting periods) have been installed across 16 Departments (provinces) in Honduras. Based on a reported average of 4.8 people per household, this translates to 1,046,193 people served — roughly 10% of the population of Honduras.<br>Honduras population in 2021: 10,062,994 (https://data.worldbank.org/indicator/SP.POP.TOTL?locations=HN) |

**SDG 8**

[47] 217,957 stoves based on the most recently verified data at the time of submission, which corresponds to the last Verification Period (12th VP, from 01/12/2020 to 30/11/2021)

| **Data/parameter ID SDGs 37** (SDG 8) | |
|---|---|
| Data / Parameter | Total number of jobs |
| Unit | Number of employees |
| Description | Employment records showing the number of people employed by the project (direct and indirect) |
| Source of data | Human resources specialist |
| Value(s) applied | Value to be provided in Monitoring Report under the corresponding parameter |
| Measurement methods and procedures | Ongoing documentation of direct and indirect employee universe by human resources specialist |
| Monitoring frequency | Ongoing |
| QA/QC procedures | Human resource specialist maintains ongoing log of direct and indirect employees by employee type |
| Purpose of data | Assess sustainability |
| Additional comment | N/A |

**SDG 15**

| **Data/parameter ID SDGs 38** (SDG 15) | |
|---|---|
| Data / Parameter | Total non-renewable wood fuel saved |
| Unit | Tonnes/year |
| Description | Refers to the total amount of non-renewable fuel savings due to displacement or energy efficiency improvements of baseline technology |
| Source of data | Project activity |
| Value(s) applied | 1.67 (0.0045754 t/hh/day) |
| Measurement methods and procedures | Direct measurement and or surveys following methodology requirements |
| Monitoring frequency | Annual |

| | |
|---|---|
| QA/QC procedures | - |
| Purpose of data | Assess sustainability |
| Additional comment | N/A |

### B.7.2. Sampling plan

>>

The sampling plan defined for monitoring aligns with the requirements from the methodology, specifically, section 4.3. Below, there is an explanation of the considerations involved with establishing the sampling plan.

**Representativeness:** Baseline and project surveys are carried out via in-person interviews with a robust sample of end users with, and without project technology, respectively, that is representative of the end users targeted in the project activity.

**Sample Sizing:** The baseline and project survey is carried out for the baseline and the project[48] scenario using representative and random sampling, following the methodology's guidelines for minimum sample size:

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

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

- Client's full name
- Government ID
- Phone Number
- Village

[48] The project activity includes a single scenario, traditional fogon where firewood is used as the main fuel for cooking, replaced by a Dos por Tres improved stove.

- Full Address
- Type of stove to be replaced (Old 2x3, traditional cookstove)
- Spouse's phone number
- GPS Location
- Number of men, women, boys and girls living in the house
- Client classification (green, yellow or red) according to level of support needed.
- Picture of the cookstove to be replaced (traditional cookstove or malfunctioning improved cookstove).
- Picture of printed form with client's consent and signatures.
- Socioeconomic questions (type of floor, roof and if the client owns vehicle).

For data capturing, Mirador uses smartphone devices with the TaroWorks application linked to the Salesforce platform to enter and store information. Mirador has progressively incorporated IT technology including features to reduce human error and increase data integrity. An example of this is the recent in-house development using Google Vision API to read MRZ information from the Government Identification card for data capturing and identity verification. This reduces drastically the typos in data capture of identification information and helps prevent duplication of records.

**General requirements for sampling:**

Either sampling will be applied to determine mean (average) parameter values or proportion (yes/no) parameter values in either case, a statistically valid sample will be applied following the latest version of the CDM Standard for sampling and surveys for CDM project activities and programmes of activities. The confidence interval and margin of error will follow the methodology's requirements.

For determination of the parameter $SFSp,b,y$, there are two valid options for the statistical analysis. In all cases, sample sizes must be derived following the general requirements for sampling and be greater than 30. The two options are:

a) 90/30 rule. When the sample sizes are large enough to satisfy the "90/30 rule," i.e. the endpoints of the 90% confidence interval lie within +/- 30% of the estimated mean, overall emission reductions can be calculated on the basis of

the estimated MEAN annual emission reduction per unit or MEAN fuel annual savings per unit.

b) 90% confidence rule. When the sample sizes are such that the "90/30 rule" is not complied with, the emission or fuel saving result is not the mean (or average) test result, but a lower value equivalent to the LOWER BOUND of the one-sided 90% confidence interval.

