TUIK RUCH LEW IMPROVED COOKSTOVE PROJECT FOR LAKE ATITLAN VALIDATION REPORT

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Client	Tuik Ruch Lew/Helping the Earth (TRL)

Project Title	Tuik Ruch Lew Improved Cookstove Project for Lake Atitlan
Project Location	Sololá, Guatemala

Summary

The project "Tuik Ruch Lew Improved Cookstove Project For Lake Atitlan" (TRL ICS project from now on), located in Sololá Department (Guatemala), was initiated by Tuik Ruch Lew/Helping the Earth (TRL from now on)– the Project Proponent (PP) – to reduce emissions in Guatemala by giving access to the indigenous communities in the Sololá Department to sustainable energy technology by providing, installing, and maintaining energy efficient cookstoves, reducing demand for wood fuel, slowing local deforestation and empowering the Tz'utujil Maya people of Lake Atitlán.

The project contributes to the achievement of 8 of the 17 Sustainable Development Goals (SDG) of United Nations through the positive impacts generated by the project activities. Additionally, the project is expected to achieve 38,056.82 tCO_2e emissions reductions in the project lifetime), as SD VISta Labeled VCUs, as a consequence of the activities implemented to reduce demand for wood fuel, slowing local deforestation and empowering the Tz'utujil Maya people of Lake Atitlán.

The objective of the validation was to conduct an independent assessment of the Project design in order to determine its compliance with the requirements of the SD VISta Program, including the appropriateness of the SD VISta claims and the plans design for their monitoring. The scope of the validation was the review of the sustainable development impacts generated by the project, their contribution to the UN SDG and the benefits for people and prosperity and the benefits for the planet that they imply.

The validation was performed through a combination of document review, interviews and communications with relevant personnel and on-site inspections. The project was assessed in conformance to the criteria set by the SD VISta Program.

During the validation process six clarification requests (CLs) and two corrective action requests (CARs) were raised as findings. All findings issued by the AENOR audit team during the validation process have been closed.

The conclusion of this validation report is that the TRL ICS Project, as it was described in the Project Description, conforms with all criteria applicable for validation set by the Sustainable Development Verified Impact Standard and the SD VISta Program Guide, without any qualification nor limitation.

CONTENTS

1 VALIDATION PROCESS

1.1 Objective

The purpose of the validation was to conduct an independent assessment of the TRL ICS Project design in order to determine its compliance with the requirements of the Sustainable Development Verified Impact Standard, as set out by the guidance documents listed in Section 2.1 of this report, including the appropriateness of the SD VISta claims and the plan design for their monitoring.

1.2 Scope and Criteria

The scope of the validation was the review of the sustainable development impacts generated by the project, their contribution to the UN Sustainable Development Goals (SDG) and the benefits for people and prosperity and the benefits for the planet that they imply. With this aim, the audit assessed the project design, its management, the conditions of the stakeholders and the natural and ecosystem services at the project start, as well as the plans design for the monitoring of the project's impacts.

The validation followed the criteria set by the SD VISta Program. Specifically, by the documents:

- SD VISta Program Guide, v1.0
- Sustainable Development Verified Impact Standard, v1.0
- SD VISta Program Definitions, v1.0

1.3 Level of Assurance

The assessment was conducted to provide a reasonable level of assurance of conformance against the defined audit criteria and materiality thresholds within the audit scope. The threshold for quantitative materiality with respect to the aggregate of errors, omissions and misrepresentations, individually or in the aggregate, for any reported SD VISta claim and/or SD VISta assets was limited to five percent, as required by Criterion 5.2.3 of the SD VISta Standard v1.0

All the versions of the validation report, before being submitted to the client, were subjected to an independent internal technical review to confirm that all validation activities had been completed according to the pertinent AENOR instructions required. The technical review was performed by a technical reviewer qualified in accordance with AENOR´s qualification scheme.

1.4 Summary Description of the Project

The project "Tuik Ruch Lew Improved Cookstove Project For Lak e Atitlan" (TRL ICS project from now on), located in Sololá Department (Guatemala), was initiated by Tuik Ruch Lew/Helping the Earth (TRL from now on)– the Project Proponent (PP) – to reduce emissions in Guatemala by giving access to the indigenous communities in the Sololá Department to sustainable energy technology by providing,

installing, and maintaining energy efficient cookstoves, reducing demand for wood fuel, slowing local deforestation and empowering the Tz'utujil Maya people of Lake Atitlán.

The TRL ICS Project promotes 4 project activities: (1) introduction of high-efficiency, biomass-fired project devices to replace open cooking fires; (2) provision of energy efficiency improvements in existing biomass-fired cookstoves; (3) distribution of British Berkefeld water filters; and (4) replacement of incandescent light bulbs with LEDs. With over 30 years of experience, the Tuik Ruch Lew (TRL) team has enabled greater access to the projects chosen ICS technology, ONIL stoves, in the Lake Atitlán basin, mainly serving Tz'utujil Maya communities.

The project area is the Sololá Department. The department, located in the western highlands of Guatemala, includes Lake Atitlán and its surrounding communities. In the project area traditional cooking methods use a three stone hearth to prepare meals, driving unsustainable wood consumption. By replacing open cooking fires with ICS technology and performing energy efficiency improvements in existing biomass fired cookstoves, the project reduces energy demand in the form of wood fuel, thus generating net GHG reductions.

The aims of the project are to:

• Remove GHG emission from atmosphere by replacing open cooking fires with ICS technology (PA1) and performing energy efficiency improvements in existing biomass fired cookstoves (PA 2), reducing energy demand in the form of wood fuel.

• Contribute to the local biodiversity conservation through the reduction of demand for wood fuel, slowing local deforestation, achieving a more sustainable land use, the reduction of the erosion rate and the increase of biodiversity rate and the increase of biodiversity.

• Contribute to the local sustainable development by offer training and working opportunities for local population in the field of sustainable agriculture.

• Provide access to safe, clean drinking water -- a resource largely inaccessible in beneficiary homes.

• Facilitate access energy efficient technologies like LEDs, including education of beneficiaries on the environmental and financial benefits of using LED light bulbs and other ways that household electricity consumption can be minimized.

1.5 Audit Team Composition

Name	Role in the Team
Jose Luis Fuentes	Project Manager
Luis Javier Arribas Alonso	Lead auditor
Juan Carlos Gómez	Technical reviewer

José Luis Fuentes is the manager of the Climate Change Unit of AENOR. He is a Forestry Engineer and has a master's in business administration and a Post-Graduate in Environmental Management. He has more than 15 years of experience in auditing, consulting and training activities related to environmental and social projects. Jose Luis has actively participated in the audit of international sustainable development projects in several carbon schemes, such as the Clean Development Mechanisms (CDM), Verified Carbon Standard (VCS), Climate, Community and Biodiversity Standards (CCB), Gold Standard (GS) and carbon footprints (ISO 14067 and ISO 14064).

Luis Javier Arribas is industrial Engineer and has more than 14 years of professional experience in climate change and sustainability projects. He has worked for the UNFCCC, as an auditor and technical reviewer of projects and programs of mitigation activities under different types of carbon standards such as CDM and JI, as well as for voluntary standards such as CCB, VCS and Gold Standard.

Juan Carlos Gómez has more than 6 years of professional experience in the environmental field. He is a Forestry Engineer and holds Master in Sustainable Development and Corporate. He has developed his entire career in the field of climate change and sustainable development. He has working experience in developing countries in Latin America, Africa and Asia, auditing REDD+ under VCS, CCB and SD VISta, and forestry projects under the CDM and JI.

1.6 Method and Criteria

The validation was performed through a combination of document review, interviews and communications with relevant personnel and on-site inspections. The project was assessed in conformance to the criteria described in Section 2.1 of this report. As discussed in this report, findings were issued to ensure that the project was in full conformance with all requirements.

AENOR confirms that sufficient evidence was presented for the SD VISta claims and that there is a clear audit trail that contains the evidence and records that validate the stated contributions to the SDG since:

- Sufficient evidence available: the project proponent has provided the necessary evidence to support the claims stated in the Project Description.
- Nature of evidence: the data provided to the audit team were collected from reliable and traceable sources. They are detailed in the project documents and have been provided to the audit team and were checked during the onsite visit.
- Cross-checked evidence: AENOR cross-checked the collected information through an on-site inspection to the project area and interviews with relevant stakeholders.

Hence, AENOR confirms that the stated SD VISta claims in the Project Description are correct.

1.7 Document Review

A detailed review of all project documentation was conducted to ensure consistency with and identify any deviation from the SD VISta Program requirements. Initial review focused on the Project Description (PD) and included an examination of the project details, implementation schedule, conditions prior to the project start, stakeholder identification and engagement, determination of expected impacts and their

monitoring plans. Documents reviewed included data from monitoring, community activities reports, PP policies and standard operating procedures (SOP), and responses to Corrective Action Requests (CARs) and Clarifications (CLs).

