

DOCUMENT OF THE INTER-AMERICAN DEVELOPMENT BANK

**GUATEMALA**

**EFFICIENT USE OF FIREWOOD AND ALTERNATIVE FUELS IN INDIGENOUS  
AND RURAL COMMUNITIES IN GUATEMALA**

**(GU-G1004)**

**PROJECT PROFILE**

This document was prepared by the project team consisting of: Alberto Levy, Team Leader (ENE/CGU); Omar Samayoa, Alternate Team Leader (CCS/CGU); Javier Cuervo, Rodrigo Aragón, Cecilia Seminario (INE/ENE); Heidi Zoe Fishpaw (VPS/ESG); Claudia Aguirre (CID/CGU); Lilena Martínez, Rodrigo Castro (VPC/FMP); Hugo Us (GDI/CGU); María C. Landazuri-Levey (LEG/SGO); Zoé Bienvenu, Aymé Sosa, María Isabel Paiz (CCS/CGU), Paloma Marcos (CSD/CCS); Sisi Larrea and Amanda Beaujon (INE/INE).

Under the Access to Information Policy, this document is subject to Public Disclosure.

## PROJECT PROFILE GUATEMALA

### I. BASIC DATA

<b>Project Name:</b>	Efficient Use of Firewood and Alternative Fuels in Indigenous and Rural Communities in Guatemala.		
<b>Project Number:</b>	GU-G1004 (Investment Grant) and GU-T1305 (TC) <sup>1</sup>		
<b>Project Team:</b>	Alberto Levy, Team Leader (ENE/CGU); Omar Samayoa Alternate Team Leader (CCS/CGU); Javier Cuervo, Rodrigo Aragón, Cecilia Seminario (INE/ENE); Heidi Zoe Fishpaw (VPS/ESG); Claudia Aguirre (CID/CGU); Lilena Martínez, Rodrigo Castro (VPC/FMP); Hugo Us (GDI/CGU); María C. Landazuri-Levey (LEG/SGO); Zoé Bienvenu, Aymé Sosa, María Isabel Paiz (CCS/CGU), Paloma Marcos (CSD/CCS); Sisi Larrea and Amanda Beaujon (INE/INE).		
<b>Beneficiary:</b>	Republic of Guatemala; Alterna.		
<b>Executing Agencies:</b>	<a href="#">Alterna</a> and The Inter-American Development Bank <sup>2</sup>		
<b>Financial Plan:</b>	Investment Grant:		\$ 9,372,000
	TC		\$ 2,728,000
	Total:		\$12,100,000 <sup>3</sup>
<b>Safeguards:</b>	Policies triggered:	OP-703 (B.1, B.2, B.3, B.6, B.15, B.17), OP-761; OP-765	
	Classification:	C	

### II. GENERAL JUSTIFICATION AND OBJECTIVES

- 2.1 The consumption of firewood in Guatemala is the highest per capita in Central America ([Food and Agriculture Organization of the United Nations Statistics-FAOSTAT](#)), generating 20% of total Green House Gas (GHG) emissions in the country.<sup>4</sup>
- 2.2 Two million Households (HH), or 70% of the total population, use firewood to meet their energy needs, mainly for cooking purposes ([Instituto Nacional de Bosques-INAB, 2012](#)). Per capita consumption is growing at a higher rate than population growth ([FAOSTAT](#)). The

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<sup>1</sup> The program will be executed with two operations: a technical component with a technical cooperation (TC), and the financial and market development component with an investment grant (IG).

<sup>2</sup> In accordance with the provisions of footnote 4 of the Non-refundable Investment Guidelines OP-219 -3, the executing agency will request that the Bank execute the technical component of the project. The Bank will only hire consulting firms and individuals. The hiring will be governed by these guidelines and the Annex X of the Technical Cooperation Guidelines (revised - Document OP-1122 annex 10).

<sup>3</sup> The Nationally Appropriate Mitigation Actions (NAMA) Facility will donate €11,000,000. The Inter-American Development Bank (IDB) will administer the donation through a Project Specific Grant (PSG) pursuant to document SC-114. In accordance with that document, the commitment of the NAMA Facility for the PSG will be established through a separate Administration Agreement. The [proposal](#) was submitted to the NAMA Facility on December 21<sup>st</sup>, 2018, the [clarification questions](#) addressed on February 15<sup>th</sup>, 2019, and the proposal was approved by GIZ on March 14<sup>th</sup>, 2019.