The table below summarizes the approaches followed for parameters defined through sampling method.

| Parameter | Type of survey/test | Minimum requirements | Considerations |
|---|---|---|---|
| Baseline Survey | Baseline survey for re-assessment of baseline scenario | Group size >1000, minimum sample size 100 | The sample size of the baseline survey carried out was 305. The sample size used was greater than the minimum required (100) by the methodology. This is survey is done once at the time of the renewal. |
| $SFSp,b,y$ Pb,y (baseline KPT) | Baseline KPT to determine fuel savings | Sample to be greater than 30 | The sample size to be used will be greater than 30, and will be aligned with the CDM Guideline Sampling and surveys for CDM project activities and programmes of activities, Version 04.0, following the approach for single sampling plan for a homogeneous PoA, for mean value parameter. Whenever possible, the Appendix 6. Sample size calculator provided by the guidelines will be used. |
| $SFSp,b,y$ Pp,y (project KPT) | Project KPT to determine fuel savings | Sample to be greater than 30 for each age cohort | Simple random sampling is employed for each age cohort; testing is transparent, easily replicable and conservative; and accounts for the impact of day-to-day variation in cooking practices.<br><br>At the time of PoA renewal, Mirador already had a large base of existing KPT data for stove |

| | | | |
|---|---|---|---|
| | | | ages ranging from 1 month to 5.5 years in age. Rather than jettison the existing research, Mirador has continued to aggregate new KPTs to the existing data for each cohort. Geographic diversity is carefully considered so that the data for each age group becomes more diverse over time. |
| Up,y | Usage survey | A minimum sample size of 30 is applied for proportion parameter values | The approach followed aligns with the Multi-stage sampling approach from the CDM sampling guidelines, where samples are taken from cluster units as primary sampling, divided by age cohorts. In this case the clusters are villages and the sampling units within the clusters are stoves.[49] The multi-stage sampling has been expanded to two stages, the villages and the cooking devices.<br><br>In case a circumstance changes during the course of the crediting period, e.g., restricted mobility, use of CSM devices, etc., a different sampling approach may be used. In any case, a statistical representative approach will be used following the CDM guidelines for sampling.<br><br>Random sampling selection is performed through Mirador Force tool, an internal IT development that ensures traceability, standardization, and scrutiny on randomness to perform the usage survey.[50] |
| LE,y; | Monitoring survey | A minimum sample size of | The supervisors count the number of stoves built, and once |

[49] Following the definition in Guideline Sampling and surveys for CDM project activities and programmes of activities Version 04.0, section 5.5. Multi-stage sampling, paragraph 22.
[50] Details provided in document Guidelines for random sampling in usage surveys, available to VVB.

| | | | |
|---|---|---|---|
| Presence of stove staking; Average household savings (SDG1); Average time saving associated with cooking time and fuel collection (SDG 5);<br><br>Proportion of population with primary reliance on clean fuels and technology (SDG 7) | | 30 is applied for proportion parameter values | every 100 stoves built are completed (the 100th, 200th, 300th and so on), the hundredth stove is selected to receive the leakage and sustainability survey. The sample size depends of the number of stoves built, being always higher than 30 samples, which is the minimum sample size required. |

For the KPTs the sample size will be aligned with a COV (typically in the range of 0.5-1.0), no less than 30 samples. In the case of a pair, the 90/30 sample rule will be met. If a single sample approach is applied, the 90/10 rule as per the methodology will be applied.

Based on the KPT results (to be ready on time for verification), the CME will decide whether to apply cross sampling or a sampling group for each VPA. In any case, the CME will meet the relevant precision/confidence level.

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

>>

The sampling plan follows the requirements stated in the methodology applied (TPDDTEC v4.0), which are summarized below:

For the usage surveys (to be completed annually) the minimum total sample size is 100, with at least 30 samples for project technologies of each age being credited. To ensure conservativeness, participants in a usage survey with technologies in the first year of use (age 0-1) 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.

It may be the case that the drop off rate is lower in the second year than in the first year, reflecting possible difficulties in the early adoption of a new technology.

Thus, if technologies of ages 1-7 are credited, the usage survey must include 30 representative samples from each age group for a total of 210 samples. The resulting usage parameter should be weighted based on the proportion of technologies in the total sales record for each age.

# SECTION C. DURATION AND CREDITING PERIOD

## C.1. Duration of project

C.1.1. Start date of VPA

>>

01/05/2009

C.1.2. Expected operational lifetime of VPA

>>

21 years (7 years x 3 crediting periods)

## C.2. Crediting period of project

C.2.1. Start date of crediting period

>>

01/05/2023

C.2.2. Total length of crediting period

>>

01/05/2023 to 30/04/2030

The length of the crediting period is 7 years.[51] This is the 2nd and last renewal.