The audit included a review of field conditions observed and interviews with project management staff. Direct on-site interviews with relevant stakeholders were the main tool to cross-check the statements and claims made in the PD and the supporting evidence provided by the PP.

Appendix 1 to this report details the list of documents provided by PP and reviewed by AENOR during the process.

1.8 Interviews

Interviews were performed during the validation site inspection and as part of the overall validation process. The AENOR validation team met with individuals with various roles in the project. This included a series of interviews with on-site and in-country staff that support the mission of the project and other conservation objectives. Onsite interviews and informal discussions were conducted with project staff.

Stakeholders were interviewed both individually and in groups, including local leaders and villagers, and representative beneficiaries of all the project activities.

A detailed list of interviewees can be found in Annex 2. In section 1.9 below is indicated the stakeholder groups interviewed during the onsite visit.

1.9 Site Inspections

The site visit was done to help the VVB reach reasonable assurance level for the validation of the project claims. It also allowed the VVB to understand the nature of the project, confirm the implementation of project activities, assess the appropriateness of the causal chains and identified impacts, to evaluate the relevance of each stakeholder group and to identify possible sources of error to focus desk review efforts.

An onsite inspection was carried out on the project area from 9 March 2020 to 12 March 2020. The site visit inspection was performed to assess monitoring efforts, including community member feedback, followed by ground-truthing and review of project activities.

The following table summarizes the activities carried out during the site visit:

Activity & Information	Date
Initial meeting - Introduction and scope of the validation process. - Confirmation of the on-site visit planning. - Clarifications related to monitoring procedures. - Introduction to calculations.	9/03/2020
Visit to project area	10-12/03/2020

- Randomly selected installations of each of 4 types of activities included in the project. (considering feasible access), in accordance with the data base provided by the project developer. - Review of operation and records. - Test of monitoring equipment and observation of monitoring practices. - Calibration and/or verification of equipment used (if applicable).	
Meetings with stakeholders - Project proponents and staff - Local stakeholders (CONAP, Amigos del Lago de Atitlán, Legambiante, Africa 70, ADECCAP, ...). - Community members (including women) benefited by project program	10-12/03/2020
Final meeting - Audit visit closure	12/03/2020

1.10 Public Comments

No public comment has been received during the public comment period.

1.11 Resolution of Findings

All documentation provided by the PP was assessed against the applicable version of the relevant SD VISta documents. Several clarification requests (CL) and corrective action requests (CAR) were raised and submitted to the PP, which addressed them either by providing to the audit team the requested information or by making the appropriate corrections. Updated versions of the documentation were submitted by the PP and the audit team reassessed them against the guidance documentation. This process was repeated iteratively until all CL and CAR were fully closed. Specifically, six CLs and two CARs were raised.

All findings issued by the AENOR audit team during the validation process have been closed. In accordance with Principle 5.4 of the SD VISta v1.0, all findings issued during the validation process, and the inputs for their closure, are described in Appendix 3 of this report.

1.12 Forward Action Requests

No Forward Action Request was raised during the validation process.

2 VALIDATION FINDINGS

2.1 Summary of SDG Contributions

The PP has identified different impacts of the project that contribute to the achievement of 8 of the 17 Sustainable Development Goals (SDG) of United Nations through the positive impacts generated by the project activities, being all of them of the claim type.

For purposes of SD VISta labeling, only the impact of 38,056.82 tCO_2e emissions reductions, which are expected to be achieved throughout the the project lifetime, as a consequence of the activities implemented to reduce demand for wood fuel, slowing local deforestation, is categorized as a label. Specifically, as SD VISta Labeled VCUs.

The following table summarizes the project's direct contribution to the SDG through the implementation of the project activities.

SDG	Goal	U.N. Sustainable Development Goals	SDG target	SDG Indicator	Contribution of the project
1	No Poverty	End poverty in all its forms everywhere	1.1	1.1.1 Proportion of population below the international poverty line, by sex, age, employment status and geographical location (urban/rural)	Implement activities to promote income increases through money and time saved using ICS Technology. The project will Increase monthly income of families who purchase wood fuel by an average of Q168.88/mo (about Q2027/yr or $261/yr)
			1.2	1.2.1 Proportion of population living below the national poverty line, by sex and age	Save an average of 2 days/ week in time for families who collect firewood
			1.2	1.2.2 Proportion of men, women and children of all ages living in poverty	Provide families with greater access to basic services in the form of clean cooking technology
			1.4	1.4.1 Proportion of population living in households with access to basic services	Maintain all stoves for optimal performance

SDG	Goal	U.N. Sustainable Development Goals	SDG target	SDG Indicator	Contribution of the project
3	Good Health & Well Being	Good health and well-being	3.2	3.2.1 Under-five mortality rate	Implement activities to decrease deaths associated with Household Air Pollution (HAP) and burns from open cooking fires. The project will Reduce HAP by 99% in 3000 homes in the project lifetime through use of ONIL Stove, leading to Reduced instance of acute respiratory infection
			3.2	3.2.2 Neonatal mortality rate	Implement activities to decrease deaths associated with Household Air Pollution (HAP) and burns from open cooking fires. The project will Reduce HAP by 99% in 3000 homes in the project lifetime through use of ONIL Stove, leading to Reduced instance of acute respiratory infection
			3.4	3.4.1 Mortality rate attributed to cardiovascular disease, cancer, diabetes or chronic respiratory disease	Improved respiratory function
			3.9	3.9.1 Mortality rate attributed to household and ambient air pollution	Reduced risk of child/infant death by eliminating open fire
			3.9	3.9.2 Mortality rate attributed to unsafe water, unsafe sanitation and lack of hygiene (exposure to unsafe Water, Sanitation and Hygiene for All (WASH) services)	By enabling access to British Berkefeld Water Filters, the project will lower exposure to unsafe water for 300 families in the project lifetime

SDG	Goal	U.N. Sustainable Development Goals	SDG target	SDG Indicator	Contribution of the project
5	Gender Equality	Gender equality	5.4	5.4.1 Proportion of time spent on unpaid domestic and care work, by sex, age and location	By providing ONIL stoves that save money, time, and health costs, the project will decrease the amount of time that women spend on unpaid domestic and care work
6	Clean Water & Sanitation	Clean water and sanitation	6.1	6.1.1 Proportion of population using safely managed drinking water services	By enabling access to British Berkefeld Water Filters, the project will lower exposure to unsafe water for 300 families in the project lifetime
7	Affordable & Clean Energy	Affordable and clean energy	7.1	7.1.2 Proportion of population with primary reliance on clean fuels and technology	With the installation of 3000 new ONIL stoves and completion of 2100 energy efficiency improvements to existing ONIL cookstoves in the project lifetime, the project will provide 3000 additional families with access to improved cookstove technology
			7.b	Expand infrastructure and upgrade technology for supplying modern and sustainable energy service	With the installation of 3000 new ONIL stoves in the project lifetime the project supplies modern and sustainable energy services that replaces tradicional open fires and with the completion of 2100 energy efficiency improvements to existing ONIL cookstoves in the project lifetime it is upgraded the existing technology.
			7.3	Number of light fixtures that undergo improvements in energy efficiency	With the installation of 2000 LED light bulbs to replace incandescent light bulbs in the project lifetime, the project will improve energy efficiency in beneficiary homes
8	Decent Work & Economic Growth	Decent work and economic growth	8.1	8.10.2 Proportion of adults (15 years and older) with an account at a bank or other financial institution or with a mobile-money-service provider	Implement activities to increase access to financial institutions. The project will Enable access to community-savings, micro-finance, or similar opportunities, enrolling 10% of families over the lifetime of the project in said programs

SDG	Goal	U.N. Sustainable Development Goals	SDG target	SDG Indicator	Contribution of the project
13	Climate Action	Climate action	13	Tonnes of greenhouse gas emissions avoided or removed	By replacing inefficient open cooking fires with ONIL stoves and performing energy efficiency improvements in existing biomass cookstoves, the project will generate approximately 38,056.82 tco_2e of emission reductions in the project lifetime.
15	Life on Land	Life on land	15.1	15.1.1 Forest area as a proportion of total land area	By replacing inefficient open cooking fires with ONIL stoves and performing energy efficiency improvements in existing biomass cookstoves, the project will provide for approximately 39,997.53 tonnes of savings in woody biomass, equivalent to 756,000 trees or 219.76 Ha of forest area in the project lifetime
			15.2	15.2.1 Progress towards sustainable forest management	By replacing inefficient open cooking fires with ONIL stoves and performing energy efficiency improvements in existing biomass cookstoves, the project will provide for approximately 39,997.53 tonnes of savings in woody biomass, equivalent to 756,000 trees or 219.76 Ha of forest area in the project lifetime
			15.4	15.4.2 Mountain Green Cover Index	By replacing inefficient open cooking fires with ONIL stoves and performing energy efficiency improvements in existing biomass cookstoves, the project will provide for approximately 39,997.53 tonnes of savings in woody biomass, equivalent to 756,000 trees or 219.76 Ha of forest area in the project lifetime

SDG	Goal	U.N. Sustainable Development Goals	SDG target	SDG Indicator	Contribution of the project
			15.5	15.5.1: Red List Index	By replacing inefficient open cooking fires with ONIL stoves and performing energy efficiency improvements in existing biomass cookstoves, the project will provide for approximately 39,997.53 tonnes of savings in woody biomass, equivalent to 756,000 trees or 219.76 Ha of forest area in the project lifetime

The audit team traced the identification of the project impacts on people, their prosperity and the planet through the causal chains elaborated by the PP and assessed their rationale based on the defined conditions prior to the project start, on the nature of the project activities and their goals, on the evidence provided and the information gathered during the site visit (observation of project activities and testimonies of stakeholders) and on the own experience of the audit. AENOR is able to confirm that the impacts have been comprehensible identified and that the contribution to SDG is appropriately attributed.