<sup>4</sup> Guatemala generated a total of 31.45 Million Tons of Carbon Dioxide equivalent (MMtCO<sub>2</sub>e) in 2005 ([NDC, 2015](#)). The energy sector is the second source of GHG emissions, representing 39% of total emissions, with 17.69 MMCO<sub>2</sub>e ([Ministerio de Ambiente y Recursos Naturales, 2015](#)). These numbers don't include CO<sub>2</sub> emissions derived from burning biomass (including firewood) since they are considered biogenic. Firewood deficit was 5 MM tons in 2010 ([INAB, 2015](#)). Using the conversion factor provided by [Climate Focus 2015](#) (one ton of dry basis firewood = 1.74 tCO<sub>2</sub>), firewood use generated 8.7 MMtCO<sub>2</sub>e in 2010.

consumption of firewood is higher in rural HH (87% of total demand), an area characterized by the increased prevalence of poverty (54%), especially among indigenous populations (whose poverty level reaches 73%, [Instituto Nacional de Estadística-INE, 2014](#)). Elevated poverty levels prevent them from accessing other energy sources. There is an average increase of 65,000 families/year using firewood as their main source of cooking energy; a trend that is not foreseen to change over the next 30 years. The population is expected to reach 22.5 million in 2030 ([Global Alliance for Clean Cookstoves-GACC, 2014](#)), which will exacerbate the problem.

- 2.3 40% of HH cooking with firewood use an open-hearth cooking system, which is highly inefficient: for every 100 units of heat generated, 92 units are lost ([INAB, 2015](#)). [48% cook with an inefficient firewood stove, and only 12% cook with liquified petroleum gas](#). Open-hearth cooking generates 6.86 tCO<sub>2</sub>e/year/HH, while "inefficient stoves" generate 5.62 tCO<sub>2</sub>e/year/HH ([MICROSOL, 2019](#)).
- 2.4 The unsustainable use of firewood presents severe health challenges. Guatemala has the second largest population affected by HH Air Pollution in LAC: 69% of HH using firewood are at high risk of cardiac and respiratory diseases, mostly children and women, deriving losses equivalent to 1% of gross domestic product and 5,100 deaths per year, of which 1,700 are children.
- 2.5 Recent initiatives and investigations show that the use of efficient firewood cookstoves, also called Improved Cookstoves (ICS), significantly help reduce firewood consumption and related Greenhouse gas (GHG) emissions ([Climate and Clean Air Coalition - CCAC, 2018](#), [World Bank, 2015](#)). The process of cooking food using solid fuels in developing countries generate annual GHG emissions of around 0.5-1.2 GtCO<sub>2</sub>e. This represents 1.5 to 3% of global CO<sub>2</sub>e emissions ([Banco Mundial, 2015](#); [Gold Standard, 2016](#)). It is estimated that the global abatement potential of emissions from the use of improved stoves could fluctuate between 0.45 and 1.7 GtCO<sub>2</sub>e per year, of which approximately 10% would be mitigated in projects executed in Latin America (FAO, 2010).
- 2.6 In Guatemala, existing models reduce firewood use and related GHG emissions by at least 40% (see FunSolar [Catalogue, 2018](#)) and have an average price of US\$170. With proper use and maintenance, ICS can have a minimum useful life of seven years ([MICROSOL, 2019](#)).
- 2.7 There have also been successful experiences of substituting firewood cookstoves by alternative technologies, i.e. induction stoves in Ecuador ([CCAC, 2018](#)), solar stoves, gasifier and heat fan stoves in Peru ([United Nations Development Program-UNDP, 2017](#)).
- 2.8 Given the relevance of firewood use as regards GHG emissions, Guatemala has included it as part of its [Nationally Determined Contribution \(NDC\)](#). It is also part of the [Energy Plan 2017-2032](#) and the [National Strategy for the Sustainable Production and Efficient Use of Firewood 2013-2024](#).
- 2.9 **Main challenges.** The diffusion of ICS faces the following challenges:
- 2.10 **Lack of knowledge and capacity:** (i) rural populations lack knowledge on ICS and their benefits: 60% of surveyed HH have never heard of ICS. and only 35% of potential customers know where to purchase an ICS. There has been very little effort to promote the benefits of using ICS and alternative fuels; (ii) there is no regulatory framework on ICS, becoming a barrier to the development of a thriving ICS market: the consumer currently has no evidence that ICS are effectively reducing firewood consumption, and this acts as a disincentive to the purchase of ICS; (iii) ICS manufacturers capabilities are

limited, particularly in planning, marketing and business management. Manufacturers lack financial resources to modernize their production systems, enhance the quality of their products and better adapt to customers' needs, hindering development prospects; and (iv) ICS are a donation product in Guatemala, with more than 85% of the installed ICS/year (Fast Track Carbon-FTC, 2016) reducing the user's incentive to pay for them and make an effective use of ICS. Donations encourage the production of ICS that meet donor's needs and not necessarily those of the consumer. Experience shows that when stoves are donated, they are of lower quality and are handed without raising awareness and without building the capacity of the beneficiaries. They are often left unused.