[51] Programme of Activity Requirements and Procedures, version 2.0; Paragraph 8.9.4 | a

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

## D.1. Safeguarding Principles that will be monitored

A completed Safeguarding Principles Assessment is in Appendix 1, ongoing monitoring is summarised below.

| Principles | Mitigation Measures added to the Monitoring Plan |
|---|---|
| **Principle 9.4 Release of pollutants** | A small amount of GHGs (including carbon monoxide, oxides of nitrogen, and ozone) are released into the air as a result of plancha welding operations. Chimney production does not involve any welding. However, such emissions would also have occurred in the baseline scenario and in any case, are negligible as compared to the reduction of GHGs associated with the stove intervention. Mirador takes appropriate safety measures for welding activities, including personal protective equipment (gloves, mask, eye protection, etc.) and ventilated working areas. |

All other principles are not applicable (N/A); therefore, no mitigation measured is required.

## D.2. Assessment that project complies with GS4GG Gender Sensitive requirements

| | |
|---|---|
| Question 1 - Explain how the project reflects the key issues and requirements of Gender Sensitive design and implementation as outlined in the Gender Policy? | The principle of gender equality is enshrined in Honduras´ *Law of Equal Opportunities for Women*.[52] The Law grants equality to women and empowers the State to adopt measures to ensure conditions of equality in all spheres of |

[52] *Ley de Igualdad de Oportunidades para la Mujer.* Available at: https://pdba.georgetown.edu/Parties/Honduras/Leyes/LeyMujer.pdf

| | |
|---|---|
| | society. Within the framework of a democratic policy, the laws, development policies, plans and programmes have aimed at women's advancement in different spheres.[53, 54]<br><br>*National Women's Policy, II Plan for Equality and Gender Equity of Honduras 2010-2022* mainstream a Gender Perspective in the Development Process for the different areas:<br><br>• Economic empowerment of women: financial education, economy, employment.<br>• Social empowerment of women: education, health, environment, social and political participation, violence-free life, rights of the girl, access to information, science and technology, among others.[55]<br><br>The implementation of the project positively impacts the development of women and economy, health, environment, and others by:<br>-Dos por Tres Stoves have a positive impact in changing the lifestyles of rural women allowing for cleaner air inside their homes and reducing the hardship of |

[53] Idem
[54] *Política Nacional de la Mujer. II Plan de Igualdad y Equidad de Género de Honduras 2010-2022.* Available at: https://siteal.iiep.unesco.org/sites/default/files/sit_accion_files/hn_0315.pdf
[55] Idem

| | |
|---|---|
| | the women in cooking, cleaning and collecting fuel wood.<br>- Inclusion of women with no hindrance to human rights and fundamental freedom by women on equal basis to men. Equal access to participation and decision making of women in the project.<br>- Providing positive impact for the economic and social development of women.<br><br>The project respects the key gender issues and requirements of gender-sensitive design and implementation of the project. The project is mostly implemented for rural families and there is no discrimination of caste, creed, or religion for selection of families. |
| Question 2 - Explain how the project aligns with existing country policies, strategies and best practices | The implementation positively impacts in the development of women and economy, health, environment, participation, and other processes that are prioritized in the *National Women's Policy, II Plan for Equality and Gender Equity of Honduras 2010-2022.*[56] |
| Question 3 - Is an Expert required for the Gender Safeguarding Principles & Requirements? | No, an expert is not required for the Gender Safeguarding Principles and Requirements. Gender requirements are addressed in the Safeguarding Principles assessment. |

[56] Idem

| | |
|---|---|
| Question 4 - Is an Expert required to assist with Gender issues at the Stakeholder Consultation? | No, an expert was not required to assist with gender issues at the Stakeholder Consultation. |

# SECTION E. SUMMARY OF LOCAL STAKEHOLDER CONSULTATION

No local stakeholder consultation requirements for the renewal of crediting period.

## E.1. Summary of stakeholder mitigation measures

>>

## E.2. Final continuous input / grievance mechanism

| Method | Include all details of Chosen Method (s) so that they may be understood and, where relevant, used by readers. |
|---|---|
| Continuous Input / Grievance Expression Process Book (mandatory) | Proyecto Mirador operational headquarters:<br>Proyecto Mirador<br>Col. Suyapa, Barrio Gualjoco<br>Santa Barbara, Honduras |
| GS Contact (mandatory) | help@goldstandard.org<br>info@proyectomirador.org<br>rafael.mendoza@proyectomirador.org |
| Other (telephone) | +504 9463-9966 for SMS<br>+504 2643-1868 Phone<br>+504 9917-6483 WhatsApp |

Mirador's Use and Maintenance Brochure, which is given to stove beneficiaries after stove installation includes Mirador's contact information.

