

Gold Standard for the Global Goals
Key Project Information & Project Design Document (PDD)



Version 1.1 – August 2017

KEY PROJECT INFORMATION

| | |
|---|---|
| Title of Project: | ECOLIFE Conservation Patsari Improved Cookstove project Monarch Butterfly Biosphere Reserve Mexico |
| Brief description of Project: | The project aims to build Patsari improved cookstoves to reduce fuelwood consumption and smoke inhalation in rural households of the Purépecha and Mazahua regions in Michoacán and State of Mexico, Mexico. |
| Expected Implementation Date: | 01/04/2019 |
| Expected duration of Project: | 15 years |
| Project Developer: | ECOLIFE Conservation |
| Project Representative: | ECOLIFE Conservation Christopher Goering, cgoering@ecolifeconservation.org |
| Project Participants and any communities involved: | ECOLIFE Conservation is both the participant and representative. |
| Version of PDD: | 3.0 |
| Date of Version: | 08/12/2020 |
| Host Country / Location: | Estado de Mexico, State of Michoacán, and State of Queretaro, Mexico |
| Certification Pathway (Project Certification/Impact Statements & Products | Impact Statements & Products, VERs |
| Activity Requirements applied: (mark GS4GG if none relevant) | Community Service |
| Methodologies applied: | Technologies and Practices to Displace Decentralized Thermal Energy Consumption (TPDDTEC) v3.1 |
| Product Requirements applied: | GHG Emissions Reductions & Sequestration Product Requirements |
| Regular/Retroactive: | Retroactive |
| SDG Impacts: | SDG1 - No Poverty: 25,8000 Households using the ICS reporting energy saving. SDG 2 - Zero Hunger: 90% Percentage of people reporting covering cooking needs. SDG 3 – Good Health and Well Being: 90% Proportion of beneficiaries confirming less respiratory disease AND 90% proportion of beneficiaries confirming improvement in hygiene within the kitchen thanks to the project. SDG 6 – Clean Water and Sanitation: 90% Usage rate of the ICS. Access to a cleaner and more efficient combustion method / device encourages the practice of treating water (boiling it) to make it drinkable. SDG 7 – Affordable and Clean Energy: 90% Usage rate of the ICS. Proportion of population with primary reliance on clean fuels and technology |

| | |
|--|--|
| | <p>SDG 11 – Sustainable Cities and Communities: 50% Amount of firewood saved. Access to a cleaner and more efficient combustion method / device for cooking helps improve air quality.</p> <p>SDG 13 – Climate Action: 155,055 tonnes of CO₂e mitigated cumulatively during the crediting period tCO₂e>></p> |
| Estimated amount of SDG Impact Certified | GS VERs: 31,003 average annual emissions reductions. |

SECTION A. Description of project

A.1. Purpose and general description of project

>> *(Provide a brief description of the project including the description of scenario existing prior to the implementation of the project.)*

ECOLIFE Conservation is building improved cookstoves in the 15 km buffer zone surrounding the Monarch Butterfly Biosphere Reserve in the Purépecha and Mazahua regions of the Estado de Mexico, State of Michoacán, and State of Queretaro, Mexico. The traditional cooking technology is fuel wood open fire cookstoves, which represents an opportunity to improve fuel wood efficiency, human health, and carbon mitigation.

ECOLIFE Conservation is a non-profit 501(c)(3) organization headquarter in Escondido, CA with a field office in Morelia, Mexico. ECOLIFE Conservation US financially and administratively oversees the Mexico office. ECOLIFE Conservation US markets the program, raises, and administers funds for the Mexico office to plan and implement the construction of stoves. The executive director of ECOLIFE Conservation has direct management of the Mexico Program Director and is responsible for strategic planning, executive direction, and funding of the project. Project Manager of ECOLIFE Conservation is responsible for managing all certification requirements.

Ecolife Conservación Ambiental Mexicana A.C. (ECOLIFE MX) develops the Patsari improved cookstove program including implementation, planning, logistics, construction, promotion, and monitoring. ECOLIFE MX employs 10 full time in administrative roles, who work in the following departments: Promotion and Monitoring (2) Suppliers and Construction (2) Education (2) Graphic Design (2) General Management (2).

In addition to the administrative positions, there are also project staff in the field, whose number varies according to the needs of the project activity. Generally, the field project staff is made up of 20 individuals, with plans to increase as the project scales. The field positions consist of promoters, education coordinators, monitoring staff, construction officials, and construction assistants. The project sources the labor locally from the communities in which we are working, providing employment opportunities and professional training. Field project staff work on a 6 month contract basis, paid for each unit of service.

The promoters are responsible for promoting the program; carrying out and/or supporting opening meetings, explaining the program, the Patsari, and the project activity, searching for potential beneficiaries, communicating with potential and actual beneficiaries, evaluating requirements, training in the use and maintenance of the Patsari, general data collection, GPS collection, documenting the previous technology (traditional stove). Promoters are paid \$150 MXN (pesos) per stove accepted by beneficiaries, with commission paid at the end of the month.

Builders are responsible for receiving, preparing, delivering, and ordering the necessary material for the construction of the "Patsari" stove. The construction teams build the Patsari stove in the home, afterwards they explain how to use and maintain the stove. Each construction team is made up of one builder official and one builder assistant in training. Builders and assistants are paid \$10 MXN (pesos) for the data capture of the stove installation and \$22.5 MXN (pesos) for each stove material delivery. In addition, builders are paid \$250 MXN (pesos) and assistants are paid \$200 MXN (pesos) for each stove constructed and approved by the head of construction.

Monitoring staff will be responsible for following up with project beneficiaries on a regular basis to fulfill maintenance needs and monitoring requirements. The monitoring staff will be implemented in 2021 and such, have not been assembled or paid.

Gold Standard[®]

ECOLIFE Conservation implements the Patsari improved cookstove model, constructed in situ the beneficiary home by locally employed construction teams. The stoves are constructed with locally sourced materials including brick, gravel, sand, clay, steel rod, boiler, tiles, mortar, cement, and Patsari metal kits.

“In the CCT for tortilla making, the main cooking task in Mexican rural households, Patsari stoves showed fuelwood savings ranging from 44% to 65% in relation to traditional open fires (n=6; P<0.05). These savings were similar in magnitude to the average energy savings from KPT before and after Patsari adoption of 67% (n=23; P<0.05) in rural households exclusively using fuelwood.”^[1]

ECOLIFE Conservation targets households within rural communities in the 15km buffer zone around the Monarch Butterfly Biosphere Reserve that use traditional cooking technologies powered by fuelwood. The total market size of the entire 15km buffer zone is estimated to be 30 municipalities, 1132 localities, and 72,000 Patsari stoves. In order to reach the market demand of ICS in the region the project must scale its installation rate. At current capacity the project can build 150 stoves per month, averaging between 1800-2000 Patsari stoves per year. With the resources available, the maximum capacity of the field team is 2400 stoves per year. Over the next five years, the project aims to add the maximum capacity of the current field team (2400 stoves/year) to the installation forecast year over year. This would mean that 1800 stoves are built in 2020, 2400 stoves in 2021, 4800 stoves in 2022, 7200 stoves in 2023, and 9600 stoves in 2024 for a total of 25,800 stoves during 2020-2024. The ability to scale the project is directly dependent on resources and funding available. The expected income from the sale of carbon credits generated by the project will be used directly to finance the development of the project, including the trucks and labor necessary to scale the installation rate.

Construction is done on a community by community basis. After identification of localities in need, educational workshops in schools are conducted. Afterwards, a community opening meeting is hosted in order to present the project and receive feedback. Project promoters visit interested households, review project requirements, and take stove orders. Construction teams are assembled and implemented following the order retrieval. A closing workshop is held to receive feedback from beneficiaries and promoters.

The project is funded by the voluntary emission reductions (VER) credits, private donations, and stove sale income. No public monies or grants financially support the organization or project. As it currently stands, ECOLIFE Conservation US raises and administers all funds for the project activity through monthly budget requests. ECOLIFE MX requests funds for a designated building period, which is reconciled against expenses. ECOLIFE MX does not raise any funds for the project. ECOLIFE US raises funds through private individual donations and ongoing fundraising campaigns.

One requirement to participate in the project is a payment of \$300 pesos. This payment is marginal to the overall stove cost and is implemented to create a sense of ownership for the stove. Otherwise, we risk the beneficiary mistreating the Patsari because they got it for free. The income from the \$300 peso requirement is directly used to pay the local construction and promotion teams. Sale income is marginal compared to the total program cost and does not represent a funding source. The labor costs alone, excluding materials, are equal to \$400 pesos, more than what the beneficiary is paying.

A breakdown of the stove costs are below:

| 2020 STOVES | BASED ON CONSTRUCTION MATERIAL | BASED ON ALL PROJECT OPERATION INVESTMENT |
|------------------------|---|--|
|------------------------|---|--|

¹ Berrueta, Víctor M., et al. “Energy Performance of Wood-Burning Cookstoves in Michoacan, Mexico.” *Renewable Energy*, vol. 33, no. 5, 2008, pp. 859–870., doi:10.1016/j.renene.2007.04.016.

| 2020 STOVES | AVERAGE PRICE STOVE | AVERAGE PRICE STOVE |
|-------------|-----------------------|-----------------------|
| Total | MXN | MXN |
| | \$1,199 | \$3,496 |
| | | |
| | USD | USD |
| | \$60 | \$176 |
| | | |

Private individual donations are received in the United States to support the overhead installation costs. Funding the project solely from private donations is highly volatile, therefore unsustainable. Private donation amounts and frequency fluctuate with variables beyond control, such as market indicators and time of year. GS VER's are a sustainable and reliable funding model for the project, which ensures its existence. The current funding model would not be able to support the project over the long term.

Traditional Technologies:



Patsari Cookstove:





A.2. Eligibility of the project under Gold Standard

>> (Describe how the project meets the eligibility criteria as per section 3.1.1 of GS4GG Principles & Requirements document and the relevant activity requirements document)

| Eligibility Criteria | |
|---|--|
| Project type | End-use energy efficiency (Improved cookstoves). |
| Project Location | Estado de Mexico, State of Michoacán, and State of Queretaro, Mexico |
| Project Area, Project Boundary and Scale | <p>The project area and boundary includes the following Mexican states: State of Mexico, Michoacán State, and State of Queretaro and are identified as the physical, geographical sites of the project technologies.</p> <p>This boundary also hosts the baseline and project fuel collection area.</p> <p>The ICS of the project will be identified in order to avoid double counting with overlapped activities in the project area.</p> <p>No specific requirement due to the scale of the project.</p> |
| Host Country Requirements | The project is in compliance with the host country's legal, environmental, ecological and social regulations. |
| Contact Details | Christopher Goering, cgoering@ecolifeconservation.org |
| Legal Ownership | The carbon transfer form from project beneficiaries are collected transparently with full, prior, and informed consent (FPIC). The carbon transfer form will be made available for the design certification and at the performance review. |
| Other Rights | NA. |
| Official Development Assistance (ODA) Declaration | ODA Declaration submitted. |

It is confirmed that the project is not registered with any other schemes.

A.3. Legal ownership of products generated by the project and legal rights to alter use of resources required to service the project

>> (Justify that project owner has full and uncontested legal ownership of the products that are generated under Gold Standard Certification and has legal rights concerning changes in use of resources required to service the Project for e.g water rights, where applicable.)

The full and uncontested legal ownership of the carbon credits produced by the project is demonstrated through the transfer of ownership from project beneficiaries and investment chain to ECOLIFE Conservation. Project beneficiaries will sign a carbon rights waiver in exchange for the ICS device and participating in the project.

Gold Standard[®]

All the details about the transfer of carbon credit ownership will be discussed at the Stakeholder Consultation Meeting and at the moment of ICS installation. All project beneficiaries will sign a carbon waiver form, which, as mentioned above, will be explained transparently and with full, prior and informed consent (FPIC).

Sample Text from Form:

By signing this form, I agree to participate in ECOLIFE Conservation's Patsari improved cookstove project and authorize the construction of the Patsari stove in my household.

I accept to be included in monitoring campaigns of the project and to provide data about the continued use of the stove. I also agree to follow the directions provided to use the stove correctly, and ensure not to modify the structure of the stove or remove its components.

ECOLIFE Conservation is seeking the certification of voluntary emission reductions credits produced by the Patsari stove. I understand with full, prior and informed consent, that I am transferring the ownership of these carbon credits to ECOLIFE Conservation.

In exchange for the installation of the Patsari cookstove, I waive full and uncontested legal ownership of the carbon credits produced by the project and transfer the rights to ECOLIFE Conservation.

Samples of carbon rights waivers have been made available to the validator.

A.4. Location of project

A.4.1. Host Country

Mexico

A.4.2. Region/State/Province etc.

Estado de Mexico, State of Michoacán, and State of Queretaro

A.4.3. City/Town/Community etc.