The information provided throughout the PD, as well as the additional evidence provided, substantiates all claims made by the PP. The audit team deems that all information presented regarding the estimated project contribution by the end of project lifetime to the SDG, associated SDG indicators and the net impact is complete, credible, appropriately substantiated and in compliance with the SD VISta requirements.

2.2 Project Design

2.2.1 Project Objectives

The TRL ICS Project aims to reduce GHG emission from atmosphere by replacing open cooking fires with ICS technology (PA1) and performing energy efficiency improvements in existing biomass fired cookstoves (PA 2), reducing energy demand in the form of wood fuel. The project is also designed to contribute to the local biodiversity conservation through the reduction of demand for wood fuel slowing local deforestation, achieving a more sustainable land use, the reduction of the erosion rate and the increase of biodiversity rate and the increase of biodiversity, the local sustainable development by offer training and working opportunities for local population in the field of sustainable agriculture.

TRL Sustainable Development Objectives:

- Install an estimated 3000 ONIL high-efficiency in the project lifetime, clean burning ONIL cookstoves, providing families with greater access to basic services in the form of clean cooking technology, thus benefiting approximately 14760 individuals (SDI 7.1.2, 7.b, 1.4.1), and provide an estimated 2100 energy efficiency improvements to existing ONIL cookstoves to benefit approximately 10,332 individuals (7.2.1) in the project lifetime.
- Increase Tz'utujil Maya families' disposable income by reducing the amount of wood fuel purchased monthly. (SDI 1.1.1, 1.2.1, 1.2.2)
- Increase Tz'utujil Maya families' disposable income by reducing the amount of time spent monthly collecting firewood, thus increasing time for income producing activities. (SDI 1.1.1, 1.2.1, 1.2.2)
- Reduce total wood fuel usage in the project area to generate approximately 38,056.82 tco2e of emission reductions in the project lifetime. (SDG 13)
- Reduce demand for wood fuel and the resulting deforestation within the project area, thus contributing to: a net positive increase in (1) forest area as a proportion of total land area (SDI 15.1.1), (2) the mountain green cover index (SDI 15.4.2), and (3) progress towards sustainable forest management. (SDI 15.2.1) This progress will help conserve ecosystem biodiversity by providing for estimated 219.76 hectares in the project lifetime of habitat for 67 species on the IUCN Red List of Threatened Species. (SDI 15.5.1)
- Reduce Household Air Pollution (HAP) by 99% in an estimated 3000 households in the project lifetime. (SDI 3.9.1)
- Reduce instance of non-communicable respiratory disease, such as Chronic Obstructive Pulmonary Disease (COPD) among adult family members, particularly women and the elderly. (SDI 3.4.1)
- Reduce risk of mortality among infants and children under five years of age due to (1) acute respiratory illnesses, such as pneumonia, the leading cause of mortality of children under five in Guatemala, and (2) burns resulting from children falling into open cooking fires. (SDI 3.2.1, 3.2.2)
- Decrease the proportion of time Tz'utujil women spend on unpaid domestic and care work. (SDI 5.4.1)
- Increase the number of individuals with an account at a bank or other financial institution and increase financial literacy by enrolling beneficiaries and prospective beneficiaries in community savings programs. (SDI 8.10.2)
- Improve energy efficiency in an estimated 2000 beneficiary homes by providing LED light bulbs to replace incandescent light bulbs (SDG 7.3) in the project lifetime.
- An estimated 300 British Berkefeld Water Filters will be distributed in the project lifetime, providing 300 families with access to clean drinking water and lowering exposure to unsafe water and corresponding risk of illness and/or death. (SDI 3.9.2, 6.1.1)

In opinion of AENOR, the PP has clearly defined the sustainable development objectives of the project, which are appropriate to the nature of the project, the project activities planned and the sustainable development context in which it is developed. The stated objectives align with the logic of the SDG in

promoting people well-being, ecosystem and biodiversity protection, strengthening institutions and promoting global partnerships in a sustainable, just and non-discriminatory way.

2.2.2 Project Activities

The project is structured in 4 main activities, design to achieve the sustainable development goals mentioned above:

1. **Introduction of high-efficiency, biomass-fired devices to replace open cooking fires:** The project includes an innovative educational component to empower the mostly female clientele to preserve indigenous cultural cooking traditions while adopting this new technology. The educational program, its ability to accelerate the uptake of the technology, promote responsible ownership, and ensure long-term stove maintenance. The Technology Adaptation Specialist's (TAS) experience as a chef and community nutritionist, and her many years' experience cooking on the stove, makes her the perfect person to impart new cooking techniques for traditional foods. Because she can communicate with beneficiaries in their native language, she can easily communicate the significance of the stove's positive environmental impacts and obtain a commitment from the beneficiary to its correct usage.

   TRL aims to install approximately 3000 stoves from the project start date over the project lifetime. The emission reduction calculations for the cookstoves to be installed demonstrate Project Activity One will sequester an estimated 23465 tonnes of CO_2e over the project lifetime. All stoves will be maintained for optimal performance.

2. **Provision of energy efficiency improvements in existing biomass-fired cookstoves:** TRL provides energy efficiency improvements to any existing biomass-fired cookstove in the project area that is performing poorly due to damage and/or degradation The energy efficiency improvements TRL will have performed over the project lifetime will avoid an estimated 14591 tonnes of CO_2e.

3. **Distribution of British Berkefeld water filters:** Over time, the TRL ICS Project has expanded to include additional activities designed to address the project area's environmental and sustainable development challenges. TRL offers British Berkefeld water filters to beneficiaries. The water filters provide access to safe, clean drinking water -- a resource largely inaccessible in beneficiary homes, that is less wasteful than drinking from plastic bags, safer than drinking tap or lake water, which is contaminated by fecal matter, and more cost-effective than buying larger water jugs.

4. **Replacement of incandescent light bulbs with LEDs:** TRL also distributes LED light bulbs to beneficiaries. For each LED light bulb that replaces an incandescent bulb, the project avoids an estimated 0.03468 tonnes of CO2 from being released into the atmosphere each year. Families save roughly Q200 per light bulb per year (depending on the fluctuating price of electricity), improving family economies. Further, beneficiaries are educated on the environmental and financial benefits of using LED light bulbs and other ways that household electricity consumption can be minimized.

In Santiago Atitlán, open fire cooking, lack of access to safe, potable drinking water, and limited knowledge of energy efficient technologies like LEDs present complex health, socio-economic, and environmental challenges to local communities. The traditional method of cooking over an open fire brings great risk of burns, acute respiratory infections, eye irritation, and chronic obstructive pulmonary

disease (COPD) resulting from decades of exposure to wood smoke. Women, children, and the elderly are particularly exposed. The result is acute respiratory infections, chronic obstructive pulmonary disease (such as bronchitis), eye problems, and cancer of the lungs. Burns from open fires pose another significant health hazard.

The TRL ICS Project was formed after becoming aware of these risks. The goal has always been to identify ways to combat the ill-effects of open fire use while confronting local ecological threats and improving family economies. TRL enables access to technology and education that empowers the beneficiaries to overcome these challenging circumstances. Other family members and neighboring families also share in the benefits.

The described activities are aligned with the sustainable development goals of the project and, considering the results already accomplished observed by the audit team during the site visit, AENOR, with a reasonable level of assurance, deems that the project will accomplish those goals and that the achievement of the estimated project contribution by the end of project lifetime is credible.

The following table summarizes the contributions to the SDG of each project activity.

SDG	Project activity
1	1, 2
3	1, 3
5	1, 2
6	3
7	1, 2, 4
8	1, 2, 3, 4
13	1, 2
15	1, 2

The PP has identified the expected impacts from project activities, and all them are positive, with the exception of the expected impact on stakeholders number four “Fewer wood vendors”. Considering that wood vendors represent a fraction of the population, the negative impact on their livelihoods is outweighed by the positive impacts of the combined, long-term sustainable development benefits of the project for the stakeholders.