When stakeholder feedback is received, it is either submitted directly by beneficiaries or gathered by Mirador's Supervisors and Ejecutores. Responses and follow up interactions are tracked appropriately in Mirador's Electronic Feedback Log using Salesforce.com. All comments logged in the physical process book (kept in Mirador's office) are added to the electronic system as well. The Electronic Feedback Log is provided to the VVB for review at each monitoring period.

# SECTION F. ELIGIBILITY AND INCLUSION CRITERIA FOR VPAS INCLUSION

>>

The below table shall be completed for all VPAs.

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

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

| No. | Eligibility Criterion | Description/ Required condition | Description of the VPA in relation to the criteria, Means of Verification and Supporting evidence for inclusion |
|---|---|---|---|
| 1 | Project Boundary and VPA Location | VPA shall involve the distribution of ICS within the geographical boundary of Host Countries defined in the PoA | VPA clearly states VPA project boundary under Section A.2, "Location of VPA", and VPA project boundary falls within PoA project boundary. VPA project boundary is Honduras, which falls within PoA project boundary.<br><br>Stoves are built in situ and a unique household account is created in the electronic database at the time of construction, including a GPS mark. GPS markings are kept for each stove installed and available to VVB for verification to ensure all stoves are within VPA project boundary. |
| 2 | Avoid double counting | VPA shall apply a unique identifier to each cookstove installed and apply routine data checks and other management protocols that ensure | Stoves are built in situ and a unique household account is created in the electronic database at the time of construction, including a GPS mark, so that if there is another |

| | | | |
|---|---|---|---|
| | | double counting is avoided. | similar activity within the same target area, stoves from the other project cannot possibly be counted under Mirador's activity. Likewise, Mirador stoves are not portable, so they cannot be confused with stoves disseminated by another project. Electronic database is available to VVB for verification containing individual records for each stove, each with a unique identifier automatically generated by database. |
| 3 | Start date | The start date of each VPA shall be the first date of stove construction. | Start date of VPA: 01/05/2009<br><br>Start date of 3rd crediting period (last renewal): 01/05/2023<br><br>All stove installations are individually tracked on an electronic database that is available to VVB for validation. |
| 4 | Methodology | VPA uses approved Gold Standard Methodology Technologies and Practices to Displace Decentralized Thermal Energy Consumption, Version 4.0. | VPA states methodology used under Section B.1, under "Reference of approved methodology (ies)." This VPA renewal utilizes Gold Standard Methodology Technologies and Practices to Displace Decentralized Thermal Energy Consumption, Version 4.0.<br><br>Other methodological tools applied:<br>• CDM tool for the Demonstration and Assessment of Additionality, version 7.0.0<br>• GS Cookstove Usage Rate Guidelines, Version 2.0 |

| | | | |
|---|---|---|---|
| | | | • Guideline CDM Sampling and surveys for CDM project activities and programmes of activities, version 4.0.<br>• CDM TOOL30 Methodological tool. Calculation of the fraction of non-renewable Biomass, version 04.0<br><br>Applicable requirements of methodology are articulated in Section B.2, "Applicability of methodology (ies)" and documented throughout VPA. Updated baseline scenarios are articulated in Section B.4, "Establishment and description of baseline scenario"; and other regulatory documents documented throughout VPA. |
| 5 | Additionality | VPA must demonstrate that the project meets additionality requirements of the Gold Standard. | This VPA demonstrates additionality using the CDM Tool for the demonstration of additionality, version 7.0.0., using Investment Barrier Analysis (Section B.5 "Demonstration of additionality").<br><br>VPA demonstrates that in the absence of project activity, baseline conditions (installation of the traditional cookstove) would persist. |
| 6 | Local Stakeholder Consultation | VPA shall conduct a Local Stakeholder Consultation (LSC) that follows the GS LSC guidance. | This VPA held its LSC in 2008 in establishment of the PDD. Since 2012 separate community stakeholder meetings have been held in advance of stove construction in every |