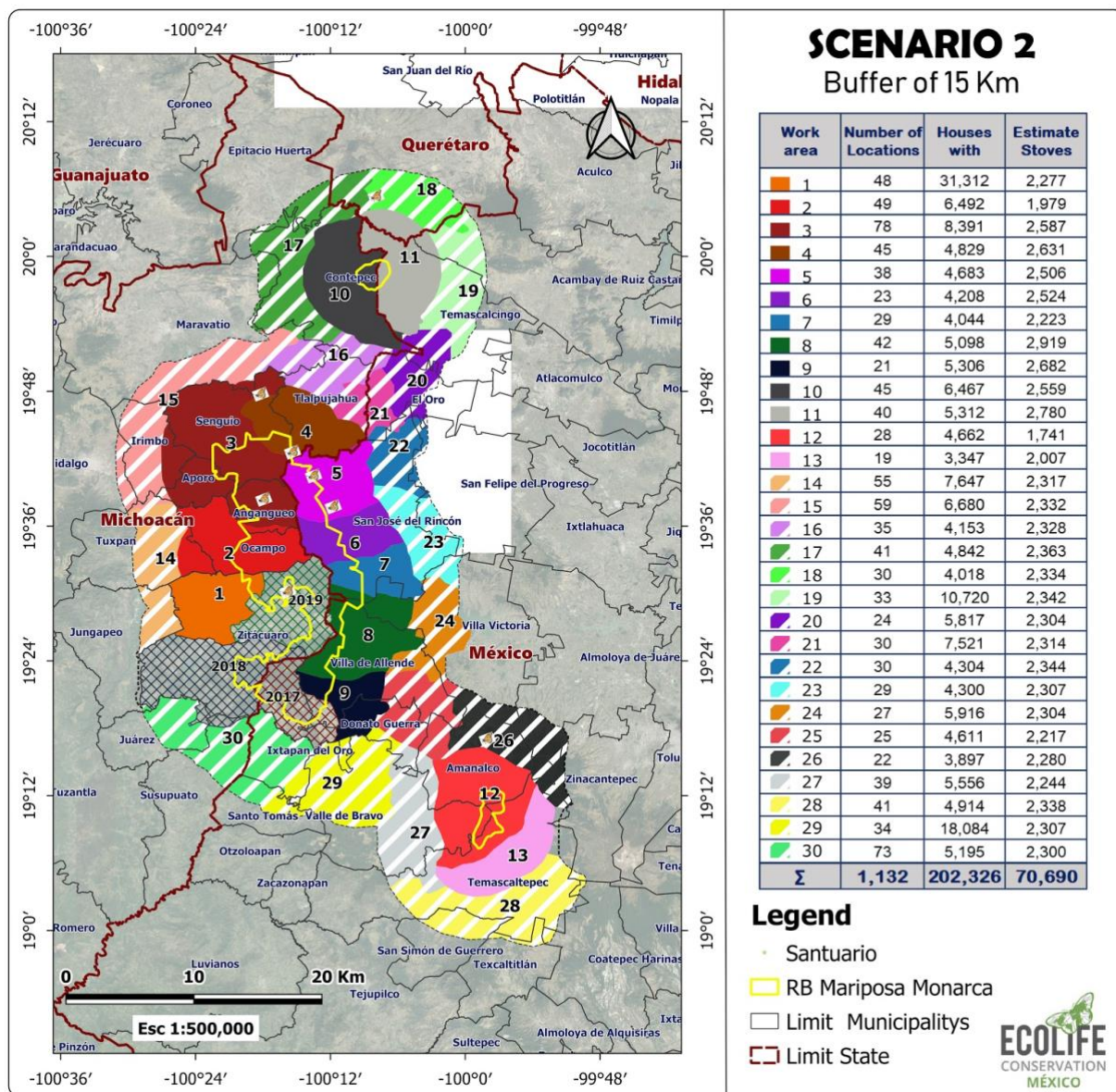
Proposed project area would cover 30 municipalities and 1132 localities in the Estado de Mexico, State of Michoacán, and State of Queretaro, Mexico.

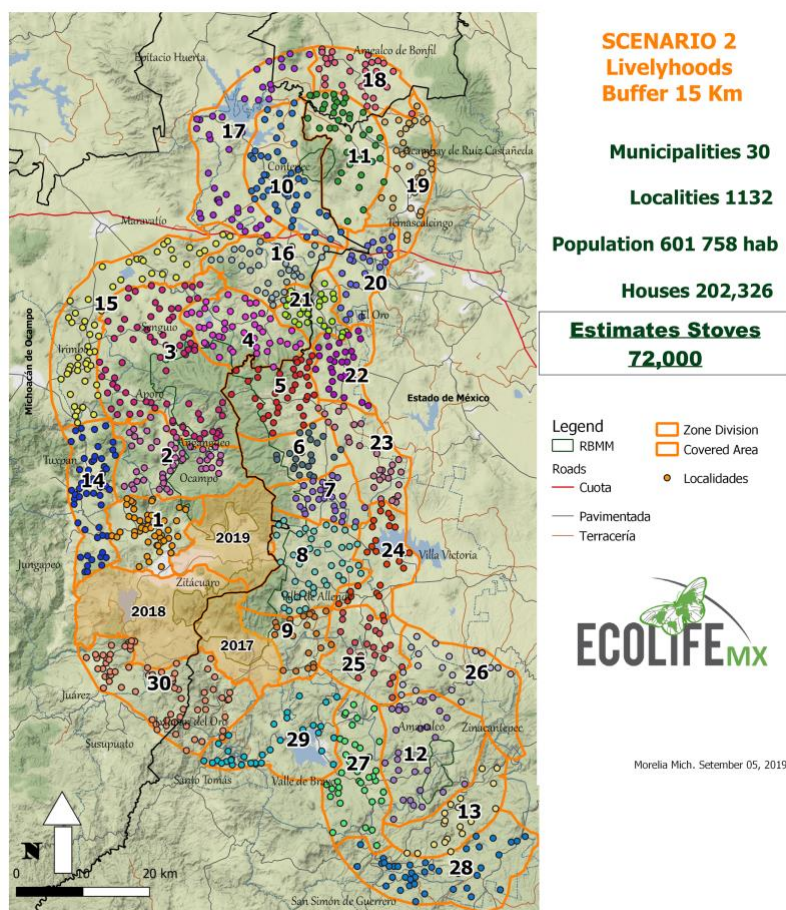
The proposed work areas are as follows:

Estado de México: Acambay, Almoloya de Juárez, Amanalco, Donato Guerra, El Oro, Ixtapan del Oro, San José del Rincón, San Simón de Guerrero, Santo Tomás, Temascalcingo, Temascaltepec, Valle de Bravo, Villa de Allende, Villa Victoria, and Zinacantepec.

Michoacán: Angangueo, Aporo, Contepec, Epitacio Huerta, Irímbo, Juárez, Jungapeo, Maravatío, Ocampo, Senguio, Susupato, Tlalpujahuá, Tuxpan, and Zitácuaro.

Queretaro: Amealco de Bonfil





A.4.4. Physical/Geographical location

>> (Include information allowing the unique identification of this project.)

The GPS coordinates and unique Patsari ID of all ICS installed are recorded along with all beneficiary's contact details. (Name, phone, address, etc). Construction records and pictures are captured and stored securely and accurately to ensure ICS are not double counted.

ECOLIFE Conservation partnered with Mogli Technologies and Taroworks to develop an efficient, reliable, and accurate data collection, transfer, and storage management system. The system can capture offline data in the field and transfer it to a custom designed CRM software (Salesforce) when the device is later connected to internet services.

When a promoter first visits a household to explain the project and requirements they use an offline form to capture beneficiary household information (GPS, contact info, etc.). The completed form automatically creates a new project contact. When the promoter returns to verify the requirements, another offline form is used to collect all beneficiary information (baseline survey), previous stove photo, carbon waiver, and beneficiary signature. Upon completion of the form the system will create a unique Patsari Opportunity (Patsari ID) related to the contact and community account, with GPS points attached for start of driveway, materials placement, and install location. 2 days prior to the scheduled construction the beneficiary will be notified and confirm via SMS. Upon construction completion the builder uses an offline form to update the Patsari opportunity with construction completion date, stove status, Patsari photo, and beneficiary confirmation.

Gold Standard[®]

Furthermore, a plaque is constructed into the front of the stove to identify households as part of the project.



A.5. Technologies and/or measures

>>(Describe the technologies and measures to be employed and/or implemented by the project, including a list of the facilities, systems and equipment that will be installed and/or modified by the project. Include information essential to understand the purpose of the project and how it will contribute positively to three SDGs.)

The ICS model installed as part of the project is the Patsari stove, developed in part by GIRA (Grupo Interdisciplinario de Tecnología Rural Apropiada) and UNAM (Universidad Nacional Autónoma de México). We chose the patsari model for its cultural consideration, safety, and efficiency.

The Patsari was designed with traditional cooking habits in mind. The comales (cooking surfaces) are designed for cooking tortillas while the back two burners are designed for boiling and simmering beans, the main cooking tasks of Mexican households.

The Patsari is constructed for permanence in situ on a concrete base. The high concrete base and cool sides protect families and children from burns and spilling of pots that happen with other low lying stoves.

A variety of KPT, WBT, and CCT tests have been conducted on the Patsari model. “In the CCT for tortilla making, the main cooking task in Mexican rural households, Patsari stoves showed fuelwood savings ranging from 44% to 65% in relation to traditional open fires (n=6; P<0.05). These savings were similar in

magnitude to the average energy savings from KPT before and after Patsari adoption of 67% (n=23; P<0.05) in rural households exclusively using fuelwood.”²

A.6. Scale of the project

>> *(Define whether project is micro scale, small scale or others. Justify the scale referring to relevant activity requirement.)*

No distinction or specific considerations made for the project due the scale.

Under the CDM definition the project is considered as Large-scale activity, because it exceeds the equivalent of 60 GWh per year or 180 GWh thermal per year in fuel input. The thermal energy efficiency of the project has been calculated as 250 GWh thermal per year.

A.7. Funding sources of project

>> *(Provide the public and private funding sources for the project. Confidential information need not be provided.)*

The project is funded by the voluntary emission reductions (VER) credits, private donations, and stove sale income. No public monies or grants financially support the organization or project. As it currently stands, ECOLIFE Conservation US raises and administers all funds for the project activity through monthly budget requests. ECOLIFE MX requests funds for a designated building period, which is reconciled against expenses. ECOLIFE MX does not raise any funds for the project. ECOLIFE US raises funds through private individual donations and ongoing fundraising campaigns.

Private individual donations are received in the United States to support the overhead installation costs. Funding the project solely from private donations is highly volatile, therefore unsustainable. Private donation amounts and frequency fluctuate with variables beyond control, such as market indicators and time of year. GS VER's are a sustainable and reliable funding model for the project, which ensures its existence. The current funding model would not be able to support the project over the long term.

One requirement to participate in the project is a payment of \$300 pesos. This payment is marginal to the overall stove cost and is implemented to create a sense of ownership for the stove. Otherwise, we risk the beneficiary mistreating the Patsari because they got it for free. The income from the \$300 peso requirement is directly used to pay the local construction and promotion teams. Sale income is marginal compared to the total program cost and does not represent a funding source. The labor costs alone, excluding materials, are equal to \$400 pesos, more than what the beneficiary is paying.

² Berrueta, Víctor M., et al. “Energy Performance of Wood-Burning Cookstoves in Michoacan, Mexico.” *Renewable Energy*, vol. 33, no. 5, 2008, pp. 859–870., doi:10.1016/j.renene.2007.04.016.

Berrueta, Víctor M., et al. “Promoting Sustainable Local Development of Rural Communities and Mitigating Climate Change: the Case of Mexico's Patsari Improved Cookstove Project.” *Climatic Change*, vol. 140, no. 1, 12 Oct. 2015, pp. 63–77., doi:10.1007/s10584-015-1523-y.

Jetter, James J., and Peter Kariher. “Solid-Fuel Household Cook Stoves: Characterization of Performance and Emissions.” *Biomass and Bioenergy*, vol. 33, no. 2, 22 Aug. 2008, pp. 294–305., doi:10.1016/j.biombioe.2008.05.014.

Johnson, Michael, et al. “Quantification of Carbon Savings from Improved Biomass Cookstove Projects.” *Environmental Science & Technology*, vol. 43, no. 7, 2009, pp. 2456–2462., doi:10.1021/es801564u.

Riojas-Rodriguez, Horacio, et al. “Impact of the Improved Patsari Biomass Stove on Urinary Polycyclic Aromatic Hydrocarbon Biomarkers and Carbon Monoxide Exposures in Rural Mexican Women.” *Environmental Health Perspectives*, vol. 119, no. 9, 2011, pp. 1301–1307., doi:10.1289/ehp.1002927.

A.8. Assessment that project complies with ‘gender sensitive’ requirements

>> (Answer the four mandatory questions included under Step 1 to 3 in “[Gold Standard Gender Equality Guidelines and Requirements](#)” available [here](#).)

In compliance with the GS4GG Standard Gender Equality Guidelines & Requirements. The project is following the pathways 1:

1) Foundation gender-sensitive requirements: These requirements are mandatory for all projects and include compliance with the Gender Safeguarding Principles and Requirements and gender sensitive stakeholder consultations.

The 3 steps for Pathway 1 steps will be followed to demonstrate compliance with the gender safeguards assessment and gender-sensitive stakeholder consultations as part of initial project design and feasibility.

STEP 1: BASIC CONTEXT

STEP 2: APPLY GOLD STANDARD SAFEGUARDING PRINCIPLES

STEP 3: CONDUCT STAKEHOLDER CONSULTATION

Discussion of mandatory questions of Steps 1-3:

| Question | Response |
|--|---|
| QUESTION 1: DOES THE PROJECT REFLECT THE KEY ISSUES AND REQUIREMENTS OF GENDER SENSITIVE DESIGN AND IMPLEMENTATION AS OUTLINED IN THE GENDER POLICY? | Because the cultural context and the statistics available from the host country, the project has identified female groups as larger groups of potential beneficiaries of the project. The project does not assume the women should remain at home, but given this fact, acknowledge that women (or any other person) should not be exposed to toxic air while cooking. The project does not promote discrimination on gender basis. |
| QUESTION 2: DOES THE PROJECT ALIGN WITH EXISTING COUNTRY POLICIES, STRATEGIES AND BEST PRACTICES? | The project follow all the recommendation issued by the host country regarding strategies and policies against discrimination on gender basis. Specially, the action and milestones of the ‘National System to prevent and eradicate violence against women’ ³ |
| QUESTION 3: DOES THE PROJECT ADDRESS THE QUESTIONS RAISED IN THE Gold Standard SAFEGUARDING PRINCIPLES & REQUIREMENTS DOCUMENT? | The project has included as part of the project design the safeguarding principles. All the information in this regard included in the section D.1 of this PDD. The project anticipates to include details in this regard as part of the stakeholder consultation process. |

³ For more details see the following link: <https://www.gob.mx/conavim/articulos/conoce-las-acciones-del-sistema-nacional-de-prevencion-atencion-sancion-y-erradicacion-de-la-violencia-contra-las-mujeres>

| | |
|--|--|
| QUESTION 4: DOES THE PROJECT APPLY THE Gold Standard STAKEHOLDER CONSULTATION & ENGAGEMENT PROCEDURE REQUIREMENTS? | The project is following all the standard's guidelines about the stakeholder consultation and engagement procedure requirements. The outcome of the stakeholder consultation process is reported following those requirements. |
|--|--|

SECTION B. Application of selected approved Gold Standard methodology

B.1. Reference of approved methodology

Gold Standard Methodology - Technologies and Practices to Displace Decentralized Thermal Energy Consumption (TPDDTEC), version 3.1.