- 2.11 **Lack of access to credit.** Both HH and ICS manufacturers need access to credit, the former to purchase it, and the latter to expand ICS production. Firewood users' ability to purchase an ICS is constrained by income and the lack of access to financing opportunities. The average price at of ICS is Q1,300 (~USD 180) which, according to the market study conducted, generates a low demand (10%) for the product in the target population. On the manufacturers' side, there is also a lack of funding opportunities to facilitate their growth by investing in machinery to automatize operations, improve designs and develop marketing strategies and distribution channels.
- 2.12 **Lack of capacity for the monitoring, reporting and verification (MRV) of GHG emissions related to firewood use.** There is currently no methodology neither capacity at national level to run a MRV System to account for firewood emissions as required by the donor and the United Nations Framework Convention on Climate Change (UNFCCC).
- 2.13 **Alignment with sectoral priorities.** The program is consistent with the Update to the Institutional Strategy (UIS) 2010-2020 (AB-3008) and is aligned with the development challenges of: (i) social inclusion and equality; and (ii) productivity and innovation as well as the cross-cutting themes of gender equality and diversity, and climate change and environmental sustainability. The program is aligned with the Country Strategy 2017-2020 (GN-2899) in the following pillars: (i) Reduction of poverty and inequality in target areas of productive development and health; and (ii) and Private sector development, by creating opportunities within the Bank's private sector windows specifically in energy efficiency. The program further complements IDB's efforts on climate change, such as the National REDD+ Strategy (ATN/FP-14012-GU) and the Forest Investment Program (ATN/SX-15570-GU), aimed at the sustainable firewood production and forest degradation reduction.
- 2.14 **Expected impact.** Reduce the emissions in the energy sector by 0.9 MMtCO<sub>2</sub>e, that represent 8% of Guatemala's NDC, through the installation of 225,000 ICS. Besides, the program will generate the following co-benefits: (i) avoid the extraction of 1 MM tons of firewood; and (ii) generate socio-economic and health benefits for 1.1 MM people by reducing exposure to emissions and particulate and generating financial savings on the cost of purchasing firewood ([up to 18% of savings on the cost of firewood](#))<sup>5</sup> and on health-related expenses.
- 2.15 **Beneficiaries.** The project will benefit 1.1 MM people, mostly women and children living in poor, indigenous and rural communities, predominantly in the departments with the

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<sup>5</sup> If expenditures in firewood are reduced in half, as was reported by users interviewed during focus groups, and 80% of these savings serve to repay the credit during the two years that the loan is expected to be repaid, then 10% of the original expenditures in firewood could be used in other activities during the life of the loan, and 50% of the original expenditures after the loan is repaid. These savings are significant enough to positively and noticeably impact the HH budget, creating incentives to purchase and the feasibility to create a market. Addressing market barriers limiting the purchase of ICS are the core of this proposal.

largest firewood deficit, consumption and losses of forest cover: Huehuetenango, Quiché, San Marcos, Alta Verapaz and Chiquimula ([INAB, 2015](#)). In these five departments, 75% of the population live in rural areas; and indigenous people represent 56.6% of population. 98.4% of rural HH still depend on firewood to meet their energy needs, mainly for cooking. This represents 598,194 HH, approximately 19% of HH nationwide. Poverty is almost constant in this target group: 77.8% live below of the poverty line. Of these, 36.7% are found in extreme poverty ([FTC, 2018](#)). HH have about 4.9 members and earn an average of US\$250. 70% of the target population purchase firewood and [report an average firewood consumption of US\\$23/month, or about 9% of HH income](#). HH face significant expenses related to the treatment of firewood use-induced diseases (23% of HH budget, [Ministerio de Salud Pública y Asistencia Social, 2017](#)). The creation of a market for ICS, therefore, is feasible, as there are financial incentives for users to adopt them<sup>6</sup>.

- 2.16 **Objective.** Reduce GHG emissions in the energy sector, by reducing firewood consumption through the adoption of efficient cooking technologies.
- 2.17 **Intervention proposal.** Reduce the barriers limiting the use of ICS through technical assistance, introduction of new technologies and innovative financial products. The project has the following components:
- 2.18 **Technical Component (€2,380,000).** Under this component, the program will cover the cost of the following activities:
- 2.19 **Component 1.1 Development of an institutional and regulatory framework for ICS (€220,000).** The program will propose a regulatory framework for ICS: the development of a national norm on ICS to be presented for the adoption by the National Normalization Commission (COGUANOR), the creation of a certification and labelling process, as well as the accreditation of laboratories and the certification of stoves that will guarantee the quality of the technologies sold on the market while securing the achievement of emission reduction targets. Besides, the program will implement a strategy to promote a market approach among key ICS stakeholders engaged in donation or subsidies activities. The strategy will include: (i) mapping of actors and areas intervened through ICS donations; and (ii) campaigns and activities that discourage donations of ICS and promote a market building approach such as Business wheels, guidelines for donors on market building activities.
- 2.20 **Component 1.2 Implementation of an MRV system of GHG emission reductions (€1,400,000).** (i) the program will design and implement an MRV system to account for emissions reduction generated by the program building on the Technologies and practices to displace decentralized thermal energy consumption methodology ([The Gold Standard, 2015](#)) under the Gold Standard certification standard. This methodology involves Kitchen Performance Tests (KPT) in the field. The KPT is a field study used to evaluate the performance of ICS and induction stoves in real conditions of use. The KPT enables the evaluation of qualitative aspects of the performance of ICS through surveys within HH, as well the comparison of impact of ICS on fuel consumption within HH. the SNICC, inventory methodologies and MRVs of similar projects; (ii) articulation with SNICC and coordination with MARN. The MRV system will be developed and implemented in coordination with the Ministry of Natural Resources (MARN) in order to ensure its articulation with the National Climate Change Information System (SNICC).