The project activities cover a wide range of aspects of community development and ecosystem conservation and it is the opinion of the audit team that possible negative impacts will be reasonably mitigate and that the project will cause a positive net result in people wellbeing and natural capital protection.

2.2.3 Implementation Schedule

The PP listed in section 2.1.3 of the PD the key dates and milestones in the project’s development and implementation. The first milestones reported correspond to the initial phases of project pre-

establishment. Specifically, on September 21th, 2015, when TRL files to become a registered Guatemalan nonprofit. Other administrative and logistical activities were carried out later to set up the project.

However, the official start date of the project declared by the PP is September 1st, 2018, when a new series of ONIL stove installations and energy efficiency improvements in existing biomass-fired cookstoves were carried out under the new, TRL Improved Cookstove Project for Lake Atitlan. The audit team was provided with official approval letter of the register as Guatemalan nonprofit and purchase and installations records of the new series of ONIL stove installations and energy efficiency improvements and could verify the correctness of its stated content and issuance date. Therefore, the project start date is appropriate and consistent with the definition, the date on which activities that lead to the generation of sustainable development benefits are implemented, of Criterion 2.14 of SD VISta v1.0 and SD VISta Program Definitions v1.0.

All project activities described in the PD have their corresponding starting date and ending date on the implementation schedule. All project activities have been already started at the time of this validation. The audit team was able to confirm the veracity of this statement by inspecting the implementation of project activities during the site visit.

2.2.4 Project Proponent and Other Entities Involved in the Project

The project proponent is TRL. No other entities are involved in the project.

During the validation process the audit team was able to verify that TRL is the only entity involved in the project and is able to confirm their participation in the project and their responsibilities. The audit team finds that contact and entity information provided in the PD conforms to the SD VISta requirements.

2.2.5 Project Type

The TRL ICS project is a grouped project and non AFOLU. The general sector of the project is energy efficiency. This has been confirmed by the audit team after assessing the nature of the project goals and project activities planned and implemented.

2.2.6 Project Location

The project is developed within the Sololá Department (14.70°N, 91.25°W), which includes the Lake Atitlán Basin, a nature reserve. 14°38’17.63”N, 91°13’44.44”W are the coordinates of Santiago Atitlán, headquarters of the project The coordinates of project area have been provided. During the onsite visit, AENOR verified the location of the project activity and the correctness of the location of the project activity and project boundaries.

2.2.7 Baseline Scenario

The PP has provided a summary of the social, economic, and natural capital conditions at the start of the project in relation to project activities in section 2.1.8 of the PD. A summary of the reported baseline scenario is:

Fire is elemental in the Maya cosmovision and still held to be an important aspect of daily life. This reverence for fire and the three-stone hearth, along with key economic factors, have preserved the use of open cooking fires within the home for both cooking and heating. To remove the smoke, in former times, lofty grass-thatched roofs – sealed from the inside with the creosote from the smoke – worked in unison with traditional cooking methods. However, newer construction techniques have led to concrete block homes, most with tin roofs, and lacking smoke outlets. Smoke inside the home exposes women and children to harmful HAP levels.

Economically, these communities are diverse, ranging from families that live in extreme poverty to families that form part of the educated and emerging middle class. TRL priorities are protecting the environment by reducing the number of trees cut for wood fuel and improving respiratory health by eliminating smoke from open cooking fires. However, the main efforts are on those living close to, or in, poverty as the economic and health benefits will often be most strongly felt by these families.

Poverty is one compelling reason that people still use a three-stone open fire, thus inspiring environmental programs that always benefit family economies. The ONIL stove burns more efficiently and removes smoke from the home via a chimney, saving families time gathering or money spent on wood, while protecting family health.

In the homes of the most economically disadvantaged beneficiaries, incandescent light bulbs are the primary source of energy consumption. After one month of LED use, beneficiaries who have replaced incandescent light bulbs can see financial savings on their energy bill greater than the cost of the new light bulb. Given that the majority of energy generated in Guatemala is non-renewable, minimizing household energy consumption is critical to limiting carbon emissions.

A family using a British Berkefeld water filter has unlimited access to clean water for a cheaper cost than local purified water vendors sell pure water or contributing to reduce the extensive plastic pollution in and around Lake Atitlán due to the purified water sold in small bags.

The main method of the audit team to assess the appropriated baseline scenario defined by the PP was the direct testimony of local stakeholders obtained through interviews during the site visit. Key questions such as “What was the situation before the project start?” or “How has your life change since the start of the project activities?” provided the audit team with evidence for the assessment. In addition, the inspection of the surroundings of the project area provide context to the would-be situation without the project.

Based on the evidence collect, AENOR is able to confirm the accuracy and the credibility of the description of the social, economic, and natural capital conditions at the start of the project provided by the PP in the PD.

2.2.8 Causal Chain(s)

The PP presented causal chains in the PD, one per project activity, identifying outputs, outcomes and impacts, differentiating negative and positive impacts on the planet and impacts on people and prosperity.

The following table summarizes the causal chains validated by the audit team per project activity, the impacts identified and the means of assessment:

Project activity	Impacts on	Means of assessment
1. Introduction of high-efficiency, biomass-fired devices to replace open cooking fires	Planet, People and prosperity	- Interviews to TRL staff. - Interviews with Onil cookstoves installed. - Monthly Reports and annual reports. - Interviews with multiple stakeholders: local ONGs, local stakeholders, local communities, etc.
2. Provision of energy efficiency improvements in existing biomass-fired cookstoves	Planet, People and prosperity	- Interviews to TRL staff. - Interviews with Onil cookstoves installed users. - Monthly Reports and annual reports. - Interviews with multiple stakeholders: local ONGs, local stakeholders, local communities, etc.
3. Distribution of British Berkefeld water filters	People and prosperity	- Inspection of water filters. - Interviews with water filters users. - Monthly Reports and annual reports.
4. Replacement of incandescent light bulbs with LEDs	Planet	- Interviews with water filters users. - Monthly Reports and annual reports.

After reviewing the evidence provided by the PP and collecting the information through direct interviews and inspections during the site visit, the audit team is able to validate all the causal chains included in the annex 2 of the PD. In opinion of AENOR, the PP has appropriately and comprehensively described the cause-and-effect relationships product of the project activities, correctly tracing all the direct positive and negative, intended and unintended impacts on the Planet and on the People and Prosperity, as required by Criterion 2.1.5 of the SD VISta v1.0. The audit team deems that the PP has included all reasonable effects of the project activities in the causal chains.

The PP has clearly documented in the causal chains which impacts of the project activities relate to People and their Prosperity and which relate to Planet. No SD VISta assets are expected to be generated by the project.

2.2.9 Threats to the Project

The PP has described the natural and human-induced threats to the expected sustainable development benefits during the project lifetime, and as well as cultural worldview limits reception of ONIL stove or stove owners alter the stove itself so that it no longer functions as designed, or owners refuse to maintain their stoves to function properly or international commercial strategies of neighboring countries reduce availability of supplies, increasing price for the foreseeable future whereas Climate change and deforestation make firewood an untenable source of fuel and negatively affects agricultural yields,

reducing reliable income streams in the local community and thus availability of funds to purchase ONIL stoves, replacement parts, water filters and/or LEDs.

Through the employment of Tz'utujil educators to explain the depth of the project in participants' native language and from their cultural perspective, an improved screening process to determinate who receives an ONIL stove, i.e., people who are committed to using the ONIL stove to accomplish the SDGs, education stove recipients about best use practices and environmental and economic benefits and share tips to help families adapt more quickly to the change in technology and maintain an intensive schedule of information dissemination about the importance of the ONIL stoves and how they must be used appropriately to achieve the benefits, both for people and the planet, using social media outlets, the PP achieves solution of the threats detected.

Moreover, the PP continues to encourage discussion and action around the design of sustainable forest management programs in the region and support local efforts to organize community forestry models, and contribute to the development of a collective conscience among PP and the rest of the community to sustainably manage local forests.

AENOR deems that the PP identified correctly and comprehensively the threats to the project benefits and that the PP created, and it is implementing actions to reduce or diminish these threats.

2.2.10 Benefit Permanence

The PP states that the project is focused on a program of education and supports a system of maintenance that helps extend the lifespan of the environmental technologies deployed.

To ensure the project's long-term viability and the permanence of ICS and other program benefits, TRL has embraced the following long-term aims:

1) Open a factory from which stoves and replacement parts are sold and maintenance visits scheduled.

2) Continue to enroll women in the TRL savings group, working to improve financial literacy.

3) Enable access to other environmental technologies that provide for financial savings among beneficiaries.

4) Target grants and other institutional funding sources to address costs associated with the most vulnerable beneficiaries.

5) Offer a holistic and long-term social, environmental, and economic educational program that accompanies all project activities

AENOR verified the benefit-permanence activities through the desk review and during the on-site visit and considers the measures will likely achieve the sustainable development goals of the project and that these will last beyond its lifetime.