B.2. Applicability of methodology

>> *(Justify the choice of the selected methodology(ies) by demonstrating that the project meets each applicability condition of the applied methodology(ies))*

The present project activity introduces a technology that reduces greenhouse gas (GHG) emission from the thermal consumption of households.

The technology implemented is an improved biomass cookstove.

The individual households do not act as project participants. ECOLIFE Conservation is the single project participant in this project.

1. The project boundary has been clearly identified. The current project as an activity has not been included in any other voluntary or compliancy market. ECOLIFE has put in place adequate measures such as exhaustive identification of each beneficiary in order to prevent any possibility of double counting.
2. The continuous useful energy output of the ICS model used is less than 150kW.
3. The baseline stove will be replaced with the ICS introduced by the model. Continuous monitoring through surveys will be done about the use of baseline stove.
4. Project participants will be the single entity claiming ownership right of and selling the emission reductions. Carbon rights waivers will be signed by all end users of the technology.
5. The project does not expect to use or introduce new biomass feedstock.

Additionally, the project meets the following condition:

- a) The project expects an improvement of Indoor air pollution (IAP) as well a reduction in GHG Levels. The monitoring survey will include questions in this regard. Comparative test baseline vs project KPTs will be carried out with sufficient accuracy level to verify the emission reductions.
- b) The project does not expect to introduce sales of renewable fuel. No further requirements in this regard are needed.

B.3. Project boundary

>> (Present a flow diagram of the project boundary, physically delineating the project, based on the description provided in section A.5 above.)

The project boundary includes the physical site where the baseline and project cookstoves are installed, as well, the fuel collection area as described in the section A.4 above.

The project area includes the rural communities in the 15 km buffer zone around the monarch reserve that use traditional cooking technologies powered by fuelwood.

The project boundary is defined as the geo-politic territory of State of Michoacan, State of Mexico, and State of Queretaro.

The diagram below physically delineates the project boundary:

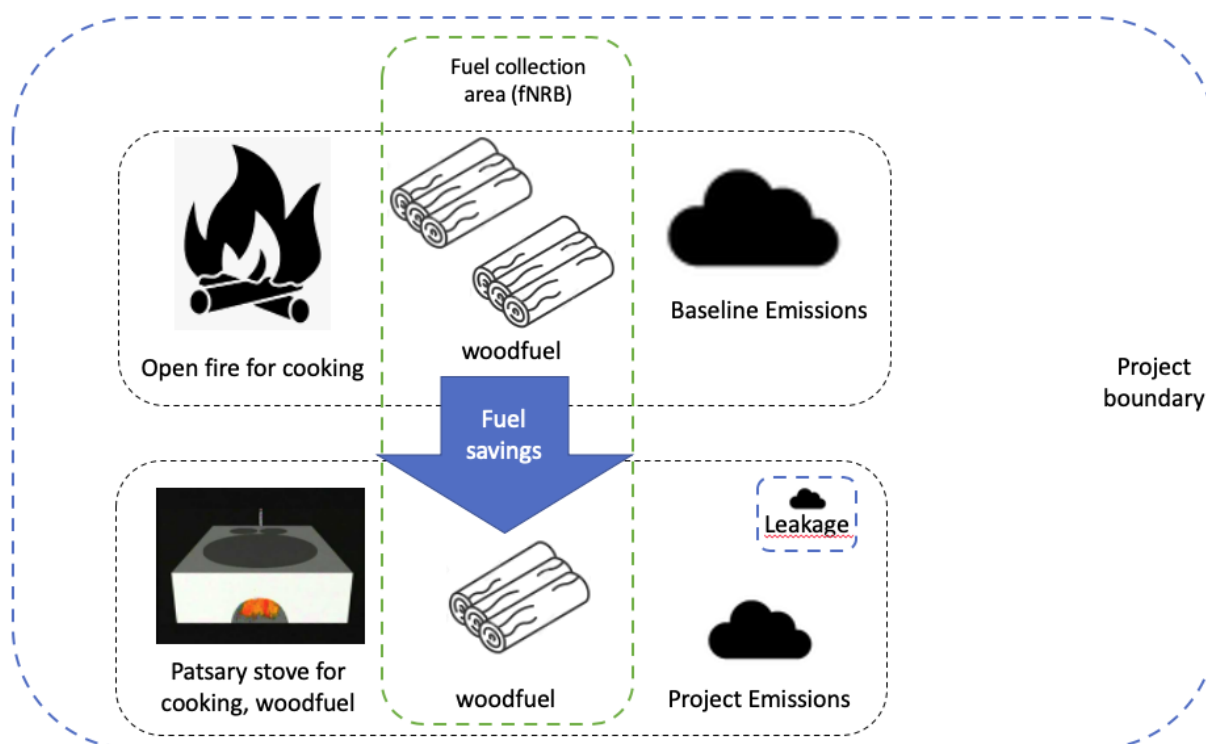


Figure 1. flow diagram of the project boundary

The sources and gases included in the project boundary are described in the below table.

| Source | | GHG s | Included? | Justification/Explanation |
|----------------------|----------|------------------|-----------|--|
| Baseline scenario | Firewood | CO ₂ | Yes | Significant source of emissions |
| | | CH ₄ | Yes | Can be a significant source of emissions |
| | | N ₂ O | Yes | Can be a significant source of emissions |
| Project scenario | Firewood | CO ₂ | Yes | Significant source of emissions |
| | | CH ₄ | Yes | Can be a significant source of emissions |
| | | N ₂ O | Yes | Can be a significant source of emissions |

B.4. Establishment and description of baseline scenario

>> (Explain how the baseline scenario is established in accordance with guidelines provided in GS4GG Principles & Requirements and the selected methodology(ies). In case suppressed demand baseline is used then same should be explained and justified.)

The baseline scenario identified is the use of inefficient and traditional cookstoves by rural households along with non-renewable firewood as main fuel to cover the thermal energy requirements for household cooking. A single baseline scenario is identified. The traditional cookstove can be as simple as three stone open fire, “U” or “C” shape-made of cinder blocks (with or without adobe clay-made coat) and may include grate or solid metal plate (plancha) and without chimney, nor improved combustion chamber, proper air supply, nor flue gas ventilation.

In some cases, other fuels may be used, only as secondary fuel for specific circumstances, for example, LPG may be used for preparing coffee or heating meals, but never as primary fuel.

The baseline is considered by-default fixed in time during the considered crediting period. The baseline will be re-assessed as per latest methodology requirements and Gold Standard rules at the renewal of the crediting period.

A change in the baseline scenario is not expected in the near future.

As can be seen in the studies quoted below, the firewood has been the main source of energy for covering the energy need in for the rural population.

“Approximately 27 million rural people in Mexico use biomass for cooking, where fuelwood represents approximately 80% of energy used by rural households and 50% of total energy use in rural communities.”⁴

“Currently, about one-fourth of Mexican households (27.2 million people) cook with fuelwood, either exclusively (18.7 million people) or in combination with LPG (8.5 million).”⁵

“Serrano-Medrano et al. (2014) have projected a decrease by only 9 % of the number of exclusive fuelwood users and their associated fuelwood consumption between 2010 and 2030.”⁶

This scenario has not change significantly in the last 15 years as it is stated in the National survey of the ‘First National Survey On Energy Consumption In Particular Houses’⁷ where it is stated textually (own translation):

“USE OF FUEL The largest proportion of the thermal energy consumed at households is devoted to cooking/heating food. The main fuel is LP gas with 79%. Followed by the use of firewood or charcoal with 11%, and natural gas with 7 percent.”

In the same survey, it is motioned the following (own translation):

⁴ Berrueta, Víctor M., et al. “Energy Performance of Wood-Burning Cookstoves in Michoacan, Mexico.” *Renewable Energy*, vol. 33, no. 5, 2008, pp. 859–870., doi:10.1016/j.renene.2007.04.016.

⁵ Masera, Omar R., et al. “From Cookstoves to Cooking Systems: the Integrated Program on Sustainable Household Energy Use in Mexico.” *Energy for Sustainable Development*, vol. 9, no. 1, 2005, pp. 25–36., doi:10.1016/s0973-0826(08)60480-9.

⁶ Berrueta, Víctor M., et al. “Promoting Sustainable Local Development of Rural Communities and Mitigating Climate Change: the Case of Mexico’s Patsari Improved Cookstove Project.” *Climatic Change*, vol. 140, no. 1, 12 Oct. 2015, pp. 63–77., doi:10.1007/s10584-015-1523-y.

⁷ Primera Encuesta Nacional Sobre Consumo De Energéticos En Viviendas Particulares (Nov. 07th 2018) Comunicado De Prensa Núm. 541/18, INEGI (National Institute of Statistic and Geography for its meaning in Spanish) [Document available at(open on 14 Feb. 2020): <https://www.inegi.org.mx/contenidos/saladeprensa/boletines/2018/EstSociodemo/ENCEVI2018.pdf>

“It is noteworthy that although the use of firewood or charcoal for cooking still represent a significant proportion in the country, the use of improved cookstoves with chimney for wood fuel or charcoal are practically non-existent. Which remains worrying given the conditions for cooking with these fuels and damage to health.”⁸

According the official latest statistics available from the Ministry of Energy⁹ (SENER for its meaning in spanish), fuelwood represents, on average in the latest three years, 33.10% of the total energy consumed at the residential sector. See table below

| Energy Information System | | | | | | |
|---|---------------|-------------|---------------|-------------|---------------|-------------|
| Ministry of Energy | | | | | | |
| National Energy Balance: Energy consumption in the residential, commercial and public sectors | | | | | | |
| (petajoules) | | | | | | |
| ACTUAL | | | | | | |
| | 2016 | % | 2017 | % | 2018 | % |
| Residential Total Energy | 756.85 | 1.00 | 751.61 | 1.00 | 760.60 | 1.00 |
| Solar | 6.10 | 0.01 | 6.42 | 0.01 | 7.11 | 0.01 |
| Wood | 251.56 | 0.33 | 250.31 | 0.33 | 249.08 | 0.33 |
| Total petroleum (LPG, Kerosene) | 249.47 | 0.33 | 246.45 | 0.33 | 246.45 | 0.32 |
| Dry Gas | 37.45 | 0.05 | 35.48 | 0.05 | 30.16 | 0.04 |
| Electricity | 212.28 | 0.28 | 212.95 | 0.28 | 227.80 | 0.30 |

It is obvious that wood as a source of energy for covering cooking needs in the residential sector, especially in the rural context, is still very relevant. A transition to cleaner and more efficient technology is not expected in the short term.

Furthermore, from the economic perspective, it is not expected that LPG can be affordable for the low-income rural population as can be seen in the table below that shows a comparison with the average income/poverty line against the cost of LPG.

| Data | Value | Unit |
|------|-------|------|
|------|-------|------|

⁸ Idem.

⁹ Energy Information System, Ministry of Energy, National Energy Balance: Energy consumption in the residential, commercial and public sectors (petajoules). Available in the following link: (opened on 02 March 2020)
<http://sie.energia.gob.mx/bdiController.do?action=cuadro&cvecua=IIE4C03>

| | | |
|--|--------------|--------------------|
| Latest Poverty Line Rural Population^{10 11} | 2,071.90 | MX \$ |
| Average Monthly Income Rural Population¹² | 1,104.00 | MX \$ |
| Average Price LPG per Kg¹³ | 16.19 | MX \$ |
| Average Consumption of LPG per capita per month (74 kg/yr)¹⁴ | 6.17 | kg/month |
| Portion of LPG used for cooking/heating meals¹⁵ | 67% | % |
| Amount of LPG consumed per month per household¹⁶ | 14.80 | kg/month/household |
| Cost of LPG per month¹⁷ | 239.60 | MX \$ |
| Portion of LPG cost from the Poverty line. | 11.6% | % |
| Portion of LPG cost from average income. | 21.7% | % |

As seen above, if the cost of the fuel demands more than 20% of the total income, therefore, it is not expected a shift in the short future. It is not expected a drastic increase of average income for the target

¹⁰ The poverty line is the threshold defined the minimum income to cover the very basic means.

¹¹ MEDICIÓN DE LA POBREZA, POBREZA EN MÉXICO, Resultados de pobreza en México 2018 a nivel nacional y por entidades federativas (Source: CONEVAL (Consejo Nacional de Evaluación de la Política de Desarrollo Social) [Document available at (open on 14 Feb. 2020): <https://www.coneval.org.mx/Medicion/Paginas/PobrezalInicio.aspx>]

¹² Average Monthly Income Rural Population base on MX \$ 36.8 per day (Source ENCUESTA NACIONAL DE INGRESOS Y GASTOS DE LOS HOGARES (May 28th 2018) comunicado de prensa núm. 251/18, INEGI (National Institute of Statistic and Geography for its meaning in Spanish) [Document available https://www.inegi.org.mx/contenidos/saladeprensa/boletines/2019/EstSociodemo/enigh2019_07.pdf].

¹³ Average price of LPG per Kg in Michoacan and Mexico (state of) (Source: Public Price – tank (Price per kilogram) Energy Regulatory Commission (CRE for its meaning in Spanish) Document available at (open on 14 Feb. 2020): <http://www.cre.gob.mx/ConsultaPrecios/GasLP/PlantaDistribucion.html?idiom=es>].

¹⁴ LPG consumption per capita per year: 74 kg (Source: Prospectiva de Gas L.P. 2018-2032. (2017) SENER [Document available at(open on 14 Feb. 2020): <https://www.gob.mx/sener/documentos/prospectivas-del-sector-energetico>, based on data from AMEGAS (Mexican Association of Distributors of Liquefied Gas and Related Companies for it meaning in Spanish)]. For the total LPG consumption, it was considered an average Family size: 3.6 persons per household (Source: La Encuesta Nacional de los Hogares (May 28th 2018) comunicado de prensa núm. 251/18, INEGI (National Institute of Statistic and Geography for its meaning in Spanish) [Document available at(open on 14 Feb. 2020): https://www.inegi.org.mx/contenidos/saladeprensa/boletines/2018/EstSociodemo/enh2018_05.pdf].