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| | | | single village where stoves are built. This means Mirador has conducted numerous stakeholder meetings in all the Departments of Honduras where stoves are built, giving local government leaders, business owners, educators, beneficiaries and others the opportunity to learn about Mirador and voice any concerns. Stakeholder feedback is documented and Mirador responses are tracked on an ongoing basis. |
| 7 | Target group | VPAs shall target household or institutional users of inefficient biomass stoves. Beneficiaries may or may not include auxiliary non-biomass cookstoves to augment their cooking practices. | Kitchen surveys were conducted in 2007 (see Yale 2007 Report), in 2012 (see Third Verification Report), and in 2022 (see Baseline Report Renewal Crediting Period) confirming target users are household users of inefficient biomass stoves. Mirador verifies, before installation, that each stove user is a household user of a traditional *fogon*. |
| 8 | Ownership of ER credits | VPA shall be developed and implemented by the CME. In case contracted entities are retained to manage future VPAs, the contractual agreements between each partner and the CME will clearly establish ownership of emission reduction credits generated through the PoA as belonging to the CME. VPA shall clearly communicate to all end user beneficiaries, verbally and in writing, that the ownership of emission reductions shall reside with the CME. | This VPA is developed and implemented by the CME. This VPA is submitted directly by the CME to DOE for inclusion. VPA is managed by CME, so it is clear ERs are owned by CME.<br><br>Project beneficiaries are consistently informed that Proyecto Mirador owns all carbon credits issued as a result of emission reductions from all stoves installed. This is first articulated at the Community Meetings staged before stove construction begins in each area, then reiterated |

when beneficiaries are individually trained. The Mirador Use and Maintenance Brochure, which is given to stove beneficiaries after stove installation, also includes a written statement of Proyecto Mirador's ownership of carbon credits, and the consent of all beneficiaries is required as a precondition to stove installation.

"By accepting a new stove from Proyecto Mirador, you agree that any reductions in $CO_2$ emissions created by the stove are the property of Mirador."

# APPENDIX 1 - SAFEGUARDING PRINCIPLES ASSESSMENT

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

| Assessment Questions/ Requirements | Justification of Relevance (Yes/potentially/no) | How Project will achieve Requirements through design, management or risk mitigation. | Mitigation Measures added to the Monitoring Plan (if required) |
|---|---|---|---|
| **Principle 1. Human Rights** | | | |
| 1. The Project Developer and the Project shall respect internationally proclaimed human rights and shall not be complicit in violence or human rights abuses of any kind as defined in the Universal Declaration of Human Rights<br>2. The Project shall not discriminate with regards to participation and inclusion | No | The project is implemented respecting internationally proclaimed human rights and is not complicit in violence or human rights abuses of any kind as defined in the Universal Declaration of Human Rights. The project does not discriminate with regard to participation and inclusion as the efficient project stoves are freely distributed to the families selected in collaboration with the representatives of the local communities. | N/A |

| Principle 2. Gender Equality | | | |
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| 1. The Project shall not directly or indirectly lead to/contribute to adverse impacts on gender equality and/or the situation of women<br>2. Projects shall apply the principles of nondiscrimination, equal treatment, and equal pay for equal work<br>3. The Project shall refer to the country's national gender strategy or equivalent national commitment to aid in assessing gender risks<br>4. (where required) Summary of opinions and recommendations of an Expert Stakeholder(s) | No | The project activity does not endorse or apply any form of discrimination based on gender. Every beneficiary decides if they want the project cookstove. It is not foreseen that the project reduces or put at risk women's access to or control of resources, entitlements and benefits. Instead, as women are primarily responsible for firewood collection and cooking activities, they will have better control of resources (firewood and time will be saved) and stand to benefit the most from possible health improvements caused by the reduced smoke inhalation during the cooking activities. It is also not foreseen that the Project would adversely affect men or women in marginalised or vulnerable communities. There will be less burden on | N/A |

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| | | women, men and children, as less firewood for cooking needs to be collected. This will reduce the time burden on women and men in the socially isolating activity of collecting resources.<br><br>The Project takes into account gender roles and the abilities of women and men to participate in the decision/designs of the project activities. For example, the Stakeholder Consultation included both women and men participating in the consultation meeting. In fact, women's participation and engagement in the project (as they are primarily responsible for the cooking activities) is essential to the success of the project.<br><br>The Project will take into account gender roles and the abilities of women and men to | |

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| | | participate and benefit from the project activities. For example, the training/cooking demonstrations on using the new stoves and on their benefits will be targeted especially toward women who are traditionally responsible for the cooking activities.<br><br>The project does not contribute to an increase in women's workload or prevent them from engaging in other activities. In fact, the efficient cookstoves will reduce the firewood needs for daily cooking activities and will thereafter reduce women's and girls workload related to firewood collection, as well as free up time spent cooking due to the stove's efficiency. The project is not foreseen to reproduce or deepen discrimination against women. The women's role will be essential as the cookstove | |