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<sup>6</sup> Average spending in firewood is about €20 or US\$22.96% of the people interviewed reported that they would like to have an improved stove. 74% of the population is willing to purchase the ICS if credit is provided, and 90% are willing to pay up to Q90 or about €12/month. Reference: [Qenk \(2018\)](#).

The MRV reports will be shared with MARN to feed the national monitoring systems, NDC and National Communications on Climate Change. Authorities may rely on the proposed MRV methodology and measures to strengthen the SNICC, inventory methodologies and MRVs of similar projects; and (iii) a strategy to access carbon funding will be developed. The NSP will generate emission reduction credits to access carbon finance.

- 2.21 **Administration, and supervision (€760,000).** This amount will include an economic, financial and health impact evaluation, the baseline of which will be determined at the beginning of the project, as well as supervision support.
- 2.22 **Investment Grant (€8,620,000).** This component will cover the cost of the following activities:
- 2.23 **Component 2.1. Implementation of a training and communication strategy on ICS (€1,380,000).** The objective is to implement a communication strategy for behavioral change and the development of users' capacities to use and maintain ICS to boost demand for the technology.
- 2.24 **Component 2.2. Creation and implementation of a guarantee fund to facilitate the purchase of ICS (€3,900,000).** The objective of this activity is to facilitate access to funding for ICS purchase by final users. A guarantee instrument will be established to incentivize Financial Institutions (FIs) to facilitate credit access to low-income families living in rural areas, purchasing wood and willing to acquire an ICS. The instrument will lower the risk to the financial institutions, and therefore their use would facilitate access to credit to consumers. Guarantees will cover an estimated 50% of the outstanding, defaulted balance for the acquisition of ICS. The guarantee line for ICS purchase (€3.9 million) will cover the granting of 180,960 credits for the purchase of ICS.<sup>7</sup>
- 2.25 **Component 2.3. Creation and implementation of a guarantee fund to facilitate the production of ICS (€1,149,521).** A Guarantee Fund (GF) will be established to incentivize Financial Institutions (FIs) to facilitate credit access to ICS manufacturer. The GFs will lower the risk to the financial institutions, and therefore their use would facilitate access to credit to producers. Guarantees will cover 50% of the outstanding, defaulted balance to produce ICS. The guarantee line for manufacturers loans (€1 million) will cover up to three loans of maximum €1.7 million each. The remaining will cover the administration fee of the guarantee fund and technical support.
- 2.26 **Component 2.4. Capacity building program for ICS manufacturers (€558,038).** The IG will support manufacturers in the implementation of innovative market building strategies, providing them with expert support, coaching and training on business and financial planning; marketing and distribution strategy, as well as customer service (post-sales services). Manufacturers will also receive expert support to prepare their loan request to access funding available under Component 2.3. Besides, the NSP will support innovation as regards ICS design in order to meet minimum standards, reduce production cost and improve features that can increase customer satisfaction.

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<sup>7</sup> A partner of the program, FENACOAC, has designed a financial instrument to facilitate access to low-income families. These are described in the following documents: [EZSHARE-362440687-23](#); [EZSHARE-362440687-22](#); [EZSHARE-362440687-21](#); and [EZSHARE-362440687-20](#). FENACOAC is interested in pilot-testing these products without the program's financial support. As suggested by the donor, accepted by FENACOAC, and based on the IDB Lab's experience of PROFOGONES in Honduras, this financial product will be tested for one year, at the completion of which the success of the product will be determined. If deemed successful, the funds will be transferred to other activities of the program, for example expanding the promotion to other regions of Guatemala targeting the same populations. If support is required, then the assistance described to FENACOAC will be implemented through Alterna.



- 2.27 **Component 2.5. Incentive program to facilitate clean cookstoves adoption (€512,974).** The following financial instruments will be implemented: (i) results-based incentives to promote capacity strengthening efforts among manufacturers: (a) award programs (€60,000); (ii) subsidies for the evaluation of ICS (subsidies to 15 ICS, representing 50% of the evaluation cost, for a total amount of €15,000); (iii) reward bonus scheme for salespeople to incentivize sales at distribution points (€5 per stove for the 20,000 first stoves sold, for a total amount of €100,000); (iv) pilot-test the creation of a market for induction electric cookstoves, through an incentive of €50 representing 20 to 30% of average retail cost of the stove of the user's choice (5,000 incentives, for a total amount of €250,000) as well as marketing activities for induction stoves (€25,000). and (v) technical support for the implementation of these activities (€62,974)
- 2.28 **Administration, supervision and audit (€1,119,467).** This amount will cover: (i) direct execution costs associated with administration, supervision and monitoring expenses, including the following: Alterna professional fees (15 employees working part time for the project), specific project personnel assignment (three full-time consultants, including one project coordinator, one project assistant, and one financial analyst); (ii) yearly audits of €20,000 each, for the five years of the duration of the project; and (iii) other execution costs, such as office rental, computers, internet, etc.