2.3 Stakeholder Engagement

2.3.1 Stakeholder Identification

The PP carried out the stakeholder identification by considering individuals, groups, or communities that either: (1) are affected or likely to be affected by project activities or (2) may have an interest in the project. Marginalized and/or vulnerable individuals and groups are directly identified within the first category. Broader stakeholders within the second category do not experience direct project impacts, but may still be consulted on an informal basis to identify risks and opportunities associated with project activities.

The stakeholder identification process has been modelled in accordance with the section 3 of the "Template for ESS10" which provides guidance on the application of the World Bank's Environmental and Social Standards (ESSs).

The following stakeholders within each category are considered: government authorities, environmental public-sector agencies, local NGOs and businesses, academics, religious groups, the media and individuals and families within nearby communities. Particular focus is directed to individuals and groups who may be directly or potentially adversely affected by project activities.

The audit team, based on the nature and location of project and the conditions prior to its implementation of the project, evaluated the possible effects of the project on institutions (governmental and non-governmental), civil society and private companies. Considering the evidence provided by the PP and the information gathered during the site visit, the audit team believes that the approach of the PP to identify the stakeholders was accurate and that the rationale supporting it was appropriate to the local context of the project. Therefore, AENOR deems that process has identified all stakeholders who might be impacted by the project activities.

2.3.2 Stakeholder Description

The PP described the following stakeholders in the PD:

1. Affected Parties

1.1. Current Beneficiaries: ONIL stove, British Berkefeld Water Filter and LED users, and other family members within the households serviced

Beneficiaries are identified as any individual in the Sololá Department willing to adopt a new environmental technology.

1.2. Potential Beneficiaries: TRL does not actively seek out new beneficiaries, but instead relies on some promotional events and, most importantly, word-of-mouth recommendation by current ONIL stove owners. TRL further screens applicants by sending the TAS to assess a family's needs and whether or not the family shows signs of being a successful ONIL stove adopter.

1.3. Local Vendors: Various local businesses supply wood, purified water, and light fixtures in the project area. TRLs services influence consumption of these products and could thus negatively affect vendor livelihoods.

2. Other Interested Parties

2.1. Project Donors: TRL has worked with numerous individuals or groups of foreigners who have come to help the poorest people in Santiago Atitlán, (e.g., those who cannot afford even the subsidized price, Q350 for the ONIL stove).

2.2. Religious groups

2.3. Government authorities: The COCODE (local indigenous authorities), and the Mayor of Santiago Atitlán are the governing bodies of the population serviced by TRL.

2.4. Environmental public-sector agencies: The INAB (National Forest Institute), CONAP (The National Council for Protected Areas) and (Ministry of Agriculture) are engaged in work relevant to TRL's mission.

2.5. Academic institutions: The Universidad del Valle, located in Sololá Department, manages an active Centro de Estudios Ambientales y Biodiversidad (CEAB) (Center for Environmental and Biodiversity Studies). TRL attends events and symposiums on ecological threats to the project area hosted by CEAB.

2.6. Local NGOs: Various other NGOs in Santiago Atitlan, including Pueblo a Pueblo, Adisa, Mayanza, and Hospitalito Atitlán, One Two Tree, Africa 70, and ADECCAP provide services to TRL's beneficiary base.

2.7. Media: The local radio station, Radio Voz de Atitlán is the primary media outlet accessed by the local community and TRL's beneficiary base.

During the site visit, the audit team interviewed representatives of different stakeholder groups described in the PD and was able to check the correctness and accuracy of the description of their relevance to the project and their interests.

2.3.3 Stakeholder Consultation

Stakeholder engagement is an ongoing and steadily improving process. Even if the four project activities do not require the approval of governing bodies, TRL is constantly engaging with their local community. TRL team's integration into the community has enabled them to gain valuable feedback through community meetings and conferences, as well as in an unofficial capacity, through casual conversations with stakeholders.

This way, TRL was able to gather useful feedback from several stakeholder groups, including representatives of social and environmental public sector agencies as well as civil society organizations, and use it to modify the project design.

Only positive comments about the project and its environmental impacts have been received, except to the size of the organization that limits the project to local or regional level.

Comments such as these motivated the following actions by TRL: (1) place additional emphasis on seeking funding to provide for larger subsidies for the project area's most vulnerable families; (2) hire additional field team personnel to increase TRL's capacity to provide maintenance and educational visits;

and (3) hold trainings for other community projects that wish to replicate TRL's model in areas the project cannot reach.

By means of documents reviewed and the interviews performed, AENOR considers that the summary of the comments received included in the PD is complete. The main conclusions of the meetings and opinions collected from meetings are included in the PD.

Thus, AENOR is able to confirm that the stakeholder consultation processes were carried out in an effective manner by the PP, that these processes were appropriate for each stakeholder group, providing information regarding potential costs, risks and benefits, and allowing the stakeholders to influence the project design. The PP dedicated particular attention to optimizing benefits for any marginalized and vulnerable groups identified, developing specific measure for women and less favored youth.

2.3.4 Continued Consultation and Adaptive Management

Further the meetings, conferences and other public events, TRL made the decision to expand its informal consultation activities to reach affected parties with limited access to this type of meeting, as consequence of the cost of the registration fees or transportation fees, the lack of free time, etc., and seeks consultation from these groups through direct community engagement with semi structured interviews, TRL has changed and adapted the systems used as well as organizational policies to reflect positive and negative feedback.

Before and after installations, beneficiaries are continually consulted through a digital survey platform in the home of the beneficiary, Furthermore, all consultation is conducted in Tz'utujil, by local Outreach Team Members so that beneficiaries can openly and clearly communicate constructive feedback and grievances.

Moreover, TRL has a Open Office where interested stakeholders can go and engage with the TRL's team, asking questions about the four different project activities and get information about the benefits of these respectively.

Other communication channels are the TRL's website where annual reports are published, the newsletters that are sent to project donors and friends of the organization twice per year and social media communication included in different platforms such as Instagram, Facebook, You Tube, etc.

The auditor team found that constant communications exist between the project and community members, traditional and official leaders, and other stakeholders.

Consultation will continue throughout the project lifetime and will continue to influence project design. Adaptations will be made if deemed necessary.

The local community has been consulted to determine their cooking needs. Feedback included: a rapidly heating and evenly distributed hot cooking surface; insulated sides that protect children from burn; a compact, durable, module unit that can be easily taken apart and reinstalled in a new location; and a stove that does not throw off excess heat during the day but retains and radiates heat at night. The ONIL

stove was chosen to reflect the specific, expressed needs of this culture and context as determined through listening to feedback and client experiences with other supposedly energy-efficient models.

In opinion of AENOR, the described plan for continuing communication and consultation between the PP and stakeholder groups described in the PD complies with the Criterion 2.2.8 of the SD VISta v1.0 and it is being implemented effectively.

2.3.5 Anti-Discrimination

AENOR checked and confirms that the PP has developed a strict policy prohibiting any form of discrimination or harassment as well as designed measures that guarantee equal opportunities for community members, including women and vulnerable and/or marginalized people, in accordance with Criterion 2.2.9 of the SD VISta v1.0.

2.3.6 Worker Training

The PP has developed and implemented plans for hiring and training and capacity building of project employees.

Interviews during the site visit confirmed employees were trained and well-versed in the skills needed to carry out their jobs. Women involved in chicken enterprises were trained and using the skills they learned. The audit team deems that the project has properly identified the training needs and delivered adequate capacitation to project's workers in order for them to perform their activities in a safe and effective manner.

2.3.7 Equal Work Opportunities

The PD describes the policy for hiring employees, according to the Employment Opportunity Policy. TRL is dedicated to being an equal opportunity employer as defined by the ILO: This fundamental convention defines discrimination as any distinction, exclusion, or preference made on the basis of race, colour, sex, religion, political opinion, national extraction, or social origin, which has the effect of nullifying or impairing equality of opportunity or treatment in employment or occupation.

During the site visit, the audit team was able to confirm that many positions were covered by women. Based on this evidence, it is the opinion of AENOR that the project provides and promotes equal employment opportunities, including women and vulnerable and/or marginalized people.

2.3.8 Workers' Rights

Each of the workers have a contract that states his/her rights and obligations. In Guatemala, the labor laws favor the employee and reputable organizations work hard to comply with these laws, which are enforced by the Ministry of Labor (MINTRAB).

The audit team is able to confirm that the project has exceeded all local labor requirements and ensured that all workers were apprised of their rights, complying with the Core Labour Conventions of the ILO. No labor conflicts were evidenced during the interviews to staff.

2.3.9 Occupational Safety Assessment

Risks will be minimized by informing workers about occupational hazards, properly training workers with best practices in order to minimize risks and providing adequate equipment/tools. Verbally informing workers of these risks and how to minimize them is included as part of worker training, orientation conversations and training refreshment courses.