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| | | users and they will enjoy the possibility of giving feedback regarding the project at a level equal to any other community member.<br><br>The project is not foreseen to limit women's ability to use, develop and protect natural resources. Instead, the use of the efficient cookstoves will reduce the firewood consumption and will thereafter provide the possibility of saving local natural wood resources.<br><br>The project activity will not expose women or girls to further risks or hazards. Instead, the risk related to the smoke inhalation during the cooking activities or the risks related to the firewood collection are foreseen to be reduced. | |

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| | | The Project will not directly or indirectly lead or contribute to adverse impacts on gender equality or the situation of women. In fact, the use of the efficient project cookstoves is foreseen to improve the general conditions of women and not to lead to any risk of contributing issues like sexual harassment/ exploitation, violence, human trafficking slavery, imprisonment, drudgery or restriction of women's rights or access to resources.<br><br>The Project will not have any impact on women's ownership rights to inherit and own land, homes and other assets.<br><br>The Project applies the principles of non-discrimination and equal treatment and equal pay for equal work. | |

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| | | For the project monitoring activities and for any other eventual paid or volunteer work the principle of equal pay for equal work will be applied and it will be organized in way to provide the conditions for equitable participation of men and women whenever possible. Project activity does not place any limitations on participating or benefiting from the Project depending on pregnancy, maternity/paternity leave or marital status.<br><br>The Project will not include any specific gender related risks. | |
| **Principle 3. Community Health, Safety and Working Conditions** | | | |
| 1. The Project shall avoid community exposure to increased health risks and shall not adversely affect the health of the | No | The project activity does not expose the community to increased health risks and does not adversely affect the health of workers and the community. In fact, the | N/A |

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| workers and the community | | improved cookstoves improve the health of households through the reduction of smoke and unhealthy airborne particles. | |
| **Principle 4.1 Sites of Cultural and Historical Heritage** | | | |
| Does the Project Area include sites, structures, or objects with historical, cultural, artistic, traditional or religious values or intangible forms of culture? | No | The project activity does not include sites, structures or objects with historical, cultural, artistic, traditional or religious value or intangible forms of culture.<br><br>The Project will provide improved cookstoves to the households in the project area and it does not require alteration, damage or removal of any historical, artistic, traditional, religious or cultural heritage issues. | **N/A** |
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| **Principle 4.2 Forced Eviction and Displacement** | | | |
| Does the Project require or cause the physical or economic relocation of peoples (temporary or permanent, full or partial)? | **No** | The project activity consists of distributing improved cookstoves and therefore no physical or economic | **N/A** |

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| >> | | relocation of peoples is involved. | |
| **Principle 4.3 Land Tenure and Other Rights** | | | |
| a. Does the Project require any change, or have any uncertainties related to land tenure arrangements and/or access rights, usage rights or land ownership?<br>b. For Projects involving land use tenure, are there any uncertainties with regards to land tenure, access rights, usage rights or land ownership? | **No** | Stove distribution does not require additional lands to be used and, therefore, does not require any change to land tenure arrangements and/or other rights. In fact, the aim of the project is to reduce the quantity of firewood consumed in the project area. | **N/A** |
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| **Principle 4.4 - Indigenous people** | | | |
| Are indigenous peoples present in or within the area of influence of the Project and/or is the Project located on land/territory claimed by indigenous peoples? | **No** | There may be indigenous people present within the area of influence. The project does not disturb territory claimed by indigenous people. | **N/A** |
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| **Principle 5. Corruption** | | | |
| 1. The Project shall not involve, be complicit in | No | The Project doesn't involve, is not complicit in, and does not | N/A |

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| or inadvertently contribute to or reinforce corruption or corrupt Projects | | inadvertently contribute to or reinforce, corruption or corrupt projects. | |
| **Principle 6.1 Labour Rights** | | | |
| 1. The Project Developer shall ensure that all employment is in compliance with national labour occupational health and safety laws and with the principles and standards embodied in the ILO fundamental conventions<br>2. Workers shall be able to establish and join labour organisations<br>3. Working agreements with all individual workers shall be documented and implemented and include:<br>a) Working hours (must not exceed 48 hours per week on a regular basis), AND | No | The project is implemented in the field by Proyecto Mirador. The employees' rights are a cross-cutting issue and are respected in all of the projects of project partners.<br>All employees will work voluntarily for the project, no forced labour is used and all employment is in compliance with national laws and consistent with the principles of standard ILO conventions.<br>The workers can establish and join labour organizations. In case new workers are hired, the working agreement will be documented and implemented in compliance with the Section 6.1 of GS4GG Safeguarding Principles & Requirements version 1.2. | N/A |