Table 1. **Indicative Budget (€)**

Components	Total	%
<b>Technical Component</b>	<b>2,380,000</b>	<b>22</b>
Component 1.1. Development of an institutional and regulatory framework for ICS	220,000	2
Component 1.2. Implementation of an MRV system of GHG emission reductions	1,400,000	13
Administration and supervision	760,000	7
<b>Investment Grant</b>	<b>8,620,000</b>	<b>78</b>
Component 2.1. Implementation of a training and communication strategy on ICS	1,380,000	12
Component 2.2. Creation and implementation of a guarantee fund to facilitate the purchase of ICS	3,900,000	37
Component 2.3. Creation and implementation of a guarantee fund to facilitate the production of ICS	1,149,521	9
Component 2.4. Capacity building program for ICS manufacturers	558,038	4
Component 2.5. Incentive program to facilitate clean cookstoves adoption	512,974	3
Administration and supervision	1,119,467	13
<b>Total</b>	<b>11,000,000</b>	<b>100</b>

- 2.22 **Leverage** of €44 million by the private sector as credits for the production and purchase of ICS through private financial institutions.
- 2.23 **Innovation.** The program promotes: (i) financial products specifically designed for ICS manufacturers and low-income users that are currently outside of the financial system; (ii) creation of a regulatory framework for ICS; (iii) innovation in the design of ICS models; (iv) the introduction of high-technology equipment to monitor GHG and particulate, and determine their health impacts in the target population; and (v) the introduction of induction stoves in Guatemala.
- 2.24 **Gender and Diversity.** The program is expected to reduce gender-specific inequalities by: (i) reducing exposure to smoke for 225,000 women and 675,000 children; (ii) allowing time saving and involvement in other activities for women as ICS significantly reduce cooking time; and (iii) reduce exposure to particulate originating from inefficient combustion of firewood inside the house, the main cause of respiratory diseases in children under the age of five. The program also addresses diversity, by promoting the design of ICS models that fit consumers' ethnic and cultural diversity.

- 2.25 **Local Productive Development.** Most ICS suppliers are local small and medium enterprises. The program will support small and medium ICS manufacturers through technical support to develop their business plans and financial support by the provision of loan guarantees.
- 2.26 **Alignment with national electrification efforts.** An electric induction stove pilot will be implemented as part of Component 2.5, which requires an adequate electrical infrastructure. As part of the rural electrification program,<sup>8</sup> efforts will be deployed to ensure that the houses are equipped with this infrastructure.
- 2.27 **People with Disabilities.** The program will promote the design of ICS for disabled people by enhancing security and facilitating its use. It will contribute to reduce blindness from smoke from firewood burning inside the HH.

### III. TECHNICAL ISSUES AND SECTOR KNOWLEDGE

- 3.1 **Executing Agency (EA) and Execution Structure:** The Inter-American Development Bank (IDB) will administer a Project Specific Grant (PSG) with funds received from the NAMA Facility through the German Development Agency (GIZ) as the designated NAMA Facility Grant Agent. GIZ will channel the funds and perform an administrative and supervisory role on behalf of the NAMA Facility. To this endeavor, the Bank will create two operations, a TC and an IGR, as follows:
- 3.2 The IDB will execute the TC (GU-T1305), for which it will apply its procurement policies, hiring two consulting firms: (i) design and promotion of the regulatory framework for ICS; and (ii) design and implementation of an MVR system, including its transfer to MARN.
- 3.3 The IGR will be executed by [Alternativa](#). Alternativa will establish a trust for the operation of the Guarantee Fund for ICS manufacturers and ICS users; design and implement the communication strategy and behavioral change (jointly with a specialized consulting firm); and manage the incentive programs to promote clean cookstove adoption. [Alternativa](#) is a social innovation organization that promotes transformative entrepreneurship through inclusion and impact programs that help connect companies, government and civil society. Alternativa has experience accompanying and promoting innovation in social enterprises, including ICS manufacturing companies, which will help reduce credit risk of manufacturers.
- 3.4 **Key stakeholders.** The main stakeholders are:
- (i) With the Technical Component: Guatemalan Normalization Commission (COGUANOR) and ICS manufacturers; MARN, with the implementation of the MRV system.
  - (ii) With the Investment Grant (IGR): financial entities and distribution chains with the capacity to grant credit, manufacturers and final users. Other stakeholders include governmental institutions, including INAB, MARN, MINEDUC, MIDES, MSPAS, and MAGA; as well as the 108 municipalities of the five target departments and the Firewood Interinstitutional Commission.
- 3.5 The Bank has extensive experience executing climate funds, including the Program for Promoting Sustainable Business Models for Clean Cookstoves Dissemination (GRT/SX-14119-HO, ATN/ME-14118-HO), which includes the installation of 75.000 ICS in Honduras (PROFOGONES Program).