¹⁵ Portion of LPG used for cooking/heating meals: 66.7% (Source: Primera Encuesta Nacional Sobre Consumo De Energéticos En Viviendas Particulares (Nov. 07th 2018) Comunicado De Prensa Núm. 541/18, INEGI (National Institute of Statistic and Geography for its meaning in Spanish) [Document available at(open on 14 Feb. 2020): <https://www.inegi.org.mx/contenidos/saladeprensa/boletines/2018/EstSociodemo/ENCEVI2018.pdf>]. This portion of 50% of is considered conservative because the same source quoted indicates that the largest proportion of the thermal energy consumed in homes is for cooking/heating food (see pages 1 and 9).

¹⁶ Calculated.

¹⁷ Calculated.

population, nor the drastic drop in the cost of LPG. Therefore, it is concluded that the baseline scenario identified will remain relevant for the the rest of the crediting period.

B.5. Demonstration of additionality

>> (If the proposed project is not a type of project that is deemed additional, as stated below, then follow guidelines in section 3.5.1 of GS4GG Principles & Requirements to demonstrate additionality.)

In situations where it can be shown that the project technology has been adopted by less than 20% of the population in the target area (as defined in section 2, 1.b), the technology can be qualified as “first of its kind” and hence a realistic and credible barrier due to prevailing practice can be claimed.

ICS adoption rate in the host country:

| <i>Number of households consuming fire wood for cooking.</i> | <i>Number of ICS implemented in the country</i> | <i>ICS adoption rate</i> |
|--|---|---|
| <i>20% of the country population[1].</i> <i>Taking an average of 3.8 family member per household, and 125 million population[2], this is 6,578,947 households using wood for cooking.</i> | <div> 203,000[3] 1,130[4] 17,340[5] 12,885[6] Total 234,355 </div> <i>This is conservative considering the 203,000 reported (Astrid and others, 2019) included all the stoves installed in the country from government programs and other projects, therefore, some of the project reported in this total separately, may be already reported there. Also, all the ICS installed are accounted as 100% are still in use, this is conservative, since many initiatives that implemented ICS didn't included a follow up or maintenance procedure and the number of ICS, which is the main factor for abandonment.</i> | <div> 3.56% 4.22% </div> <i>Depending on what source is used for accounting the HHs using fire wood for cooking. Even the most conservative values demonstrate the penetration factor is lower than 20%. Therefore, the project can be considered as “first-of-its kind” and it is deemed additional.</i> |

| | | |
|--|--|--|
| <p><i>People that use Wood for cooking: 21.1 million in rural areas and 4.5 million in urban areas.[7]</i></p> <p><i>Taking an average of 3.8 family member per household[8], and considering only rural areas, this is 5,552,631 households using wood for cooking.</i></p> | | |
|--|--|--|

Furthermore, other official studies indicate that penetration factor of the ICS in the country is basically null, being less than 0.6%.[9]

Finally, it is obvious that the project is not financially attractive because, as shown in section A.1, the average cost of implementing an ICS for the project (MXN\$3,496) is significantly higher than the money received from the beneficiaries (MXN\$300.00), it stress the fact the project is not having profits by implementing the project.

[1] Usuarios de leña en México, Comisión Federal para la Protección contra Riesgos Sanitarios (Con datos del on datos del Instituto Nacional de Estadística y Geografía (INEGI)). Fecha de publicación, 31 de diciembre de 2017. Source available in the following link (open on 08 dic. 2020):

<https://www.gob.mx/cofepris/acciones-y-programas/3-usuarios-de-lena-en-mexico#:~:text=En%20M%C3%A9xico%2C%20se%20estima%20que,localiza%20en%20las%20C3%A1reas%20rurales.>

[2] Comunicado De Prensa Núm. 302/20 9 De Julio De 2020 Página 1/2 Estadísticas A Propósito Del Día Mundial De La Población (11 De Julio) Datos Nacionales. Source available in the following link (open on 08 dic. 2020):

https://www.inegi.org.mx/contenidos/saladeprensa/aproposito/2020/Poblacion2020_Nal.pdf

[3] A follow-up study after an improved cookstove intervention in rural Mexico: Estimation of household energy use and chronic PM2.5 exposure Astrid Schilman [and others] Oct. 2019.

[4] INFORME FINAL Evaluación Integral del Programa de Estufas Ecológicas en San Luis Potosí y Propuesta de Intervención Clave del Proyecto: FMSLP-2013-C03-221387 Fondo Mixto de Fomento a la Investigación Científica y Tecnológica CONACYT-Gobierno del estado de San Luis Potosí.

[5] MONITORING REPORT v08 – 07/07/2016 “Ustil Naj – Casa saludable para todos” – VPA4 GS 2441

[6] Distribution Of Onil Stoves – Mexico Vcs Monitoring Period 1. <https://registry.verra.org/app/projectDetail/VCS/1216>

[7] MACHUCA, SOFIA & Álvarez-Sánchez, María & Maldonado-Torres, Ranferi & VELEZ, ALEJANDRO. (2018). Consumo de leña en México: hábitos de uso, problemática asociada y alternativas sostenibles de solución. MACHUCA, SOFIA & Álvarez-Sánchez, María & Maldonado-Torres, Ranferi & VELEZ, ALEJANDRO. (2018). Consumo de leña en México: hábitos de uso, problemática asociada y alternativas sostenibles de solución. Source available in the following link (open on 08 dic. 2020): https://www.researchgate.net/profile/Maria_Alvarez-Sanchez2/publication/331100897_Consumo_de_leña_en_México_habitos_de_uso_problematizada_y_alternativas_sostenibles_de_solucion/links/5c65ccd3a6fddcb608c3b4b2/Consumo-de-leña-en-México-habitos-de-uso-problematizada-y-alternativas-sostenibles-de-solucion.pdf

[8] Tamaño promedio del hogar por entidad federativa, Número de personas que en promedio residen habitualmente en un hogar. <https://www.inegi.org.mx/temas/hogares/>

[9] Comunicado De Prensa Núm. 541/18 7 De Noviembre De 2018 Página 1/3 Comunicación Social Primera Encuesta Nacional Sobre Consumo De Energéticos En Viviendas Particulares (ENCEVI). Source available in the following link (open on 08 dic. 2020): <https://www.inegi.org.mx/contenidos/saladeprensa/boletines/2018/EstSociodemo/ENCEVI2018.pdf>

A. Baseline non-renewable biomass (NRB) assessment

Because the baseline scenario for the project has been identified as the consumption of firewood for the main source of energy to cover cooking needs, the fraction of the non-renewable biomass needs to be defined. There is not a national default value provided by the CDM EB and endorsed by the DNA of the host country. The fNRB value has been calculated following the Option b. Adoption of the approach similar to the latest version of CDM-approved methodology AMS II.G, as developed in section A1.3 Meth

TPDDTEC V3.1 Gold Standard Methodology. All the references/sources and relevant calculations have been made available to the validator for its scrutiny (see file: calculations fNRB Calculation Final.xls).

The Fixed value of f_{NRB} is fixed ex-ante for the entire crediting period even though the project activity may choose to update the f_{NRB} during the crediting period.

| Country | Value of f_{NRB} |
|---------|--------------------|
| Mexico | 86.28% |

B.6. Sustainable Development Goals (SDG) outcomes

B.6.1. Relevant target for each of the three SDGs

>> (Specify the relevant SDG target for each of three SDGs addressed by the project. Refer to the most recent version of targets [here](#).)

The information about project impact towards the SDGs (targets, indicators and parameters) is based in the data provided in the link <https://sustainabledevelopment.un.org/sdgs>

SDG1 - No Poverty

Target

1.4 By 2030, ensure that all men and women, in particular the poor and the vulnerable, have equal rights to economic resources, as well as access to basic services, ownership and control over land and other forms of property, inheritance, natural resources, appropriate new technology and financial services, including microfinance

Indicator

1.4.1 Proportion of population living in households with access to basic services.

Explanation: Access to a cleaner and more efficient combustion method/device contributes to the improvement of basic services, reducing poverty levels.

The saving energy for cooking improves the quality of basic domestic services by reducing poverty levels.

Parameter

Number of Households using the ICS. 25,800 of Households using the ICS reporting energy saving.

SDG 2 - Zero Hunger

Target

2.1 By 2030, end hunger and ensure access by all people, in particular the poor and people in vulnerable situations, including infants, to safe, nutritious and sufficient food all year round

Indicator

2.1.1 Prevalence of undernourishment

Parameter

90% Percentage of people reporting covering cooking needs

Explanation: Access to a cleaner and more efficient combustion method/device represents the opportunity to expand food options, contributing to the reduction of malnutrition.

SDG 3 – Good Health and Well Being

Target

3.4 By 2030, reduce by one third premature mortality from non-communicable diseases through prevention and treatment and promote mental health and well-being

Indicator

3.4.1 Mortality rate attributed to cardiovascular disease, cancer, diabetes or chronic respiratory disease

Explanation: Access to a cleaner and more efficient combustion method / device for cooking reduces the exposure of vulnerable groups (women, children, the elderly) to toxic gases generated by the use of solid fuels, the product of incomplete combustion, which significantly reduces respiratory conditions, eye irritation, and risk of burns.

Projects that include chimney devices that displace the combustion products gases outside the home frequently help to improve the cleanliness and hygiene inside the houses (without smoke or soot), which promotes cleaning habits and transmits a sensation of well-being and dignity.

The correct and complete cooking of food and the practice of boiling thanks to a cleaner and more efficient method / combustion device helps reduce gastrointestinal diseases.

The saving of water and energy to heat it helps to improve cleaning and hygiene habits by making available the water resource for more people and improving the personal hygiene experience especially in places with cold climates.

Parameter

90% Proportion of beneficiaries confirming less respiratory disease AND 90% proportion of beneficiaries confirming improvement in hygiene within the kitchen thanks to the project.

SDG 6 – Clean Water And Sanitation

Target

6.1 By 2030, achieve universal and equitable access to safe and affordable drinking water for all

Indicator

6.1.1 Proportion of population using safely managed drinking water service

Explanation: Access to a cleaner and more efficient combustion method / device encourages the practice of treating water (boiling it) to make it drinkable.

Parameter

90% Usage rate of the ICS. Access to a cleaner and more efficient combustion method / device encourages the practice of treating water (boiling it) to make it drinkable.

SDG 7 – Affordable and clean Energy

Target

7.1 By 2030, ensure universal access to affordable, reliable and modern energy services

Indicator

7.1.2 Proportion of population with primary reliance on clean fuels and technology

Explanation: In many cases, access to fuels such as LP gas and natural gas are out of reach of the most vulnerable population and efficient methods / devices of solid fuels (charcoal and wood) are medium transition technologies long term. This technology can significantly help to cover a good part of household energy requirements in a reliable and clean way.

Parameter

Usage rate of the ICS

SDG 11 – Sustainable Cities and Communities

Target

11.6 By 2030, reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality and municipal and other waste management

Indicator

11.6.2 Annual mean levels of fine particulate matter (e.g. PM2.5 and PM10) in cities (population weighted)

Explanation: Even in cities, in a part of the population, especially in the peripheries (but not exclusively), the use of solid fuels for cooking is very common, which increases air pollution levels. Access to a cleaner and more efficient combustion method / device for cooking helps improve air quality.

Parameter

50% Amount of firewood saved.

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

Target

13.2 Integrate climate change measures into national policies, strategies and planning

13.3 Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning

77,885 cumulative tCO2e mitigated during the crediting period of the Project, thereby making a contribution to climate action through the fuel saving for cooking.

B.6.2. Explanation of methodological choices/approaches for estimating the SDG outcome

>> (Explain how the methodological steps in the selected methodology(ies) or proposed approach for calculating baseline and project outcomes are applied. Clearly state which equations will be used in calculating net benefit.)

The selection of the equations is based on the fact that the baseline fuel and the project fuel are the same and the baseline emission factors and project emission are considered the same.

Emissions reductions calculated as follows:

Gold Standard®

$$ER_y = \sum_{b,p} (N_{p,y} * U_{p,y} * P_{p,b,y} * NCV_{b, fuel} * (f_{NRB,b,y} * EF_{fuel, CO2} + EF_{fuel, nonCO2})) - \sum LE_{p,y} \quad (1)$$

Where:

| | |
|----------------------|--|
| $\sum_{b,p}$ | Sum over all relevant (baseline b/project p) couples |
| $N_{p,y}$ | Cumulative number of project technology-days included in the project database for project scenario p against baseline scenario b in year y |
| $U_{p,y}$ | Cumulative usage rate for technologies in project scenario p in year y, based on cumulative adoption rate and drop off rate revealed by usage surveys (fraction) |
| $P_{p,b,y}$ | Specific fuel savings for an individual technology of project p against an individual technology of baseline b in year y, in tons/day, as derived from the statistical analysis of the data collected from the field tests |
| $f_{NRB,b,y}$ | Fraction of biomass used in year y for baseline scenario b that can be established as non-renewable biomass (drop this term from the equation when using a fossil fuel baseline scenario) |
| $NCV_{b,fuel}$ | Net calorific value of the fuel that is substituted or reduced (IPCC default for wood fuel, 0.015 TJ/ton) |
| $EF_{b,fuel,CO2}$ | CO ₂ emission factor of the fuel that is substituted or reduced. 112 tCO ₂ /TJ for Wood/Wood Waste, or the IPCC default value of other relevant fuel |
| $EF_{b,fuel,nonCO2}$ | Non-CO ₂ emission factor of the fuel that is reduced |
| $LE_{p,y}$ | Leakage for project scenario p in year y (tCO ₂ e/yr) |

Baselines Emissions calculated as followed:

$$BE_{b,y} = B_{b,y} * ((f_{NRB,y} * EF_{b,fuel, CO2}) + EF_{b,fuel, nonCO2}) * NCV_{b, fuel} \quad (3)$$

Where:

Gold Standard®

| | |
|-----------------------|---|
| $BE_{b,y}$ | Emissions for baseline scenario b during the year y in tCO ₂ e |
| $B_{b,y}$ | Quantity of fuel consumed in baseline scenario b during year y, in tons, as per by-default factors ²⁴ (cases with project performance field test only) |
| $f_{NRB,,y}$ | Fraction of biomass used during year y for the considered scenario that can be established as non-renewable biomass (drop this term from the equation when using a fossil fuel baseline scenario) |
| $NCV_{b,fuel}$ | Net calorific value of the fuel that is substituted or reduced (IPCC default for wood fuel, 0.015 TJ/ton) |
| $EF_{b,fuel,CO_2}$ | CO ₂ emission factor of the fuel that is substituted or reduced. 112 tCO ₂ /TJ for Wood/Wood Waste, or the IPCC default value of other relevant fuel |
| $EF_{b,fuel,nonCO_2}$ | Non-CO ₂ emission factor of the fuel that is substituted or reduced |

$$B_{b,y} = N_{p,y} * P_{b,y} \quad (4)$$

Where:

| | |
|-----------|---|
| $N_{p,y}$ | Project technology-days in the project database for project scenario p through year y |
| $P_{b,y}$ | Specific fuel consumption for an individual technology in baseline scenario b during year y converted to tons/day |

Project Emissions calculated as follows:

$$PE_{p,y} = B_{p,y} * ((f_{NRB,y} * EF_{p,fuel, CO2}) + EF_{p,fuel, nonCO2}) * NCV_{p, fuel} \quad (5)$$

Where:

$PE_{p,y}$ Emissions for project scenario p during year y in tCO₂e

$B_{p,y}$ Quantity of fuel consumed in project scenario p during year y, in tons, and as derived from the statistical analysis conducted on the data collected during the project performance field tests (cases when no baseline performance field test are performed, e.g. by-default baseline factors)

$f_{NRB,y}$ Fraction of biomass used during year y that can be established as non-renewable biomass (drop this term from the equation when using a fossil fuel baseline scenario)

$NCV_{p,fuel}$ Net calorific value of the project fuel (IPCC default for wood fuel, 0.015 TJ/ton). This is equal to the baseline fuel NCV in projects which use the same fuel.