During the site visit, workers interviewed were confirmed to have been informed of risks and instructed how to minimize them. The audit team considers that occupational safety assessment was comprehensive, and that measures have been put in place to minimize risk to workers.

2.3.10 Feedback and Grievance Redress Procedure

A grievance/conflict resolution process has been designed where beneficiaries and stakeholders have TRL's contact information and the understanding that they should contact the organization with any problems, questions, or grievances. If there is an issue that cannot be resolved through direct communication with TRL, the municipality has an official mediator office, where complaints or disputes can be brought for resolution.

During the validation site visit the grievance process was reviewed and the grievance process involvement of local community was confirmed to be publicized and practiced as originally intended; the communities and working groups interviewed showed knowledge and acceptance of this procedure.

Based on the above evidence, AENOR considers that the grievance redress procedure has being design and is implemented according to Criterion 2.2.14 of the SD VISta v1.0 and that it is effective in its aim.

2.3.11 Feedback and Grievance Redress Procedure Accessibility

According to the PD, TRL maintains a contact form on the website that is accessible in both Spanish and English. Completing this form generates an email to the program developer who responds personally. In the event of a grievance, the TAS logs it in her documents to be addressed either at the following staff meeting or immediately, depending on the urgency. Due to the high illiteracy rate and Tz'utujil being a non-written language, community grievances would most likely be made in person.

During the site visit, the audit team was able to confirm that information about the project was available. Interviews with local stakeholders show no evidence of pending grievances. It is the opinion of the audit team the project is transparent with all stakeholders regarding grievances or any other feedback and that the procedure is accessible to all of them.

2.3.12 Stakeholder Access to Project Documentation

In addition to an enhanced focus on verbal communication among staff and local community members, TRL includes direct links to monitoring reports on his website. TRL posts annual reports online as well as project descriptions on his website and publishes links to these materials on Facebook.

During site visit, the audit team checked that the monitoring reports and the annual reports are included on the website of the PP.

It is the opinion of the audit team, based on the testimonies of local stakeholders regarding the well-established communication channels with the project management, that the project has and will continue to make project documentation accessible to all stakeholders

2.3.13 Information to Stakeholders on Validation and Verification Process

The PP informs the beneficiaries and their families that they are participating in a project that distributes the ONIL stove at a reduced price to improve their respiratory health, the family economy, and the environment. They are also informed of the need to track their successes and monitor key data, such as money spent on wood fuel among other economic indicators. As this community is still very suspicious of foreign intentions, auditors were accompanied by TRL staff for site visits to which families were notified several days in advance either via telephone, or in-person.

As the SD VISta program progresses, the main forms of information dissemination to the local community will be radio broadcasts and Facebook, as well as the website. The PP already announced the participation in SD VISta's project via newsletter, social media publications, blog publications, and on the website.

All interviewees were well aware of the nature of the audit process and declared being informed of the auditors visit with anticipation. AENOR deems that all stakeholders are likely to know of future assessments.

2.4 Project Management

2.4.1 Avoidance of Corruption

TRL staff maintain the highest standards of transparency. The organization uses an external accountant who manages the accounts and organizes all receipts and other financial documents. In addition, TRL employs an auditor to guide the association in its transactions – the first external audit will be completed in 2020. To maintain transparency, TRL publishes annual reports on its website. The organization complies with all Guatemalan laws against favoritism, cronyism, or nepotism.

The project proponents and all connected with TRL are actively involved out of dedication to the protection of the environment as well as a desire to share the benefits created by the project with the Tz'utujil Maya people of Lake Atitlán

After reviewing all the aforementioned policies, the audit team considers that the project management has defined and set a strong and comprehensive framework to prevent the commitment any kind of illicit acts by project staff. No evidence of any form of corruption or illegality was found during the review of the provided evidence and the site visit.

2.4.2 Statutory and Customary Rights

TRL operates entirely out of a private office space with installation activities taking place in beneficiary homes. TRL staff enter private property only with the explicit permission of the owner. Stove installations

take place around the lake. The key area of installations thus far is in Santiago Atitlan, which is just visible at the southern end of the lakes.

This statement was confirmed by the audit team during site visit by consulting local leaders and local governmental officials. No conflict with any kind of statutory and customary rights was reported to the audit team nor was noticed by them.

2.4.3 Recognition of Property Rights

The PP installs a stove only at the property owner's invitation. Most often the home is built on property acquired through inheritance. The project does not infringe or interact with property rights. After delivery and payment, the ONIL stove is the sole property of the owner – TRL relinquishes all claims.

Due to past experience with illegitimate projects that solicited identifying information from community members for the sake of theft, there is a high level of distrust between community members and new NGOs. The members of the community will not sign documents and are extremely suspicious of any unknown person asking them for information.

All beneficiaries verbally consent to take part in the project during the first site visit. The act of purchasing the ONIL stove and verbally agreeing to several consents constitutes a formal agreement between TRL and the new owner

AENOR verified all these documents and considers that the PP holds the declared property rights. Upon site visit, the audit team confirmed that local community rights to access the project area for fishing, small scale removal of trees and collection of non-timber forest products were being respected by the PP without any kind of impairment.

2.4.4 Free, Prior and Informed Consent

FPIC does not apply to the project activities since they do not infringe on or otherwise concern land rights.

2.4.5 Restitution and/or Compensation for Affected Resources

The project does not affect any party's access to resources or their lands.

2.4.6 Property Rights Removal/Relocation of Property Rights Holders

ONIL stove installations do not impede on the land or property rights of a beneficiary. After installation, TRL forfeits any future claim to the stove as property, and beneficiaries can withdraw from the project at any point without penalty. Part of participation in the project includes terminating the use of open cooking fires. To ensure the project does not infringe on cooking activities important to Tz'utujil Maya culture, the TAS guides new families through the adjustment period from three-stone fires to a clean cookstove based on her own experience. Beneficiaries learn how traditional meals can be prepared using the new ICS technology. The lead TAS's expertise as a community nutritionist is applied daily to her work with beneficiaries to aid in this transition.

2.4.7 Identification of Illegal Activities

Extortion is a very common crime in Guatemala. As such, organizations tend to keep their financial information out of public view. TRL distributes ONIL stoves only on demand. It does not buy large quantities of stoves for storage. Part of the qualifications of TAS and installer are that they understand these intricacies and work to avoid publicizing the financial situation of TRL.

Robbery is the most common crime in the area of the project. The outreach workers, the installer and TAS, always travel in groups of two and work only during daylight to prevent theft.

TRL purchases made with an association check must have two signatures of the administrator and treasurer. Funds can be accessed only if these two members agree

During AENOR onsite visit, no illegal activities out of control and monitoring were detected. The audit team considers that the project has properly identified all illegal activities and that is implementing effective measures to prevent them. The project does not and has not benefited from any illegal activity.

2.4.8 Ongoing Conflicts or Disputes

The audit team has not found any evidence of ongoing conflicts or disputes.

2.4.9 National and Local Laws and Regulations

In 2016 Tuik Ruch Lew became a registered Guatemalan nonprofit, adhering to the registration process and all subsequent local and national laws governing nonprofit activities in the country. TRL abides by all Guatemalan Labor Laws as written in the Guatemalan Employment Code, and Laws for Protected Areas.

AENOR did not detect during the site visit or desk review incompliances related to laws and regulations.

2.4.10 Project Ownership

Escritura Pública Número 802 (see appendix 4) establishes the Project Proponent as a registered not-for profit association in Guatemala. Although TRL beneficiaries possess ownership of the equipment, before installation, beneficiaries enter into a verbal contractual agreement with TRL. Beneficiaries agree to allow TRL, as a not-for profit association, do the following:

(1) Claim the GHG emission reductions and/or removals generated by the equipment used in the TRL ICS Project.

(2) Conduct follow-up visits for monitoring purposes.

All communication is conducted in Tz'utujil, the native language of the beneficiary. The verbal agreement is designed by the local Outreach Team to explain the environmental benefits of the ONIL stove and communicate to the beneficiaries how claiming benefits will enable the project to remain financially viable. This verbal agreement vests project ownership in the Project Proponent.

The audit team has checked during the onsite visit the acknowledge of the verbal contractual agreement with TRL by the beneficiaries of the TRL ICS project and finds that the PP's project ownership is unconditional, undisputed and unencumbered, in accordance with SD VISta requirements.

2.4.11 Grouped Projects

Section 2.3.11 of the PD stablishes the necessary eligibility criteria to ensure that inclusion of all new project activity instances are in accordance with the requirements detailed in the SD VISta Standard, v1.0.

3 BENEFITS FOR PEOPLE AND PROSPERITY

3.1.1 Condition of Stakeholders at Project Start

In section 3.1 of the PD, the PP described the conditions of the stakeholders defined in section 2.2.2. The audit team based the assessment of the appropriateness of these descriptions on the testimonies of the stakeholders obtained through interviews during the site visit. Annex 2 of this report provides a comprehensive list of all the people interviewed during the process.