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<sup>8</sup> IDB is currently preparing the Infrastructure for the Rural Electrification in Guatemala Program (GU-L1171)



- 3.6 The execution period and disbursements of the IGR will be 60 months. The execution period and disbursements of the TC will be 72 months, as the impact study requires that the IGR ends to measure the impact of the interventions under the program. The consulting services and other services to be hired under this operation will be included in Procurement Plans. The hiring process will be conducted with the framework of the Bank's procurement policies and procedures. The Bank will do the contracting of consulting firms for services of an intellectual nature according to GN-2765-1 and its associated operational guides (OP-1155-4). As part of the project preparation activities, a detailed consolidated Pluri-annual Execution Plan and the Annual Operational Plan will be prepared to guide the administrative and fiduciary processes to be used during execution, as well as technical processes and the relationship with the different actors and obtaining the expected products of the operation.

#### **IV. ENVIRONMENTAL SAFEGUARDS AND FIDUCIARY SCREENING**

- 4.1 No socio-environmental risk has been detected in the screening of the operation, and minor social risks have been detected in terms of the need to guarantee the participation of beneficiary indigenous communities. Therefore, the operation is classified as Category C as per the Environmental and Safeguard Compliance Policy (OP-703). Raising awareness and capacity development activities as well as ICS and financial product design will be socio-culturally appropriate. Stoves design will be participatory developed through pilots to ensure that they function properly and work well for families' specific sociocultural needs and realities, and women's participation in these pilots will be promoted. This will ensure that any stoves that families use their resources to acquire, work well for them and are a good use of those limited resources. No penalties or discouragement of the use of firewood will be made, nor affect indigenous communities' use of natural resources (See [Safeguard Screening Form](#) and [Safeguard Policy Filter Report](#)).

#### **V. OTHER ISSUES**

- 5.1 The following risks have been identified: (i) lack of involvement by key stakeholders; this risk will be mitigated through socialization and consultation of activities with key stakeholders; (ii) low levels of demand from rural, indigenous communities; this risk will be mitigated through a market study to identify territories with greater demand and ICS models with better acceptance; (iii) credit risks related to the population where the credit portfolio will be placed; this risk will be mitigated through the GF and the design of specific financial products; (iv) limited capacity of ICS producing companies to produce stoves within the time frame and in the volume required by the program; this risk will be mitigated by Component 2.4 which includes capacity development activities geared to manufacturers; (v) donations of stoves by other stakeholders, which could reduce the interest of the target public in acquiring an ICS; as part of Component 2.1, a strategy will be designed and implemented in order to mitigate this risk; and (vi) absence of a regulatory framework: the program will focus on developing a national norm and regulatory instruments for ICS, and therefore will not affect the execution of the program.

#### **VI. RESOURCES AND TIMETABLE**

- 6.1 The expected POD distribution date to the Quality and Risk Review meeting will be January 22, 2020, and the date for submission to the IDB Board of Executive Directors will be March 25, 2020.

CONFIDENTIAL

<sup>1</sup> The information contained in this Annex is confidential and will not be disclosed. This is in accordance with the "Deliberative Information" exception referred to in paragraph 4.1 (g) of the Access to Information Policy (GN-1831-28) at the Inter-American Development Bank.



## Safeguard Policy Filter Report

### Operation Information

Operation		
GU-G1004 Efficient Use of Firewood and Alternative Fuels in Indigenous and Rural Communities in Guatemala		
Environmental and Social Impact Category	High Risk Rating	
C	Low	
Country	Executing Agency	
GUATEMALA	US-IDB - INTER-AMERICAN DEVELOPMENT BANK	
Organizational Unit	IDB Sector/Subsector	
Energy	BIO-ENERGY	
Team Leader	ESG Primary Team Member	
ALBERTO LEVY FERRE	HEIDI ZOE FISHPAW	
Type of Operation	Original IDB Amount	% Disbursed
Investment Grants	\$11,000,000	0.000 %
Assessment Date	Author	
10 Jun 2019	heidif ESG Primary Team Member	
Operation Cycle Stage	Completion Date	
ERM (Estimated)	14 Jun 2019	
QRR (Estimated)	25 Jul 2019	
Board Approval (Estimated)		
Safeguard Performance Rating		
Rationale		



# Safeguard Policy Filter Report

## Potential Safeguard Policy Items

[No potential issues identified]

## Safeguard Policy Items Identified

### B.1 Bank Policies (Access to Information Policy– OP-102)

The Bank will make the relevant project documents available to the public.

### B.1 Bank Policies (Disaster Risk Management Policy– OP-704)

The operation is in a geographical area exposed to [natural hazards](#) ([Type 1 Disaster Risk Scenario](#)). Climate change may increase the frequency and/or intensity of some hazards.