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| b) Duties and tasks, AND<br>c) Remuneration (must include provision for payment of overtime), AND<br>d) Modalities on health insurance, AND<br>e) Modalities on termination of the contract with provision for voluntary resignation by employee, AND<br>f) Provision for annual leave of not less than 10 days per year, not including sick and casual leave.<br>4. No child labour is allowed (Exceptions for children working on their families' property requires an Expert Stakeholder opinion)<br>5. The Project Developer shall ensure the use of appropriate equipment, training of workers, | | The employment model applied will be also locally and culturally appropriate.<br><br>The use of the efficient cookstove will reduce the quantity of firewood used in daily cooking activities and can thereafter release local families' economic and time resources for other tasks which can be considered to support the financial sustainability of the project. | |

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| documentation and reporting of accidents and incidents, and emergency preparedness and response measures | | | |
| **Principle 6.2 Negative Economic Consequences** | | | |
| 1. Does the project cause negative economic consequences during and after project implementation? | **No** | The use of efficient cookstoves will reduce firewood consumption and will thereafter save the resources of the project families, which can be considered to have positive impacts on the project families' economic situations.<br><br>No potential risks for the local economy are expected. | N/A |
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| **Principle 7.1 Emissions** | | | |
| Will the Project increase greenhouse gas emissions over the Baseline Scenario? | No | The Project will reduce GHG emissions as will be monitored and verified in line with the GS4GG. | N/A |
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| **Principle 7.2 Energy Supply** | | | |

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| Will the Project use energy from a local grid or power supply (i.e., not connected to a national or regional grid) or fuel resource (such as wood, biomass) that provides for other local users? | No | The Project will not use energy from a local grid or power supply. The efficient cookstoves are fired with fuelwood and therefore no change in the currently used cooking fuel will be made. | N/A |
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| **Principle 8.1 Impact on Natural Water Patterns/Flows** | | | |
| Will the Project affect the natural or pre-existing pattern of watercourses, ground-water and/or the watershed(s) such as high seasonal flow variability, flooding potential, lack of aquatic connectivity or water scarcity? | No | The project will not affect the natural or pre-existing pattern of watercourses, groundwater and/or the watersheds, nor will it incur water related issues. | N/A |
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| **Principle 8.2 Erosion and/or Water Body Instability** | | | |
| a. Could the Project directly or indirectly cause additional erosion and/or water body instability or disrupt the natural pattern of erosion?<br>b. Is the Project's area of influence susceptible to | No | The Project will not cause additional erosion directly or indirectly and/or water body instability or disrupt the natural pattern of erosion. | N/A |

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| excessive erosion and/or water body instability? | | | |
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| **Principle 9.1 Landscape Modification and Soil** | | | |
| Does the Project involve the use of land and soil for production of crops or other products? | No | The project's impact on environment is positive; no negative impacts are expected. Moreover, the stove distribution activities do not include planting or other agricultural activities, producing chemicals or use of GMOs. The project will distribute one stove model produced locally. The local stove production does not incur any significant environmental impacts. For example, the quantity of clay needed for stove production is low compared to other activities like house construction. Hazardous waste is not produced.<br><br>Furthermore, the aim of the project is to reduce the | N/A |
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| | | quantity of firewood consumed in the project area for cooking activities which will save the natural resources. | |
| **Principle 9.2 Vulnerability to Natural Disaster** | | | |
| Will the Project be susceptible to or lead to increased vulnerability to wind, earthquakes, subsidence, landslides, erosion, flooding, drought or other extreme climatic conditions? | No | The Project is not suspected to lead to increased vulnerability to any extreme climatic conditions. | N/A |
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| **Principle 9.3 Genetic Resources** | | | |
| Could the Project be negatively impacted by or involve genetically modified organisms or GMOs (e.g., contamination, collection and/or harvesting, commercial development, or take place in facilities or farms that include GMOs in their processes and production)? | No | The Project doesn't involve, and is not negatively impacted by, the use of genetically modified organisms, or GMOs. | N/A |
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| **Principle 9.4 Release of pollutants** | | | |