$EF_{p,fuel,CO2}$ CO₂ emission factor of the project fuel. This is equal to the baseline fuel EF in projects which use the same fuel, 112 tCO₂/TJ for Wood/Wood Waste, or the IPCC default value of other relevant fuel

$EF_{p,fuel,nonCO2}$ Non-CO₂ emission factor of the project fuel. This is equal to the baseline fuel EF in projects which use the same fuel.

$$B_{p,y} = N_{p,y} * ((P_{p,y} * U_{p,y}) + (P_{b,y} * (1 - U_{p,y}))) \quad (6)$$

Where:

$N_{p,y}$ Project technology-days in the project database for project scenario p through year y

$P_{p,y}$ Specific fuel consumption for an individual technology in project scenario p during year y converted to tons/day

$P_{b,y}$ Specific fuel consumption for an individual technology in baseline scenario b during year y converted to tons/day

$U_{p,y}$ Cumulative usage rate for technologies in project scenario j during year y, based on cumulative installation rate and drop-off rate.

The overall GHG reduction achieved by the project activity are calculated as follows:

$$ER_y = \sum BE_{b,y} - \sum PE_{p,y} - \sum LE_{p,y} \quad (7)$$

Where:

ER_y Emission reduction for total project activity in year y (tCO₂e/yr)

$BE_{p,y}$ Baseline emissions for baseline scenario b in year y (tCO₂e/yr)

$PE_{b,y}$ Project emissions for project scenario p in year y (tCO₂e/yr)

$LE_{p,y}$ Leakage for project scenario p in year y (tCO₂e/yr)

It is pertinent to mention that arithmetically, it is the same to calculate separately baseline, project and leakage as the equation 7, than calculating the reductions as the wood fuel saving (baselines minus project) minus leakage. Both approaches are applied in the ERs spreadsheet and lead the same results (see tab ER Calculations).

B.6.3. Data and parameters fixed ex ante for monitoring contribution to each of the three SDGs

(Include a compilation of information on the data and parameters that are not monitored during the crediting period but are determined before the design certification and remain fixed throughout the crediting period like IPCC defaults and other methodology defaults. Copy this table for each piece of data and parameter.)

| | |
|---|---|
| Relevant SDG Indicator | SDG 13 |
| Data/parameter | EF _{b,co2} |
| Unit | tco ₂ /TJ |
| Description | CO ₂ emission factor arising from use of fuels in baseline scenario (wood fuel is considered as the baseline fuel.) |
| Source of data | IPCC default values IPCC default value IPCC 2006 Guidelines for National Greenhouse gas Inventories Chapter 2: Stationary Combustion (https://www.ipcc-nggip.iges.or.jp/public/2006gl/pdf/2_Volume2/V2_2_Ch2_Stationary_Combustion.pdf) Page 2.23/ Table 2.5 |
| Value(s) applied | 112 |
| Choice of data or Measurement methods and procedures | Deemed valid by GS VER Methodology |
| Purpose of data | Determination of CO ₂ emission factor in baseline |

| | |
|--------------------|--|
| Additional comment | |
|--------------------|--|

| | |
|--|--|
| Relevant SDG Indicator | SDG 13 |
| Data/parameter | EF _{b,non co2} |
| Unit | tCO ₂ /TJ |
| Description | Non-CO ₂ emission factor arising from use of fuels in baseline scenario |
| Source of data | As provided by IPCC in section 2.10.2 of IPCC Fourth Assessment Report: Climate Change 2007 (http://www.ipcc.ch/publications_and_data/ar4/wg1/en/ch2s2-10-2.html) and Emission Factor value provided in Table 2.5 of Chapter 2: Stationary Emissions (2006 IPCC Guidelines for National Greenhouse Gas Inventories). |
| Value(s) applied | 8.692 (7.5*1.192 ((CH ₄ =0.3*GWP 25) + (N ₂ O=0.004*GWP 298)) |
| Choice of data or Measurement methods and procedures | Deemed valid by GS VER Methodology Determined as per IPCC default figures |
| Purpose of data | Determination of non-CO ₂ emission factor in baseline |
| Additional comment | |

| | |
|--|--|
| Relevant SDG Indicator | SDG 13 |
| Data/parameter | EF _{p,co2} |
| Unit | tCO ₂ /TJ |
| Description | CO ₂ emission factor arising from use of fuels in project scenario |
| Source of data | IPCC default values IPCC 2006 Guidelines for National Greenhouse gas Inventories Chapter 2: Stationary Combustion (https://www.ipcc-nggip.iges.or.jp/public/2006gl/pdf/2_Volume2/V2_2_Ch2_Stationary_Combustion.pdf) Page 2.23/ Table 2.5 |
| Value(s) applied | 112 |
| Choice of data or Measurement methods and procedures | Deemed valid by Methodology Determined as per IPCC default figures |
| Purpose of data | Determination of CO ₂ emission factor in project |
| Additional comment | |

| | |
|---|--|
| Relevant SDG Indicator | SDG 13 |
| Data/parameter | $EF_{p,non\ CO_2}$ |
| Unit | tCO ₂ /TJ |
| Description | Non-CO ₂ emission factor arising from use of fuels in project scenario |
| Source of data | As provided by IPCC in section 2.10.2 of IPCC Fourth Assessment Report: Climate Change 2007 (http://www.ipcc.ch/publications_and_data/ar4/wg1/en/ch2s2-10-2.html) and Emission Factor value provided in Table 2.5 of Chapter 2: Stationary Emissions (2006 IPCC Guidelines for National Greenhouse Gas Inventories). |
| Value(s) applied | 8.692 (7.5*1.192 ((CH ₄ =0.3*GWP 25) + (N ₂ O=0.004*GWP 298)) |
| Choice of data or Measurement methods and procedures | Deemed valid by GS VER Methodology Determined as per IPCC default figures |
| Purpose of data | Determination of non-CO ₂ emission factor in project |
| Additional comment | |

| | |
|--|---|
| Relevant SDG Indicator/Safeguarding Principle | SDG 13 |
| Data / Parameter | NCV _b |
| Unit | TJ/ton |
| Description | Net calorific value of the fuels used in the baseline |
| Source of data | IPCC default value IPCC (2006) "IPCC Guidelines for National Greenhouse Gas Inventories", Volume 2, Energy, Chapter 1, Introduction, Table 1.2, p 1.19 |
| Value(s) applied | 0.0156 |
| Measurement methods and procedures | Deemed valid by Methodology Determined as per IPCC default figures |
| Purpose of data | Determination of fuels NCV in baseline |
| Additional comment | |

| | |
|--|------------------|
| Relevant SDG Indicator/Safeguarding Principle | SDG 13 |
| Data / Parameter | NCV _p |

| | |
|---|---|
| Unit | TJ/ton |
| Description | Net calorific value of the fuels used in the project |
| Source of data | IPCC default value IPCC (2006) "IPCC Guidelines for National Greenhouse Gas Inventories", Volume 2, Energy, Chapter 1, Introduction, Table 1.2, p 1.19 |
| Value(s) applied | 0.0156 |
| Measurement methods and procedures | Deemed valid by Methodology Determined as per IPCC default figures |
| Purpose of data | Determination of fuels NCV in project |
| Additional comment | |

| | |
|--|--|
| Relevant SDG Indicator/Safeguarding Principle | SDG 13 |
| Data / Parameter | $f_{NRB,i,y}$ |
| Unit | Fractional non-renewability |
| Description | Non-renewability status of woody biomass fuel in scenario i during year y |
| Source of data | fNRB Calculation |
| Value(s) applied | 0.86 |
| Measurement methods and procedures | Value calculated using methodological approach justified with relevant and updated data. |
| Purpose of data | Determination of fraction of non-renewable biomass |
| Additional comment | |

| | |
|---|--|
| Relevant SDG Indicator | SDG 13, SDG 3 and SDG 15 |
| Data/parameter | $P_{b,y}$ |
| Unit | Tonnes firewood per household per year |
| Description | Quantity of firewood consumed in baseline scenario during year y |
| Source of data | Baseline KPT |
| Value(s) applied | .0238 tons/household/year |
| Choice of data or Measurement methods and procedures | Baseline KPT Field Test |

| | |
|-----------------|---|
| Purpose of data | Estimation of CO ₂ e emission reductions |
|-----------------|---|

B.6.4. Ex ante estimation of outcomes linked to each of the three SDGs

>> (Provide a transparent ex ante calculation of baseline and project outcomes (or, where applicable, direct calculation of net benefit) during the crediting period, applying all relevant equations provided in the selected methodology(ies) or as per proposed approach. For data or parameters available before design certification, use values contained in the table in section B.6.3 above. For data/parameters not available before design certification and monitored during the crediting period, use estimates contained in the table in section B.7.1 below)

Ex ante calculations related to the outcomes of SDG 1, SDG 6, SDG 7, SDG 11 and SDG 13

A detailed ex-ante calculation of the outcome for SDG 13 will be provided in a separate excel file (uploaded to SustainCert App). For data/parameters available before design certification values contained in section B.6.3 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 SDG 2, SDG 3

The impact monitoring relating those SDGs is made also through a qualitative auto-evaluation of the sample families during the annual Usage Survey as described above in section B.6.2. For these aspects no specific calculations are needed to be made.

B.6.5. Summary of ex ante estimates of each SDG outcome

Ex-ante estimation of SDG 13 outcomes

| Year | Baseline estimate | Project estimate | Net benefit |
|--|-------------------|------------------|-------------|
| Year 1 | 9,734 | 5,353 | 4,381 |
| Year 2 | 27,242 | 15,457 | 11,785 |
| Year 3 | 55,158 | 32,314 | 22,844 |
| Year 4 | 104,820 | 62,208 | 42,612 |
| Year 5 | 184,320 | 110,927 | 73,393 |
| Total | 381,274 | 226,259 | 155,015 |
| Total number of crediting years | 5 | | |
| Annual average over the crediting period | 76,255 | 45,252 | 31,003 |

B.7. Monitoring plan

B.7.1. Data and parameters to be monitored

(Include specific information on how the data and parameters that need to be monitored in the selected methodology(ies) or proposed approaches or as per mitigation measures from safeguarding principles

assessment or as per feedback from stakeholder consultations would actually be collected during monitoring. Copy this table for each piece of data and parameter.)

| | |
|---|---|
| Relevant SDG Indicator | SDG 13, SDG 1 and SDG 7 |
| Data / Parameter | $U_{p,y}$ |
| Unit | Percentage |
| Description | Usage rate in project scenario p during year y |
| Source of data | Annual usage survey/Monitoring survey |
| Value(s) applied | Ex ante estimate: 0.90 |
| Measurement methods and procedures | The usage survey is carried out annually as described in section B.7 of this PDD. |
| Monitoring frequency | Annual |
| QA/QC procedures | Continuous supervision on monitoring campaigns and crosscheck of results and consolidation of databases and results. QA/QC to take place at operational and administrative levels including checks by external (e.g. project consultant). |
| Purpose of data | Estimation of CO ₂ e emission reductions |
| Additional comment | A usage parameter is derived for each age group of project cookstove being credited. |

| Relevant SDG Indicator | SDG 13, SDG 1 and SDG 7 | | | | | | | | | | | | | | |
|---|--|--------------|------------------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|--|--|
| Data / Parameter | $N_{p,y}$ | | | | | | | | | | | | | | |
| Unit | Number of project cookstove credited (units) | | | | | | | | | | | | | | |
| Description | Cookstove in the project database for project scenario p through year y | | | | | | | | | | | | | | |
| Source of data | Total sales and distribution record | | | | | | | | | | | | | | |
| Value(s) applied | <p>Ex ante estimation:</p> <table border="1"> <thead> <tr> <th>Project year</th><th>Stoves installed</th></tr> </thead> <tbody> <tr> <td>Year 1</td><td>1,669</td></tr> <tr> <td>Year 2</td><td>1,502</td></tr> <tr> <td>Year 3</td><td>2,993</td></tr> <tr> <td>Year 5</td><td>5,418</td></tr> <tr> <td>Year 5</td><td>7,791</td></tr> <tr> <td></td><td></td></tr> </tbody> </table> | Project year | Stoves installed | Year 1 | 1,669 | Year 2 | 1,502 | Year 3 | 2,993 | Year 5 | 5,418 | Year 5 | 7,791 | | |
| Project year | Stoves installed | | | | | | | | | | | | | | |
| Year 1 | 1,669 | | | | | | | | | | | | | | |
| Year 2 | 1,502 | | | | | | | | | | | | | | |
| Year 3 | 2,993 | | | | | | | | | | | | | | |
| Year 5 | 5,418 | | | | | | | | | | | | | | |
| Year 5 | 7,791 | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| Measurement methods and procedures | Continuous monitoring. The number of project cookstoves is recorded in the stoves selling database. | | | | | | | | | | | | | | |
| Monitoring frequency | Continuous | | | | | | | | | | | | | | |
| QA/QC procedures | Continuous supervision on monitoring campaigns and crosscheck of results and consolidation of databases and results. QA/AC to take place at operational and administrative levels including checks by external (e.g. project consultant). | | | | | | | | | | | | | | |
| Purpose of data | Estimation of CO ₂ e emission reductions | | | | | | | | | | | | | | |
| Additional comment | - | | | | | | | | | | | | | | |