The description of the conditions prior to the project start were confirmed by all the interviewed stakeholders. Thus, AENOR considers that the PP has described accurately the conditions at the project start date with respect to social, economic and cultural diversity within and between the stakeholder groups and the interactions between stakeholder groups.

3.1.2 Expected Stakeholder Impacts

The PP identified the expected stakeholder impacts through the definition of the causal chains of each project activity described in section 2.1.9 of the PD. The following table summarizes the means used to assess the expected impacts on each stakeholder group resulting from project activities:

Project Activities	Impact	Affected Stakeholder Group(s)	Monitored Output	Validation assessment of the expected impacts	+/-	SDG
1 2	Access to ONIL ICS	Beneficiaries and their families	# of ONIL ICS installed.	Review that after the installation of the new cookstove is completed the corresponding form in Kobo Toolbox and internal reports of the weekly Friday meetings and annual reports.	+	7.1 1.4
	Reduce HAP 99%		# of ONIL ICS installed. Indirectly, each stove provides for the following improve health outcomes: lower risk of developing COPD, less instance of acute lower respiratory illness, improved overall respiratory health. Lower risk of deaths of children under five from falling into open cooking fires. Lower risk of neonatal deaths resulting from dangerous levels of exposure to HAP for pregnant women		+	3.9
	Lower risk of adverse birth outcomes resulting from prenatal exposure to ambient air pollution				+	3.2
	Reduce instances of acute lower respiratory infection				+	3.4
	Eliminate risk of young children falling into open cooking fires				+	3.2
	More disposable income due to the reduction of		# of ONIL ICS installed and cost of the average consumption of wood by the beneficiaries.	Review the information achieved by the PP from the beneficiaries of each ONIL ICS installed	+	1.1 1.2

Project Activities	Impact	Affected Stakeholder Group(s)	Monitored Output	Validation assessment of the expected impacts	+/-	SDG
	fuel wood expenditure			through the questionaries' surveys carried out in the scheduled periodic visit carried out by the TAS.		
	Beneficiaries are referred to community savings/microcredit opportunities		Number of beneficiaries savings/microcredit	internal reports of the weekly Friday meetings and annual reports.	+	8.10
	Proportion of time spent by women on unpaid and domestic work and care decreases		# of ONIL ICS installed and cost of the average of time spent recollecting wood	Review the information achieved by the PP from the beneficiaries of each ONIL ICS installed through the questionaries' surveys carried out in the scheduled periodic visit carried out by the TAS.	+	5.4
	Reduced demand lowers profits for local wood vendors	Local vendors	# of ONIL ICS installed and cost of the average consumption of wood by the beneficiaries.	Review the information achieved by the PP from the beneficiaries of each ONIL ICS installed through the questionaries' surveys carried out in the scheduled periodic visit carried out by the TAS.	+	13
	Increase forest area providing for habitat and other ecosystem services		# of ONIL ICS installed and the average consumption of wood by the beneficiaries.	Review the information achieved by the PP from the beneficiaries of each ONIL ICS installed through the questionaries' surveys carried out in the scheduled periodic visit carried out by the TAS.	+	15
3	Increase proportion of population with access to water filter technology	Beneficiaries and their families	# of water filters installed.	Review that after the installation of the new water filter is completed the corresponding form in Kobo Toolbox and internal reports of the weekly Friday meetings and annual reports.	+	6
	Reduces instances of water-born illnesses		# of water filters installed. Indirectly, each water filters provides for the following improve health outcomes: lower risk of water born illnesses.		+	3.9

Project Activities	Impact	Affected Stakeholder Group(s)	Monitored Output	Validation assessment of the expected impacts	+/-	SDG
	Reduced demand for "Pure water" lower profits for local vendors	Local vendors	# of water filters installed and cost of the average consumption of pure water by the beneficiaries.	Review the information achieved by the PP from the beneficiaries of each water filters installed through the questionaries' surveys carried out in the scheduled periodic visit carried out by the TAS.	-	
4	Reduced business for light bulb vendors lowering profits	Local vendors	# of light bulb installed and cost of the average consumption of electricity by the beneficiaries.	Review the information achieved by the PP from the beneficiaries of each light bulb installed through the questionaries' surveys carried out in the scheduled periodic visit carried out by the TAS.	-	
	Improved energy efficiency in households	Beneficiaries and their families	# of light bulb installed.	Review that after the installation of the new light bulb is competed the corresponding form in Kobo Toolbox and internal reports of the weekly Friday meetings and annual reports.	+	7.3.

After reviewing the evidence provided by the PP and collecting the information through direct interviews and inspections during the site visit, the audit team is able to confirm that expected impacts for each stakeholder group identified in the PD are likely to occur. In opinion of AENOR, the PP has properly estimated the type and magnitude of the project's impacts on the stakeholder groups, as required by Criterion 3.1.4 of the SD VISta v1.0.

3.1.3 Mitigation of Negative Impacts on Stakeholders

As it was indicated in section 3.4. of the PD, The PP has identified only the negative impacts on local vendors stakeholders due to the reduction of consumption of wood, pure water and light bulb.

The PP does not plan to do specific actions to mitigate these impacts because the negative impact is not significant against the benefits obtained from the beneficiaries of the project activities and others involved parties.

The audit team checked with the stakeholders that might be affected by these negative impacts their perception of the risk they pose to them, and they did not consider necessary mitigation measures design

by the PP. All cookstoves, water filters and light bulbs inspected during the site visit were functionally. Thus, in opinion of AENOR, the project has in place measures that will mitigate and minimize the negative impacts on the stakeholders.

3.1.4 Stakeholder Monitoring Plan

The PP uses results-based framework that allows TRL to track short-term and long-term success and make necessary changes to improve the project results. The project tracks client information and VCS required data and parameters Ny,i,j and either By=1,new,i, j,survey or SCnew,i,j, for Project Activities One and Two, through the combination of the digital survey platform, KoBo Toolbox, and a cloud-based server. Using in-house designed surveys that account for cultural nuances relevant to a beneficiary base, the Outreach Team gathers data in beneficiary homes (offline) using a tablet over the course of a multi-year visit follow-up schedule. Maintenance and educational services are also included on these visits, conducted entirely in the native language of the beneficiary. Once connected to wifi at the end of each day, an Outreach Team member will sync the tablet, uploading survey results to the cloud. TRL conducts data validation after every round of data collection to ensure accuracy. When non-conformances arise, the Outreach and Program Development team discuss the reasons for such and plan to ensure monitoring activities abide by the validated monitoring plan. The quality of data collected that coincides with non-conformances is internally evaluated and excluded if incomplete or inaccurate.

In opinion of the AENOR team, all necessary parameters required to support all impacts and claims described in the project's expected and net impacts are contained in the monitoring plan and are clearly described. Details on the methods for collection of data for each output that is being monitored, particularly regarding the monitoring frequency and methods and SDG Target or Indicator, are provided. After the review of evidence provided by the PP, the interview and communications with PP, AENOR confirms that monitoring arrangements described in the monitoring plan are feasible within the project design and that the PP will be able to implement the monitoring plan.

3.1.5 Net Positive Stakeholder Wellbeing Impacts

According to the PD, the positive impacts are indicated below:

- A higher proportion of the population will live in a household with access to basic services and will primarily rely on clean fuels and technology to prepare meals. Open cooking fires will be eliminated in the homes serviced.
- Beneficiaries below the international and national poverty lines will have a greater capacity to save money that would otherwise be spent on energy bills/wood fuel, and/or time that would otherwise be spent collecting wood. This is especially relevant for the rural areas TRL serves.
- Fewer individuals will be at risk of death attributed to household and ambient air pollution as they will no longer be at risk of cardiovascular diseases, cancers, or chronic respiratory diseases that are caused by exposure to HAP.
- Fewer pregnancies will be at risk of ending prematurely due to complications arising from exposure to HAP.

- Fewer children under-five will be at risk of falling into open cooking fires.
- Female beneficiaries will spend a lower proportion of time on unpaid domestic and care work.
- A higher proportion of the population will be using safely managed drinking water and fewer individuals are at risk of death resulting from water-borne illnesses caused by consuming unsafe water.
- A higher proportion of the population will have access to an informal financial institution in the form of TRL's Savings Program.

The site visit interviews with community members and leaders demonstrated that communities were receiving benefits they would not otherwise have received in the absence of the project. Jobs were created and other income-producing opportunities were made available and have included the poorest people and women. In opinion of AENOR, the assessment of the anticipated net impacts is accurate and reflects faithfully the project benefits in communities.

AENOR checked the net impact by their outcomes onsite: all the activities were visited during the field trip, and moreover, working groups/beneficiaries were interviewed, as well as TRL staff and stakeholders such as ONGs and religious representatives of the Community. They confirmed the results mentioned, which is also supported in the extensive documentary evidences provided for the validation (see Appendix 1: list of evidences provided, in this report).