### B.1 Bank Policies (Gender Equality Policy– OP-761)

The operation will offer opportunities to promote [gender equality](#) or [women's empowerment](#).

### B.1 Bank Policies (Indigenous People Policy– OP-765)

The operation will offer opportunities for indigenous people

### B.2 Country Laws and Regulations

The operation is expected to be in compliance with laws and regulations of the country regarding specific women's rights, the environment, gender and indigenous peoples (including national obligations established under ratified multilateral environmental agreements).

### B.3 Screening and Classification

The operation (including [associated facilities](#)) is screened and classified according to its potential environmental impacts.

### B.6 Consultations

Consultations with affected parties will be performed equitably and inclusively with the views of all stakeholders taken into account, including in particular: (a) equal participation by women and men, (b) socio-culturally appropriate participation of indigenous peoples and (c) mechanisms for equitable participation by vulnerable groups.

### B.15. Co-financing Operations

The operation or any of its components is being co-financed.

### B.17. Procurement

Suitable safeguard provisions for the procurement of goods and services in Bank financed operations may be incorporated into project-specific loan agreements, operating regulations and bidding documents, as appropriate, to ensure environmentally responsible procurement.



## Safeguard Policy Filter Report

### Recommended Actions

Operation has triggered 1 or more Policy Directives; please refer to appropriate Directive(s). Complete Project Classification Tool. Submit Safeguard Policy Filter Report, PP (or equivalent) and Safeguard Screening Form to ESR.

### Additional Comments

[No additional comments]



## Safeguard Screening Form

### Operation Information

Operation		
<b>GU-G1004</b> Efficient Use of Firewood and Alternative Fuels in Indigenous and Rural Communities in Guatemala		
Environmental and Social Impact Category	High Risk Rating	
C	Low	
Country	Executing Agency	
GUATEMALA	US-IDB - INTER-AMERICAN DEVELOPMENT BANK	
Organizational Unit	IDB Sector/Subsector	
Energy	BIO-ENERGY	
Team Leader	ESG Primary Team Member	
ALBERTO LEVY FERRE	HEIDI ZOE FISHPAW	
Type of Operation	Original IDB Amount	% Disbursed
Investment Grants	\$11,000,000	0.000 %
Assessment Date	Author	
10 Jun 2019	heidif ESG Primary Team Member	
Operation Cycle Stage	Completion Date	
ERM (Estimated)	14 Jun 2019	
QRR (Estimated)	25 Jul 2019	
Board Approval (Estimated)		
Safeguard Performance Rating		
Rationale		

### Operation Classification Summary

Overriden Rating	Overriden Justification
Comments	





# Safeguard Screening Form

## Conditions / Recommendations

No environmental assessment studies or consultations are required for Category "C" operations.

Some Category "C" operations may require specific safeguard or monitoring requirements (Policy Directive B.3). Where relevant, these operations will establish safeguard, or monitoring requirements to address environmental and other risks (social, disaster, cultural, health and safety etc.)

The Project Team must send the PP (or equivalent) containing the Environmental and Social Strategy (the requirements for an ESS are described in the Environment Policy Guideline: Directive B.3) as well as the Safeguard Policy Filter and Safeguard Screening Form Reports.

## Summary of Impacts / Risks and Potential Solutions

## Disaster Risk Summary

Disaster Risk Level

**Low**

Disaster / Recommendations

No specific disaster risk management measures are required.

## Disaster Summary

Details

The project is classified as low disaster risk because the occurrence of the hazard event does not impact in the achievement of project outcomes.

Actions

Operation has triggered 1 or more Policy Directives; please refer to appropriate Directive(s). Complete Project Classification Tool. Submit Safeguard Policy Filter Report, PP (or equivalent) and Safeguard Screening Form to ESR.