| | |
|---|---|
| Relevant SDG Indicator | SDG 13, SDG 1 and SDG 7 |
| Data / Parameter | Pp,y |
| Unit | tonnes/household/day |
| Description | Quantity of fuel that is consumed in project scenario p during year y |
| Source of data | Kitchen Performance Test and associated KPT data analysis and any applicable adjustment factors |
| Value(s) applied | Value to be provided in Monitoring Report under the corresponding parameter. |
| Measurement methods and procedures | Monitor project scenario fuelwood consumption through 3-day Kitchen Performance Tests (KPTs) for each age group of stoves included. |
| Monitoring frequency | Updated every two years, or more frequently |
| QA/QC procedures | Continuous supervision on monitoring campaigns and crosscheck of results and consolidation of databases and results. QA/AC to take place at operational and administrative levels including checks by external (e.g. project consultant). |
| Purpose of data | Estimation of CO2e emission reductions |
| Additional comment | A usage parameter is derived for each age group of project cookstove being credited. |

| | |
|---|---|
| Relevant SDG Indicator | SDG 13, SDG 1 and SDG 7 |
| Data / Parameter | Up,y |
| Unit | Percentage |
| Description | Usage rate in project scenario p during year y |
| Source of data | Annual usage monitoring survey |
| Value(s) applied | Value to be provided in Monitoring Report under the corresponding parameter. |
| Measurement methods and procedures | Annual usage monitoring survey |
| Monitoring frequency | Annual or more frequently, in all cases on time for any request for issuance |
| QA/QC procedures | Continuous supervision on monitoring campaigns and crosscheck of results and consolidation of databases and results. QA/AC to take place at operational and administrative levels including checks by external (e.g. project consultant). |
| Purpose of data | Estimation of CO2e emission reductions |
| Additional comment | A single usage parameter is weighted to be representative of the quantity of project technologies of each age being credited in a given project scenario. |

| | |
|---|---|
| Relevant SDG Indicator | SDG 13 |
| Data / Parameter | LEp,y |
| Unit | t_CO2e per year |
| Description | Leakage in project scenario p during year y |
| Source of data | Monitoring survey |
| Value(s) applied | Value to be provided in Monitoring Report under the corresponding parameter. |
| Measurement methods and procedures | Field monitoring survey |
| Monitoring frequency | Every two years |
| QA/QC procedures | Continuous supervision on monitoring campaigns and crosscheck of results and consolidation of databases and results. QA/AC to take place at operational and administrative levels including checks by external (e.g. project consultant). |
| Purpose of data | Estimation of CO2e emission reductions |
| Additional comment | Aggregate leakage can be assessed for multiple project scenarios, if appropriate |

| | |
|---|---|
| Relevant SDG Indicator | SDG 11 |
| Data / Parameter | Households using the ICS reporting energy saving. |
| Unit | Number of households |
| Description | Project beneficiaries confirming they perceive a reduction in the fuel consumption for cooking, thanks to the project. |
| Source of data | Monitoring survey |
| Value(s) applied | Value to be provided in Monitoring Report under the corresponding parameter. |
| Measurement methods and procedures | Field monitoring survey |
| Monitoring frequency | Annual |
| QA/QC procedures | Continuous supervision on monitoring campaigns and crosscheck of results and consolidation of databases and results. QA/AC to take place at operational and administrative levels including checks by external (e.g. project consultant). |
| Purpose of data | Quantification of impact relating SDG1 |
| Additional comment | Aggregate leakage can be assessed for multiple project scenarios, if appropriate |

| | |
|---|---|
| Relevant SDG Indicator | SDG 2 |
| Data / Parameter | people reporting covering cooking needs |
| Unit | Percentage (%) |
| Description | Project beneficiaries confirming the project has contributed to cover the cooking needs- |
| Source of data | Monitoring survey |
| Value(s) applied | Value to be provided in Monitoring Report under the corresponding parameter. |
| Measurement methods and procedures | Field monitoring survey |
| Monitoring frequency | Annual |
| QA/QC procedures | Continuous supervision on monitoring campaigns and crosscheck of results and consolidation of databases and results. QA/AC to take place at operational and administrative levels including checks by external (e.g. project consultant). |
| Purpose of data | Quantification of impact relating SDG2 |
| Additional comment | Aggregate leakage can be assessed for multiple project scenarios, if appropriate |

| | |
|---|---|
| Relevant SDG Indicator | SDG 3 |
| Data / Parameter | Proportion of beneficiaries confirming less respiratory disease |
| Unit | Percentage (%) |
| Description | Project beneficiaries that perceive less respiratory disease thanks to the project. |
| Source of data | Monitoring survey |
| Value(s) applied | Value to be provided in Monitoring Report under the corresponding parameter. |
| Measurement methods and procedures | Field monitoring survey |
| Monitoring frequency | Annual |
| QA/QC procedures | Continuous supervision on monitoring campaigns and crosscheck of results and consolidation of databases and results. QA/AC to take place at operational and administrative levels including checks by external (e.g. project consultant). |
| Purpose of data | Quantification of impact relating SDG2 |
| Additional comment | Aggregate leakage can be assessed for multiple project scenarios, if appropriate |

| | |
|---|---|
| Relevant SDG Indicator | SDG 3 |
| Data / Parameter | proportion of beneficiaries confirming improvement in hygiene within the kitchen thanks to the project. |
| Unit | Percentage (%) |
| Description | Project beneficiaries that perceive hygiene within the kitchen has been improved thanks to the project. |
| Source of data | Monitoring survey |
| Value(s) applied | Value to be provided in Monitoring Report under the corresponding parameter. |
| Measurement methods and procedures | Field monitoring survey |
| Monitoring frequency | Annual |
| QA/QC procedures | Continuous supervision on monitoring campaigns and crosscheck of results and consolidation of databases and results. QA/AC to take place at operational and administrative levels including checks by external (e.g. project consultant). |
| Purpose of data | Quantification of impact relating SDG2 |
| Additional comment | Aggregate leakage can be assessed for multiple project scenarios, if appropriate |

| | | | | | | | | | | | | | |
|---|---|-----|--------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Relevant SDG Indicator | SDG 6 | | | | | | | | | | | | |
| Data / Parameter | Usage rate of the ICS. Access to a cleaner and more efficient combustion method. | | | | | | | | | | | | |
| Unit | Percentage (%) | | | | | | | | | | | | |
| Description | Project beneficiaries using the device for boiling water as treatment to make it drinkable. | | | | | | | | | | | | |
| Source of data | Monitoring survey | | | | | | | | | | | | |
| Value(s) applied | <p>Estimated values</p> <table> <tr> <td>Age</td><td>Usage Rate %</td></tr> <tr> <td>0-1</td><td>90%</td></tr> <tr> <td>1-2</td><td>88%</td></tr> <tr> <td>2-3</td><td>89%</td></tr> <tr> <td>3-4</td><td>80%</td></tr> <tr> <td>4-5</td><td>75%</td></tr> </table> | Age | Usage Rate % | 0-1 | 90% | 1-2 | 88% | 2-3 | 89% | 3-4 | 80% | 4-5 | 75% |
| Age | Usage Rate % | | | | | | | | | | | | |
| 0-1 | 90% | | | | | | | | | | | | |
| 1-2 | 88% | | | | | | | | | | | | |
| 2-3 | 89% | | | | | | | | | | | | |
| 3-4 | 80% | | | | | | | | | | | | |
| 4-5 | 75% | | | | | | | | | | | | |
| Measurement methods and procedures | Field monitoring survey | | | | | | | | | | | | |
| Monitoring frequency | Annual | | | | | | | | | | | | |
| QA/QC procedures | Continuous supervision on monitoring campaigns and crosscheck of results and consolidation of databases and results. QA/AC to take place at operational and administrative levels including checks by external (e.g. project consultant). | | | | | | | | | | | | |
| Purpose of data | Quantification of impact relating SDG2 | | | | | | | | | | | | |
| Additional comment | The estimated values for usage rates for age group 0-1 is defined as 90% which is the maximum rate allowed as per the GS 'Requirements and Guidelines for carrying out usage surveys for projects implementing improved cooking devices' assuming the 'Level B. Good Practice Monitoring Requirements'. The usage rate for subsequent age groups are based on theoretical behaviour of usage rates. | | | | | | | | | | | | |

| | |
|---|--|
| Relevant SDG Indicator | SDG 11 |
| Data / Parameter | Amount of firewood saved. Access to a cleaner and more efficient combustion method |
| Unit | Percentage (%) |
| Description | Firewood saving in comparison with the baseline scenario. |
| Source of data | Project KPTs |
| Value(s) applied | Value to be provided in Monitoring Report under the corresponding parameter. |
| Measurement methods and procedures | Every two years. |
| Monitoring frequency | Annual |
| QA/QC procedures | Transparent data analysis and reporting |
| Purpose of data | Quantification of impact relating SDG2 |
| Additional comment | Aggregate leakage can be assessed for multiple project scenarios, if appropriate |

| | |
|---|--|
| Relevant SDG Indicator | SDG 08 |
| Data / Parameter | Economic support and benefits provided for external staff (constructors and promoters). |
| Unit | Money spent on benefits for external staff. |
| Description | Although constructors and promoters are not direct employees of Ecolife, they are very relevant stakeholders, and the project has provided support to them beyond its responsibility (medical care support). |
| Source of data | Human resources and administrative records |
| Value(s) applied | Value to be provided in Monitoring Report under the corresponding parameter. |
| Measurement methods and procedures | Annually |
| Monitoring frequency | Annual |
| QA/QC procedures | QA/AC to take place at operational and administrative levels including checks by external (e.g. project consultant). Transparent data analysis and reporting |
| Purpose of data | Quantification of impact relating SDG08 |
| Additional comment | |

| | |
|---|--|
| Relevant SDG Indicator | SDG 08 |
| Data / Parameter | Number of jobs positions created by the project and the respective salaries. |
| Unit | Number of jobs and Salaries (MNX\$) |
| Description | Jobs created as result of the the project activity. |
| Source of data | Contracts, employment records, and payment records. |
| Value(s) applied | Value to be provided in Monitoring Report under the corresponding parameter. |
| Measurement methods and procedures | Reported annually |
| Monitoring frequency | Annual |
| QA/QC procedures | Human resources and Directors continuous checks. |
| Purpose of data | Quantification of impact relating SDG8 |
| Additional comment | Human resources records to be available at the verification. |

B.7.2. Sampling plan

>> (If data and parameters monitored in section B.7.1 above are to be determined by a sampling approach, provide a description of the sampling plan.)

Robust sampling will be employed; testing is transparent, easily replicable and conservative; and the impact of day-to-day variation in cooking practices is accounted for in the calculation of emission reductions on absolute fuelwood savings as observed in the KPT over a complete four-day cycle.

Seasonal variation will be considered for the baseline KPT. All baseline and project field testing will be designed to satisfy the statistical requirements as described in the methodology.

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, considering randomness and representativeness. 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.

B.7.3. Other elements of monitoring plan

The sampling plan follow the requirements stated in the methodology applied (TPDDTECv3.1), 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 (age0-1) must have technologies that have been in use on average longer than 0.5 years. For technologies in the second year of use (age1-2), the usage

survey must be conducted with technologies that have been in use on average at least 1.5 years, and so on.

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 age 1-5 are credited, the usage survey must include 30 representative samples from each age for a total of 150 samples. The resulting usage parameter should be weighted based on the proportion of technologies in the total sales record of each age.

SECTION C. Duration and crediting period

C.1. Duration of project

10 years

C.1.1. Start date of project

>> *(Specify start date of the project, in the format of DD/MM/YYYY. Describe how this date has been determined as per the definition of start date provided in section 3.4.3 of GS4GG Principles & Requirements document and provide evidence to support this date.)*

The project start date is 01/04/2019. This is the date that the first cookstove to be certified was installed.

C.1.2. Expected operational lifetime of project

The expected operation lifetime of the project is 5 years. The Patsari model has a lifespan of 5 years or more with regular maintenance. With the replacement of some components (e.g. ceramic elbow, chimney and iron plate) the useful lifespan can be extended for at least another 3-4 years with similar efficiency. The operational lifetime of the project will match with lifespan of the technology being used.

Because the project has not yet installed stoves that have reached the 5-6 year stove age group, options to extend the lifespan are still being assessed. The project will either determine the efficiency of a Patsari with replacement components using a KPT or a new stove will be installed after the five year period. Through the KPT's to be carried out for the different stove age groups the performance of the stove will be tracked. The project may consider not including Patsaris with replacement components in the emission reduction calculations.

The project is developing a maintenance program in order to ensure sustained use and function of the stove. The project has an ongoing SMS feature where beneficiaries can submit maintenance requests and questions at any time through Mogli SMS. With the keyword "ayudame", beneficiaries can submit maintenance requests directly to the project which is automatically handled and tracked through Salesforce. The project will also solve maintenance needs through on going monitoring campaigns. Lastly, the project is planning to create maintenance centers in each community, contingent on the resources available. The maintenance centers would be storefronts in central locations throughout the community. Here, beneficiaries can easily and conveniently visit their local maintenance center for components, guidance, questions, or repairs.

C.2. Crediting period of project

C.2.1. Start date of crediting period

>> (Specify in dd/mm/yyyy. This can be start of project operation or two years prior to the date of Project Design Certification, whichever is later.)

The start date of the crediting period is 01/04/2019

C.2.2. Total length of crediting period

>> (Specify the total length of crediting period sought in line with GS4GG Principles & Requirements or relevant activity requirements.)

The length of the crediting period is 5 years. The crediting period may be renewed twice in line with Community Services Activity Requirements.