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| Could the Project potentially result in the release of pollutants to the environment?<br>>> | Yes | Project uses steel planchas (cooktops), aluminium chimneys and ceramic parts. Steel manufacturing operations generate $CO_2$ emissions, either as a result of the reaction of carbon (coke) with iron oxide in the blast furnace, or from a power plant producing electricity used in the production of steel. Mirador is not involved in the manufacture of steel but the plancha production process does involves welding, in which gases are generated due to the high temperature and ultraviolet (UV) radiation from the arc. The most common gases emitted during welding are ozone, nitrous gases, and carbon monoxide.[57] | A small amount of GHGs (including carbon monoxide, oxides of nitrogen, and ozone)[58] are released into the air as a result of plancha welding operations. Chimney production does not involve any welding. However, such emissions would also have occurred in the baseline scenario and in any case, are negligible as compared to the reduction of GHGs associated with the stove intervention. Mirador takes safety measures for welding task, including personal protective equipment (gloves, mask, eye protection, etc.) and ventilated working areas. |

[57] Golbabaei and Khadem, "Air Pollution in Welding Processes: Assessment and Control Methods"
[58] Ibid.

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| **Principle 9.5 Hazardous and Non-hazardous Waste** | | | |
| Will the Project involve the manufacture, trade, release, and/ or use of hazardous and non-hazardous chemicals and/or materials? | No | The Project does not involve the manufacture, trade, release, and/or use of hazardous chemicals and or materials. | N/A |
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| **Principle 9.6 Pesticides & Fertilisers** | | | |
| Will the Project involve the application of pesticides and/or fertilisers? | No | The Project does not involve the application of pesticides and/or fertilisers. | N/A |
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| **Principle 9.7 Harvesting of Forests** | | | |
| Will the Project involve the harvesting of forests? | No | The Project does not involve the harvesting of forests. | N/A |
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| **Principle 9.8 Food** | | | |
| Does the Project modify the quantity or nutritional quality of food available such as through crop regime alteration or export or economic incentives? | No | The Project does not modify the quantity or nutritional quality of food available. | N/A |
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| **Principle 9.9 Animal husbandry** | | | |
| Will the Project involve animal husbandry?<br>>> | No | The Project does not involve animal husbandry. | N/A |
| **Principle 9.10 High Conservation Value Areas and Critical Habitats** | | | |
| Does the Project physically affect or alter largely intact or High Conservation Value (HCV) ecosystems, critical habitats, landscapes, key biodiversity areas or sites identified?<br>>> | No | The project boundary includes the physical, geographical sites of the project technologies; in other words, the physical location of the project stoves. | N/A |
| **Principle 9.11 Endangered Species** | | | |
| a. Are there any endangered species identified as potentially being present within the Project boundary (including those that may route through the area)?<br>b. Does the Project potentially impact other areas where endangered species may be present through transboundary affects? | No | There are no endangered species identified as potentially being present in the project boundary and the project is not foreseen to have any negative potential impacts on other areas where endangered species may be present through transboundary effects. | N/A |

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# APPENDIX 2- CONTACT INFORMATION OF VPA IMPLEMENTER

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|---|---|
| Organization name | Proyecto Mirador, LLC |
| Registration number with relevant authority | |
| Street/P.O. Box | 100 Drakes Landing Road, Suite 260 |
| Building | |
| City | Greenbrae |
| State/Region | CA |
| Postcode | 94904 |
| Country | USA |
| Telephone | 415-464-9590 |
| E-mail | eadams@proyectomirador.org |
| Website | www.proyectomirador.org |
| Contact person | Esther Adams |
| Title | Program Manager |
| Salutation | Ms. |
| Last name | Adams |
| Middle name | |
| First name | Esther |
| Department | U.S. Administrative Office |
| Mobile | |
| Direct tel. | |
| Personal e-mail | |

# APPENDIX 3- LUF ADDITIONAL INFORMATION

| | |
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| Risk of change to the Project Area during Project Certification Period: | |
| Risk of change to the Project activities during Project Certification Period: | |
| Land-use history and current status of Project Area: | |
| Socio-Economic history: | |
| Forest management applied (past and future) | |
| Forest characteristics (including main tree species planted) | |
| Main social impacts (risks and benefits) | |
| Main environmental impacts (risks and benefits) | |
| Financial structure | |
| Infrastructure (roads/houses etc): | |
| Water bodies: | |
| Sites with special significance for indigenous people and local communities - resulting from the Stakeholder Consultation: | |
| Where indigenous people and local communities are situated: | |
| Where indigenous people and local communities have legal rights, customary rights or sites with special cultural, ecological, economic, religious or spiritual significance: | |

# APPENDIX 4-SUMMARY OF APPROVED DESIGN CHANGES

Please refer to Design Changes Requirements for more information on procedures governing Design Changes

## Revision History

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