## ESTRATEGIA AMBIENTAL Y SOCIAL

- 1.1 No se ha detectado ningún riesgo socioambiental en el screening de la operación, y se han detectado riesgos sociales menores en cuanto a la necesidad de garantizar la participación y de comunidades indígenas beneficiarias, y por lo tanto se ha clasificado como Categoría C bajo la Política de cumplimiento y salvaguardias (OP-703). Para cumplir con la Política Operativa sobre Pueblos Indígenas (OP-765), como parte del Plan de Negocios que se va a preparar durante la preparación de la operación, se incluirán recursos para realizar encuestas socioculturalmente apropiadas con las comunidades indígenas durante la ejecución de la operación, para entender sus necesidades socioculturales particulares de cocina y demás. También incluirá recursos para realizar visitas a comunidades indígenas en el área geográfica de la operación, respetando la estructura de liderazgo legítimo de cada una, para presentar los diseños preliminares de las estufas y recibir retroalimentación. Se contará con el apoyo del especialista social del Banco (SCL/GDI) local que forma parte del equipo para la metodología de la encuesta y las visitas, y sobre como identificar los líderes auténticos de las comunidades indígenas.
- 1.2 Se destaca que el componente de la operación que se trata del marco regulatorio no afectará ni penalizará al uso de leña de las comunidades indígenas, sino que se trabajará en los estándares para estufas alta eficiencia bajo emisiones fabricadas en el país. El componente sobre cambio de comportamiento (*Behavioral Change Communication Strategy*) no forzará un cambio en las prácticas de uso de leña tradicional de las comunidades tampoco, sino que va a enfocar en brindar capacitaciones a familias incluyendo en comunidades indígenas sobre los beneficios económicos de tener una estufa alta eficiencia bajo emisiones además de para el medio ambiente, y dar incentivos para la adquisición de dichas estufas de parte de las familias, particularmente acceso a microcrédito. Será importante su retroalimentación mencionada en el párrafo arriba sobre los diseños para asegurar que las estufas son totalmente funcionales en el contexto sociocultural particular de estas familias, y que los fabricantes la operación esté financiando den el soporte necesario, para evitar que familias paguen por una estufa que luego no les sirva.
- 1.3 La operación reconoce y busca remediar las barreras para comunidades indígenas acceder a crédito. La medida propuesta para superar dichas barreras es a través de una garantía a entidades financieras que les permite disminuir el riesgo crediticio de otorgar microcrédito a familias indígenas, a ser formalizado en convenios eventuales bajo la operación con dichas entidades financieras. Los convenios especificarán que estas entidades financieras deberán flexibilizar sus procesos normales en cuanto a requerir una factura de servicio a domicilio, historia de crédito, o comprobante de ingreso formal/regular, que limitan a las familias indígenas muchas veces a ser aprobadas para crédito.

## INDEX OF COMPLETED AND PROPOSED SECTOR WORK

Area	Description	Estimated Dates	References and Electronic Links
Technical Documents	Result Matrix, detail Budget, disbursement plan, Risk Management (GRP), Program Operations Manual (POM), Annual Operational Plan (AOP), Procurement Plan (PA), initial PMR		To be annexed at POD stage
Technical options and design	<ol style="list-style-type: none"> <li>1. Analysis of past and current ICS initiatives, lessons learnt and identification of synergies</li> <li>2. Analysis and design of parameters and standards for ICS</li> <li>3. Market Study 1. Determine barriers to ICS access and the willingness to pay for ICS in the target market</li> <li>4. Market Study 2. Determine demand for ICS and analyze the offer</li> <li>5. Analysis and design of a distribution strategy for ICS in Guatemala</li> <li>6. Design of financial instruments for ICS consumers and manufacturers</li> <li>7. Design of the financial mechanism. Design the financial mechanism for the implementation of a Guarantee Fund</li> <li>8. Design of the MRV framework</li> <li>9. Legal and institutional analysis of NSP implementation modalities and implementing partners</li> <li>10. Coordination of the NSP appraisal phase</li> <li>11. Technical advice and NSP formulation</li> </ol>	<ol style="list-style-type: none"> <li>1. Jul-Dec 2017</li> <li>2. Jul-Dec 2017</li> <li>3. Nov 2017- Jun 2018</li> <li>4. Oct-Dec 2018</li> <li>5. Oct-Dec 2017</li> <li>6. Sep-Dec 2017</li> <li>7. Dec 2017-Mar 2018</li> <li>8. Sept 2017-Dec 2018</li> <li>9. Jul-Nov 2018</li> <li>10. May 2017-May 2018</li> <li>11. Jul 2017-Dec 2018</li> </ol>	<ol style="list-style-type: none"> <li>1. <a href="#">Enlace a Documento</a></li> <li>2. <a href="#">Enlace a Documento</a></li> <li>3. <a href="#">Enlace a Documento</a> y <a href="#">Enlace a Documento</a></li> <li>4. <a href="#">Enlace a Documento</a></li> <li>5. <a href="#">Enlace a Documento</a></li> <li>6. <a href="#">Enlace a Documento</a></li> <li>7. <a href="#">Enlace a Documento</a></li> <li>8. <a href="#">Enlace a Documento</a></li> <li>9. <a href="#">Enlace a Documento</a>, <a href="#">Enlace a Documento</a>, and <a href="#">Enlace a Documento</a></li> <li>10. <a href="#">Enlace a Documento</a></li> <li>11. <a href="#">Enlace a Documento</a></li> </ol>
	1.		
Environmental and Social Safeguards	<ol style="list-style-type: none"> <li>1. Safeguards filters (SPF &amp; SSF)</li> <li>2. Environmental and Social Strategy</li> </ol>	March 2019	<ol style="list-style-type: none"> <li>1. <a href="#">Enlace a Documento</a> and <a href="#">Enlace a Documento</a></li> <li>2. <a href="#">Enlace a Documento</a></li> </ol>

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<sup>1</sup> The information contained in this Annex is confidential and will not be disclosed. This is in accordance with the "Deliberative Information" exception referred to in paragraph 4.1 (g) of the Access to Information Policy (GN-1831-28) at the Inter-American Development Bank.