SECTION D. Safeguarding principles assessment

D.1. Analysis of social, economic and environmental impacts

>> (Refer the GS4GG Safeguarding Principles and Requirements document for detailed guidance on carrying out this assessment.)

| Safeguarding principles | Assessment questions | Assessment of relevance to the project (Yes/potentially/no) | Justification | Mitigation measure (if required) |
|--------------------------------|-----------------------------|--|----------------------|---|
| | | | | |

| | | | | |
|---|--|----|--|-----|
| 1 - Human Rights | <p>a. The Project Developer and the Project shall respect internationally proclaimed human rights and shall not be complicit in violence or human rights abuses of any kind as defined in the Universal Declaration of Human Rights.</p> <p>b. The Project shall not discriminate with regards to participation and inclusion.</p> | No | <p>The project is implemented respecting internationally proclaimed human rights and is no complicit in violence or human rights abuses of any kind as defined in the Universal Declaration of Human Rights.</p> <p>The project doesn't either discriminate with regards to participation and inclusion as the efficient project stoves are free and are distributed for the families selected in collaboration with the representatives of the local communities.</p> | N/A |
| 2 - Gender Equality and Women's | a. The Project shall complete the following gender assessment questions in order | No | JUSTIFICATION POINT 1: The project activity doesn't endorse any form of | N/A |
| 3 - Community Health, Safety and Working Conditions | a. The Project shall avoid community exposure to increased health risks and shall not adversely affect the health of the workers and the community. | No | The project activities doesn't include exposing the community to increased health risks and is not adversely affecting the health of workers and the community. In fact, the project activities provide the distribution of improved cookstoves, with the aim, omitting the other objectives, to improve the health of households, for example through the reduction of smoke and therefore less harmful inhalations. | N/A |

| | | | | |
|---|--|-----------|---|------------|
| <p>4 – Cultural Heritage, Indigenous Peoples, Displacement and Resettlement</p> | <p>a. Sites of Cultural and Historical Heritage Does the Project Area include sites, structures, or objects with historical, cultural, artistic, traditional or religious values or intangible forms of culture (e.g., knowledge, innovations, or practices)?</p> <p>b. Forced Eviction and Displacement Does the Project require or cause the physical or economic relocation of peoples (temporary or permanent, full or partial)?</p> <p>c. Land Tenure and Other Rights</p> <p>1. Does the Project require any change to land tenure arrangements and/or other rights?</p> <p>2. For Projects involving land-use tenure, are there any uncertainties with regards land tenure, access rights, usage rights or land ownership?</p> <p>d. Indigenous People</p> <p>Are indigenous people present in or within the area of influence of the Project and/or is the Project located on land/territory claimed by indigenous people?</p> | <p>No</p> | <p>The project activity doesn't include sites, structures or objects with historical, cultural, artistic, traditional or religious value or intangible forms of culture.</p> <p>The Project will provide improved cookstoves to the households in the project area and it does not require alternation, damage or removal of any historical, artistic, traditional, religious or cultural heritage issues.</p> <p>The project activity consists of distributing improved cookstoves and therefore no physical or economic relocation of peoples is involved.</p> <p>Stoves distribution doesn't need additional lands to be used and, therefore, doesn't require any change to land tenure arrangements and/or other rights. In fact, the aim of the project is to reduce the quantity of firewood consumed in the project area.</p> <p>There are no indigenous people present within the area of influence nor the project is located on territory claimed by indigenous people.</p> | <p>N/A</p> |
|---|--|-----------|---|------------|

Gold Standard®

| | | | | |
|-------------------|--|----|--|-----|
| 5 - Corruption | The Project shall not involve, be complicit in or inadvertently contribute to or reinforce corruption or corrupt Projects. | No | The Project doesn't involve, be complicit in or inadvertently contribute to or reinforce corruption or corrupt Projects. | N/A |
|-------------------|--|----|--|-----|

| | | | | |
|----------------------------|---|-----------|---|------------|
| <p>6 – Economic Impact</p> | <p>a. Labour Rights</p> <p>1. The Project Developer shall ensure that there is no forced labour and that all employment complies the national labour and occupational health and safety laws, with obligations under international law, and consistency with the principles and standards embodied in the International Labour Organization (ILO) fundamental conventions. Where these are contradictory and a breach of one or other cannot be avoided, then guidance shall be sought from Gold Standard.</p> <p>2. Workers shall be able to establish and join labour organizations.</p> <p>3. Working agreements with all individual workers shall be documented and implemented. These shall at minimum comprise: (a) Working hours (must not exceed 48 hours per week on a regular basis), AND (b) Duties and tasks, AND (c) Remuneration (must include provision for payment of overtime), AND (d) Modalities on health insurance, AND (e) Modalities on termination of the contract with provision for voluntary resignation by employee, AND Provision for annual leave of not less than 10 days per year, not including sick and casual leave.</p> <p>4. The Project Developer shall justify that the employment model applied is locally and culturally appropriate.</p> <p>5. Child labour, as defined by the ILO Minimum Age Convention is not allowed. The Project Developer shall use adequate and verifiable mechanisms for age verification</p> | <p>No</p> | <p>The project is implemented in the field by ECOLIFE conservation. The employees' rights are a cross-cutting issue and respected in all of the projects of project partners. All employees, will work voluntarily for the project, no forced labour is used and all employment is in compliance with national laws and consistency with the principles of standard ILO conventions. The workers can establish and join labour organizations. In case of new workers will be hired, the working agreement will be documented and implemented in compliance with the Section 3.6.1 of GS4GG Safeguarding Principles & Requirements version 1.1. The employment model applied will be also locally and culturally appropriate.</p> <p>The use of the efficient cookstove will reduce the quantity of firewood used in daily cooking activities and can thereafter release economical and time resources of the local families for other tasks which can be considered to support the financial sustainability of the project.</p> <p>The use of efficient cookstoves will reduce the firewood consumption and will thereafter save the resources of the project families and can be considered to have positive impacts on the project families' economic situation.</p> <p>The project is not only looking for reporting the direct employment impact, but also the subcontractors who are not part of the direct staff. The</p> | <p>N/A</p> |
|----------------------------|---|-----------|---|------------|

| | | | | |
|--|--|--|--|--|
| | <p>in recruitment procedures. Exceptions are children for work on their families' property if: (a) Their compulsory schooling (minimum of 6 schooling years) is not hindered, AND Respected, (b) The tasks they perform do not harm their physical and mental development, AND (c) The opinions and recommendations of an Expert Stakeholder shall be sought and demonstrated as being included in the Project design.</p> <p>6. The Project Developer shall ensure the use of appropriate equipment, training of workers, documentation and reporting of accidents and incidents, and emergency preparedness and response measures.</p> <p>b.Negative Economic Consequence</p> <p>1. The Project Developer shall demonstrate the financial sustainability of the Projects implemented, also including those that will occur beyond the Project Certification period.</p> <p>2. The Projects shall consider economic impacts and demonstrate a consideration of potential risks to the local economy and how these have been taken in account in Project design, implementation, operation and after the Project. Particular focus shall be given to vulnerable and marginalized social groups in targeted communities and that benefits are socially-inclusive and sustainable.</p> | | <p>project is creating new temporary job positions and is providing benefits beyond what it is required by law for this type of temporary contracts e.g. medical care support.</p> <p>No potential risks for the local economy are expected.</p> | |
|--|--|--|--|--|

| Environmental & Ecological Safeguarding Principles | | | | |
|--|---|----|---|-----|
| 1 – Climate and Energy | <p>Emissions Will the Project increase greenhouse gas emissions over the Baseline Scenario?</p> <p>Energy Supply Will the Project use energy from a local grid or power supply (i.e., not connected to a national or regional grid) or fuel resource (such as wood, biomass) that provides for other local users?</p> | No | <p>The Project will reduce the GHG emissions as will be monitored and verified in line with the GS4GG.</p> <p>The Project will not use energy from a local grid or power supply. The efficient cookstoves are fired with charcoal and therefore no change for the currently used cooking fuel will be made.</p> | N/A |
| Water | <p>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?</p> <p>Erosion and/or Water Body Instability 1. Could the Project directly or indirectly cause additional erosion and/or water body instability or disrupt the natural pattern of erosion? If 'Yes' or 'Potentially' proceed to question 2. 2. Is the Project's area of influence susceptible to excessive erosion and/or water body instability?</p> | No | <p>The project will not affect the natural or pre-existing pattern of watercourses, groundwater and/or the watersheds etc. water related issues.</p> <p>The Project will not cause additional erosion directly or indirectly and/or water body instability or disrupt the natural pattern of erosion.</p> | N/A |

| | | | | |
|--|--|-----------|---|------------|
| <p>3 – Environment, ecology and land use</p> | <p>Landscape Modification and Soil Does the Project involve the use of land and soil for production of crops or other products?</p> <p>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?</p> <p>Genetic Resources Could the Project be negatively impacted by the use of genetically modified organisms or GMOs (e.g., contamination, collection and/or harvesting, commercial development)?</p> <p>Release of pollutants Could the Project potentially result in the release of pollutants to the environment?</p> <p>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?</p> <p>Pesticides & Fertilisers Will the Project involve the application of pesticides and/or fertilisers?</p> <p>Harvesting of Forest Will the Project involve the harvesting of forests?</p> <p>Food Does the Project modify the quantity or nutritional quality of food available such as through crop regime alteration</p> | <p>No</p> | <p>The project impact on environment is positive, no negative impacts are expected. Moreover, the stove distribution activities does not include planting or other agricultural activities, producing chemicals or use of GMOs. The project will distribute one clay stove model produced locally. The local stove production is not having any significant environmental impacts as for example the quantities of clay collection needed for the stove production are low compared to other activities like house construction. Neither hazardous waste is produced.</p> <p>Furthermore, the aim of the project is to reduce the quantity of firewood consumed in the project area for cooking activities which will save the natural resources. The Project is not suspected to or will lead to increased vulnerability to any extreme climatic conditions.</p> <p>The Project doesn't involve or is negatively impacted by the use of genetically modified organisms or GMOs.</p> <p>The Project is not potentially resulting in release of pollutants to the environment.</p> <p>The Project is not involving the manufacture, trade, release, and/or use of hazardous chemicals and or materials.</p> <p>The Project doesn't involve the application of pesticides and/or fertilisers.</p> | <p>N/A</p> |
|--|--|-----------|---|------------|

| | | | | |
|--|--|--|---|--|
| | <p>or export or economic incentives?</p> <p>Animal husbandry Will the Project involve animal husbandry?</p> <p>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?</p> <p>Endangered Species</p> <p>1. Are there any endangered species identified as potentially being present within the Project boundary (including those that may route through the area)?</p> <p>2. Does the Project potentially impact other areas where endangered species may be present through transboundary affects?</p> | | <p>Neither harvesting of forests is involved.</p> <p>The Project doesn't modify the quantity or nutritional quality of food available.</p> <p>The Project doesn't involve animal husbandry.</p> <p>The project boundary is the physical, geographical sites of the project technologies, in other words, the physical location of the project stoves .</p> <p>There are no endangered species identified as potentially being present the project boundary and the project is not foreseen to have any negative potential impacts on other areas where endangered species may be present through transboundary effects.</p> <p>It is important to clarify that the project does not takes place within the Monarch Butterfly Reserve but in the buffer area surrounding the reserve. The stoves are installed only at the households and there are no interventions in HCV areas. Therefore, there is no need to carry out a HCV assessment</p> | |
|--|--|--|---|--|

SECTION E. Local stakeholder consultation

E.1. Solicitation of comments from stakeholders

>> (Describe how stakeholder consultation was conducted in accordance with GS4GG Stakeholder Procedure Requirements and Guidelines.)

Originally, the main local stakeholder consultation meeting was planned to take place on the 23rd and 24th April. However, due to the Covid-19 pandemic, the in-person meeting could not take place. The Mexican Government has banned all the public meetings in that time. The in-person meeting has been postponed. Since the Covid-19 situation didn't improve, the PD organized a virtual stakeholder consultation scheduled on 24th April.

The agenda of the meeting included the following items:

1. Opening of the meeting
2. Explanation of the project
 - a. A non-technical summary of the project including information on project design, technology, objectives, scale, duration and implementation plan, and certification process under Gold Standard For Global Goals.
3. Discussion of continuous input/grievance mechanism
4. Questions for clarification about the project
5. Blind sustainability development exercise
 - a. Summary of the economic, social and environmental impacts of the project as per Safeguarding Principles & Requirements

| Safeguarding Principles | |
|----------------------------|--|
| Social | Principle 1 Human Rights |
| | Principle 2 Gender Equality and Women's Rights |
| | Principle 3 Community Health, Safety and Working Conditions |
| | Principle 4 Cultural Heritage, Indigenous Peoples, Displacement and Resettlement |
| | Principle 5 Corruption |
| Economic | Principle 6 Economic Impacts |
| Environmental & Ecological | Principle 7 Climate and Energy |
| | Principle 8 Water |
| | Principle 9 Environment, Ecology and Land Use |

6. Discussion on monitoring sustainable development
7. Closure of the meeting

The stakeholders invited to the meeting included Authorities (local, state, federal), NGOs, Academics, Gold Standard, NGOs supporters, and Gold Standard staff.

| GS Category | Organization | Representative | Invitation Method | Date Invited | Confirmed |
|-------------|--------------|----------------|-------------------|--------------|-----------|
|-------------|--------------|----------------|-------------------|--------------|-----------|

| | | | | | |
|---|---|--------------------------|-------|----------------|-----|
| G | WWF Zitácuaro | Eduardo Rendón Salinas | Email | April 10, 2020 | Yes |
| D | RBMM CONANP Zitácuaro | Felipe Martínez | Email | April 10, 2020 | Yes |
| E | Danaidas Conservación y Desarrollo Sustentable A.C. | Martín Cruz Piña | Email | April 10, 2020 | No |
| E | Alternare A.C. | Guadalupe del Río Pesado | Email | April 10, 2020 | No |
| E | Biocenosis A.C. Región Monarca | Antonio Gutiérrez Núñez | Email | April 10, 2020 | No |
| E | Fondo Monarca | Eligio García Serrano | Email | April 10, 2020 | Yes |
| E | Protectores de la Monarca A.C. | C.Carmelo Martínez Colín | Email | April 14, 2020 | No |
| E | World Vision México A.C. | Hilda Reynoso Garduño | Email | April 10, 2020 | No |
| D | Centro Eje Neovolcánico de la CONANP | Gloria Tavera Alonso | Email | April 10, 2020 | No |
| G | APRONAD | Francisco Rivas | Email | April 10, 2020 | No |
| G | Global Offset Research | Siddharth Yadav | Email | April 10, 2020 | No |
| G | Fundacion MDL de Honduras | Suyapa Zelaya | Email | April 10, 2020 | No |
| G | CEDESOL | David Whitfield | Email | April 10, 2020 | No |
| G | Lean Management Systems Promotion Society | Raave Jain | Email | April 10, 2020 | No |
| G | HIVOS | Harry Clemens | Email | April 10, 2020 | No |
| F | Gold Standard representative/Secretariat | NA | Email | April 10, 2020 | No |
| E | Aprovecho Research Institute | Dean Still | Email | April 10, 2020 | No |
| E | Aprovecho Research Institute | Sam Bentson | Email | April 10, 2020 | No |
| E | Berkeley Air | Dana Charron | Email | April 10, 2020 | No |
| E | Climate Solutions | Olivier LeFebvre | Email | April 10, 2020 | No |
| E | Cool Effect | Marisa de Belloy | Email | April 10, 2020 | No |
| E | Cool Effect | Jodi Manning | Email | April 10, 2020 | No |
| E | OCHO | Cristina Tejada | Email | April 10, 2020 | No |
| E | SEA Limited | Dale Andreatta | Email | April 10, 2020 | No |
| E | Stockholm Environmental Institute | Rob Bailis | Email | April 10, 2020 | No |
| E | StoveTeam | Nancy Hughes | Email | April 10, 2020 | No |
| E | StoveTeam | Mike Hatfield | Email | April 10, 2020 | No |
| E | TaroWorks | Elaine Chang | Email | April 10, 2020 | No |
| E | Trees Water & People | Sebastian Africano | Email | April 14, 2020 | Yes |
| E | UNAM | Adrian Ghilardi | Email | April 10, 2020 | No |
| E | UpEnergy | Evan Haigler | Email | April 10, 2020 | No |
| E | UpEnergy | Erik Wurster | Email | April 10, 2020 | No |
| E | Zamorano | Victoria Cortés | Email | April 10, 2020 | No |
| E | HELPS International | Richard Grinell | Email | April 10, 2020 | No |
| C | DIF Zitácuaro | Hilda Pliego Vázquez | Email | 4/10/2020 | No |

| | | | | | |
|---|--|----------------------------|-------|----------------|-----|
| D | SEDESOL Michoacán | Gerardo Castillo | Email | 4/10/2020 | No |
| D | SEDESOL Michoacán | Víctor Manuel Silva Tejada | Email | 4/10/2020 | No |
| C | UNAM | Alfredo Fuentes | Email | April 10, 2020 | Yes |
| C | UNAM | Omar Masera | Email | April 10, 2020 | No |
| E | GIRA | Victor Berrueta | Email | April 10, 2020 | Yes |
| C | DIF Estado de México | NA | Email | 4/10/2020 | No |
| D | SEDESOL Federal | NA | Email | 4/10/2020 | No |
| C | DIF Michoacán | NA | Email | 4/10/2020 | No |
| G | WWF-Mexico | Jatziri Perez | Email | 4/10/2020 | No |
| G | IUCN Mexico, Central America, and Caribbean | NA | Email | 4/10/2020 | No |
| G | CLAC and Fairtrade | NA | Email | 4/10/2020 | No |
| G | Care International | Clare Spurrell | Email | 4/10/2020 | No |
| G | Care International Geneva | NA | Email | 4/10/2020 | No |
| G | Hivos International | NA | Email | 4/10/2020 | No |
| G | Hivos International | NA | Email | 4/10/2020 | No |
| G | Instituto Perene | NA | Email | 4/10/2020 | No |
| G | R20 | Dr. Ruben Guerra, PhD | Email | 4/10/2020 | No |
| D | Ministry of Environment and Natural resources of Mexico (SEMARNAT) | Paula Guadalupe Macias | Email | 4/10/2020 | No |
| C | Ministry of Environment and Natural resources of Mexico (SEMARNAT) | Diana Karin Guzman Torres | Email | 4/10/2020 | No |
| E | Partnership for Market Readiness/World Bank | Ximena Aristizabal | Email | 4/10/2020 | No |
| E | GIZ - Mexico | Vanessa Villa | Email | 4/10/2020 | No |
| E | Vattenfall Energy Trading GmbH | Francisco Grajales | Email | 4/10/2020 | No |
| E | Iniciativa Climática de México | Dr. Adrian Fernandez | Email | 4/10/2020 | No |
| E | Forest Finest | Andreas Schnall | Email | 4/10/2020 | No |
| E | MexiCO2 Plataforma Mexicana de Carbono | Eduardo Piquero | Email | 4/10/2020 | No |
| E | Tradition Green | Arturo Brandt | Email | 4/10/2020 | No |
| E | GIZ - Mexico | Emily Castro Prieto | Email | 4/10/2020 | No |
| E | GIZ | Carlos Roberto Perez | Email | 4/10/2020 | No |
| E | S&A Carbon | Kyle Silon | Email | 4/10/2020 | No |
| E | Powerlinkinvest | Ulrich Sawetzki | Email | 4/10/2020 | No |

| | | | | | |
|----------------------|-------------------------------------|---------------------|-------|----------------|-----|
| E | Solidariad Network | Moriz Vohrer | Email | 4/10/2020 | No |
| E | Climate Aggregation Platform - UNDP | Mateo Salomon | Email | 4/10/2020 | No |
| E | Climate Reality Leader | Yes | Email | 4/10/2020 | Yes |
| E | South Pole | Christian Ehrat | Email | 4/10/2020 | No |
| C | SEMACCDET | Ricardo Luna García | Email | 4/10/2020 | No |
| Kitzia Oribe Aguilar | | | | April 10, 2020 | Yes |

Invitation tracking table, virtual meeting

The invitations, reminders and the final reminders were sent via email on 10th April 2020, 17th April 2020 and 22nd April 2020 respectively.

More details about this meeting are available on the LSC Meeting Report.

All the comments received were recorded along with the responses provided. The virtual meeting included the blind SD exercise. Follow-up emails were sent to the participants to thank for their participation and to encourage sending additional feedback.

A non-technical project summary and feedback form have been available on the ECOLIFE website since April 2020 to receive feedback. Emails were sent to the stakeholders explaining project information is available in the ECOLIFE website.

Since April 2020, when the in-person meeting was postponed, ECOLIFE has waited for better conditions that allow a physical meeting. Following the indications from the Mexican government,¹⁸ a series of local stakeholder consultation meetings were hosted on August 27th within the municipalities of Jungapeo and Zitacuaro. The opening meetings were spread across two municipalities, three communities, and eight localities in order to encourage access and participation from a wide range of stakeholders.

In total, eight meetings were planned but 5 occurred due to weather conditions. There was heavy rain during the second round of openings which led to no attendance.

In addition to the physical meetings, a virtual stakeholder consultation meeting was hosted to receive feedback from stakeholders that would have been unable to travel into the field where the physical meetings occurred.

Physical LSC Invitation Tracking Table:

¹⁸ From 17th-30th August, the risk indicator published by the Mexican Government was 'Orange', it means that besides to essential economic activities, companies from non-essential economic activities are allowed to work with 30% of the personnel; public spaces can open with a reduced capacity (50% capacity); restaurants, hotels, barbershops/hair saloons can open at reduced capacity (50% capacity).

| Category code | Organisation (if relevant) | Name of invitee | Way of invitation | Date of invitation | Confirmation received? Y/N |
|---------------|----------------------------|------------------------------|-------------------|--------------------|----------------------------|
| A | Community Leader | JESÚS HERNÁNDEZ GARCÍA | Letter and Oral | Aug 20, 2020 | Y |
| A | Community Leader | BULMARO SOTO GUILLÉN | Letter and Oral | Aug 20, 2020 | Y |
| A | Community Leader | JULIO CÉSAR VÁZQUEZ CRUZ | Letter and Oral | Aug 20, 2020 | Y |
| A | Community Leader | EVERARDO PICHARDO ARMENTA | Letter and Oral | Aug 20, 2020 | Y |
| A | Community Leader | HÉCTOR NAVA HERNÁNDEZ | Letter and Oral | Aug 20, 2020 | Y |
| A | Community Leader | MIGUEL ÁNGEL GUIDO CONTRERAS | Letter and Oral | Aug 20, 2020 | Y |
| A | Community Leader | RAFAEL CRUZ VARELA | Letter and Oral | Aug 20, 2020 | Y |
| A | Community Leader | PEDRO RODRÍGUEZ REYES | Letter and Oral | Aug 20, 2020 | Y |
| A | Community Leader | JOSÉ LUIS HUERTA SOTO | Letter and Oral | Aug 20, 2020 | Y |
| A | Community Leader | EFRAIN SOTO RIVERA | Letter and Oral | Aug 20, 2020 | Y |
| A | Community Leader | DANIEL SANTANA MARQUEZ | Letter and Oral | Aug 20, 2020 | Y |
| A | Community Leader | DANIEL SANTANA MARQUEZ | Letter and Oral | Aug 20, 2020 | Y |
| A | Community Leader | DANIEL SANTANA MARQUEZ | Letter and Oral | Aug 20, 2020 | Y |
| A | Community Leader | DANIEL SANTANA MARQUEZ | Letter and Oral | Aug 20, 2020 | Y |
| A | Community Leader | ABUNDIO SALAS DELGADO | Letter and Oral | Aug 20, 2020 | Y |
| A | Community Leader | JESÚS HERNÁNDEZ GARCÍA | Letter and Oral | Aug 20, 2020 | Y |
| A | Community Leader | BULMARO SOTO GUILLÉN | Letter and Oral | Aug 20, 2020 | Y |

E.2. Summary of comments received

>> (Provide a summary of key comments received during the consultation process.)

Overall, responses from stakeholders are positive and grateful toward the project, showing understanding and awareness to it. The opinions regarding the positive features of the meeting reflect that the meeting was very useful in different fronts. The stakeholders' opinion about the project is positive: 98.3% of the stakeholders indicated they like the project. Only 1.7% indicated they didn't like the project. It is worth to mention that the reason to indicate they don't like the project was because the stakeholder considered the cost of the stove high.

About the LSC meeting, 91.5% of the attendees indicated they have a positive impression of the meeting; 85.5% indicated to have a neutral impression of the meeting; no one indicated to have a negative impression of the meeting.

E.3. Report on consideration of comments received

>> (Describe how the comments have been addressed by providing a clarification to the stakeholder or by altering the design of the project or by proposing to monitor any anticipated negative impacts etc.)

All the comments from both the virtual and in-person meetings were recorded. Below, there are samples of the comments received.

| Participant Comment/Question | ECOLIFE Response |
|---|--|
| I do not have a roof for my kitchen, why do I need one? | The requirements of the project exist to make sure that the stove is kept in the best possible condition and will last as long as possible. They also exist because it is an effort to make a cleaner, safer, and better kitchen overall. We don't just want to build a stove, we want to help create a better kitchen overall. |
| How much and why does ECOLIFE charge for the stove? | It costs 300 pesos. We do not make money on the sales, it does not even cover the cost of the material. The comals alone cost 150-200 pesos. One reason we charge for the stoves is that the money goes directly towards paying the salary of the construction and promotion workers, which allows us to build more stoves. The other reason is that we want you to invest in the stove so you know you own it. Sometimes when people get things for free they do not care as much about it and will not maintain it as if it were their own. When you invest your own money, it becomes more valuable to the user. |
| When will you build the stove? | We explained the process to receive a stove, including the beneficiary requirements, next steps, and project work cycle. We explained the working process for that specific community and the tentative dates when promoters would return to check requirements, when materials would be delivered, and when building would commence. For this specific community we anticipated that they would have a stove built in their home about one month from the date of the meeting. |

Sample of comment received in the in-person LSC meetings.

| Participant Comment/Question | ECOLIFE Response |
|---|--|
| How do you define which localities to implement the project? We have been told that 7-15 km from the buffer zone of the reserve, on the map I can see that the southern part of the reserve is the most benefited and towards the northern part there are very few stoves, How do you choose the beneficiaries? | The reason is simple, we have not reached the north yet because we have limited funds, we take advantage mouth-to-mouth advertising. We are gradually covering spaces, we work progressively by targets. We have a minimum coverage of 60% in each community, reaching that minimum we wait one more month to see if there are still houses that meet the conditions in order to meet target to build the stove for all of those that meet the requirements. Once the work is done in one community we continue with the next community. If after 3-4 months there are households interested from the communities we already worked, we are able to still include them in the project but likely at the end of the year. |

| | |
|---|---|
| Thank you very much for inviting me, I was working in CDM and I realized that it is not very economical to do a CDM projects, the question is: is the organization and construction of that project exactly the same as before under CDM? | The certification process for carbon credits at GS is very similar to the one at CDM, there are some differences because CDM is regulated by the United Nations. The GS certification cycle for voluntary projects is basically the same. |
|---|---|

Sample of comment received in the virtual LSC meetings.

Contact information of project participants

| | |
|--|--|
| Organization name | ECOLIFE Conservation |
| Registration number with relevant authority | EIN: 20-0147505 United States Department of the Treasury Internal Revenue Service |
| Street/P.O. Box | 101 North Broadway |
| Building | |
| City | Escondido |
| State/Region | California |
| Postcode | 92025 |
| Country | United states |
| Telephone | +1 760-740-1346 |
| Fax | NA |
| E-mail | cgoering@ecolifeconservation.org |
| Website | www.ecolifeconservation.org |
| Contact person | Christopher Goering |
| Title | Project Manager, ECOLIFE Conservation |
| Salutation | |
| Last name | Goering |
| Middle name | |
| First name | Christopher |
| Department | |
| Mobile | +1 562-972-1675 |
| Direct fax | |
| Direct tel. | |
| Personal e-mail | christophergoering12@gmail.com |

Appendix 1. Summary of post registration design changes

Revision History

| Version | Date | Remarks |
|---------|----------------|---|
| 1.1 | 24 August 2017 | Updated to include section A.8 on 'gender sensitive' requirements |
| 1 | 10 July 2017 | Initial adoption |
| | | |
| | | |
| | | |