According to AENOR observations, the net impacts of the project activities are likely to be positive for each stakeholder group.

4 BENEFITS FOR THE PLANET

4.1.1 Condition of Natural Capital and Ecosystem Services at Project Start

In section 4.1 of the PD, the PP described the conditions of natural capital and ecosystem services prior to the project start and their potential threats. The audit team based the assessment of the appropriateness of these description on the ecological evidence provided by the PP, the historical evolution of the region, the inspection of the project area and the situation of its neighboring zone, as well as the testimonies of local community members and users of the services provided by the project area ecosystems.

The description of the conditions prior to the project start and the threats faced by the ecosystems were confirmed by the observations of the audit team on site and by all the interviewed locals. Thus, AENOR considers that the PP has described accurately the conditions at the project start date with respect to of natural capital and ecosystem services and includes real and possible threats.

4.1.2 Expected Impacts on Natural Capital and Ecosystem Services

The PP identified the expected impacts on natural capital and ecosystem services through the definition of the causal chains of each project activity described in section 2.1.9 of the PD. The following table summarizes means used to assess the expected impacts resulting from project activities:

Project Activities	Impact	Affected natural capital and/or ecosystem services(s)	Monitored Output	Validation assessment of the expected impacts	+/-	SDG
1 2	Avoided deforestation of forested area due to wood fuel savings made possible by ONIL ICS	Biodiversity and Species Richness, Soil and Water Conservation	Slow the negative annual net change rate of forest area in the project area, increasing forest area as a proportion of total land area. Monitored indirectly by the number of ONIL ICS installed and the average consumption of wood by the beneficiaries.	Review the information achieved by the PP from the beneficiaries of each ONIL ICS installed through the questionaries' surveys carried out in the scheduled periodic visit carried out by the TAS.	+	15
	Reduced demand for non-renewable woody biomass made possible by ONIL ICS		Consumption of wood fuel for cooking purposes		+	15

After reviewing the evidence provided by the PP and collecting the information through direct interviews and inspections during the site visit, the audit team is able to confirm that expected impacts on natural capital and ecosystem services resulting from project activities identified in the PD are likely to occur. In

opinion of AENOR, the PP has properly estimated the type and magnitude of the project's impacts on the on natural capital and ecosystem services, as required by Criterion 3.2.4 of the SD VISta v1.0.

4.1.3 Mitigation of Negative Impacts on Natural Capital and Ecosystem Services

The PP has not identified negative impacts on natural capital and ecosystem services as result of the implementation of project activities. Therefore, it is not necessary to do action to mitigate it.

Thus, in opinion of AENOR, the project has had to mitigate and minimize no negative impacts on the natural capital and ecosystem services.

4.1.4 Natural Capital and Ecosystem Services Monitoring Plan

The PP has designed a monitoring plan to track the effects of the project activities on the natural capital and ecosystem services, which is described in PD section 4.3. The monitoring plan is structured according to the project activities, and allow to track the contributions on the SDG, described in section 1 of the PD, and to support all impacts and claims. All variables are directly linked to the impacts on the planet expected by the project.

The project is also validated and regularly verified under the Verified Carbon Standard (VCS) and has developed and implemented a robust monitoring system during the next seven years.

In the opinion of the AENOR team, all necessary parameters required to support all impacts and claims described in the project's expected and net impacts are contained in the monitoring plan and are clearly described. Details on the methods for collection of data for each output that is being monitored, particularly regarding the monitoring frequency and methods and SDG Target or Indicator, are provided. After the review of evidence provided by the PP, the interview and communications with PP, AENOR confirms that monitoring arrangements described in the monitoring plan are feasible within the project design and that the PP will be able to implement the monitoring plan.

4.1.5 Net Positive Natural Capital and Ecosystem Services Impacts

The 74.61 ha of forests conserved will provide for a net positive ecological impact on the natural capital in the project area. This area will thus continue to provide the following ecosystem services: habitat for biodiversity, soil and water conservation and carbon sequestration. Without the project activities, this area of forest would be logged for wood fuel, and thus unable to provide for the ecosystem services detailed in section 4.1. of PD.

By replacing open cooking fires with ICS technology and performing energy efficiency improvements in existing biomass-fired cookstoves, the project reduces energy demand in the form of wood fuel use, thus generating net GHG reductions. Together, the two project activities generate an estimated 12686 tCO2e GHG emission reductions over the seven-year project crediting period.

No negative ecological impacts have been identified for the project, therefore net impacts of the project activities are positive.

In opinion of AENOR after visiting the project region, the project has adequately identified all potentially negative offsite biodiversity impacts and has taken actions to mitigate them.

Thus, AENOR deems that the anticipated net impacts of the project activities are likely to be positive for natural capital and ecosystem services.

5 VALIDATION CONCLUSION

AENOR has performed a validation assessment of the "Tuik Ruch Lew Improved Cookstove Project For Lake Atitlan", in Sololá Department, Guatemala, and is able to affirm with a reasonable level of assurance that the project is in compliance with the Sustainable Development Verified Impact Standard v1.0 requirements and all its associated guides and definitions, without qualifications or limitations.

The objective of the validation was to conduct an independent assessment of the "Tuik Ruch Lew Improved Cookstove Project For Lake Atitlan" design in order to determine its compliance with the requirements of the SD VISta Program, including the appropriateness of the SD VISta claims and the plans design for their monitoring. The scope of the validation was the review of the sustainable development impacts generated by the project, their contribution to the UN SDG and the benefits for people and prosperity and the benefits for the planet that they imply.

The review of the Project Description and additional documents related to the project management and monitoring; and the subsequent background investigation, interviews and testimonies of stakeholders and project site inspections have provided AENOR with sufficient evidence to validate the fulfilment of the stated criteria.

In detail the conclusions can be summarized as follows:

- The project is in line with all criteria of the SD VISta v1.0, the SD VISta Program Guide v1.0 and the SD VISta Program Definitions v1.0.
- All claims made by the project, including its contribution to the SDG, associated SDG indicators and net impacts on People and Prosperity and on the Planet, are credible and appropriately substantiated with historical and projected data and information.
- The monitoring plans for tracking the impacts on stakeholders and on natural capital and ecosystem services are transparent and adequate to support all impacts and claims expected by the project.

The conclusion of this report is that the Tuik Ruch Lew Improved Cookstove Project For Lake Atitlan", as it was described in the Project Description, conforms with all criteria applicable for validation set by the Sustainable Development Verified Impact Standard and the SD VISta Program Guide, without any qualification nor limitation.

APPENDIX 1: LIST OF EVIDENCES PROVIDED

1. Final version: SD VISta Project Description v1.4, dated on 01 January 2021.
2. Appendix 1: Guatemala PPI® 2014
3. Appendix 2: Causal Chains
4. Appendix 3: Código de Trabajo de Guatemala Decreto 1441-1961
5. Appendix 4: TRL Official Government Certification of Non-profit Status
6. Appendix 5: Leyes Áreas Protegidas
7. Final version: SD VISTA Calculations Spreadsheet V1.4
8. Client Database Spreadsheet.
9. Manufacturer specifications ONIL Products
10. Global Forest Watch. “Land cover in Sololá, Guatemala”
11. “Departamento Sololá - Portal de Resultados del Censo 2018.pdf”
12. Factors associated with fatal cases of acute respiratory infection (ARI) among hospitalized patients in Guatemala
13. “Above ground live woody biomass density.png”
14. Template 1 of the survey questionnaires.
15. Template 2: Female Empowerment Questions
16. Transport receipts from Helps of cookstoves.
17. Sololá_Area.kml
18. Devised from the data of the Population and Housing Census 2018, Guatemala
19. Budgets Stove Fabrication
20. Asociacion Rtui'k Ruch'lew financial 3rd quarter report for 2017
21. Delivery Receipts LED

APPENDIX 2: LIST OF PEOPLE INTERVIEWED

Name	Title/Organization/Community
Cameron Krummel	Founder, Administrator, Chief Financial Officer/TRL
Isabel Quinilla	Founder, Technology Adaptation Specialist I/TRL
Jose Cuá Ajuchan	Technician/TRL
María Sosof Sosof	Technology Adaptation Specialist II/TRL
Ava Scott	Climate change technician/TRL, Princeton in Latin America Fellow
Andrew Pethan	Data Systems Architect/TRL, voluntary
Enrica Colazzo	Project Coordinator/ Africa 70
Vilma Mendoza	Project manager/Pueblo a Pueblo
Gregorio Chiviliu José Pablo Sol Daniel Sisay Francisco Tacaxoy Ajchomajay	Representative members from the Church “Verbo de Dios”
Gaspar Coche	Participant of the TRL Cookstove project

APPENDIX 3: CORRECTIVE ACTION REQUESTS AND CLARIFICATIONS

Corrective Actions Requests (CARs)

CAR ID	01	**Date:** 28/04/2020
Description of CAR		
The PD has not been completed in accordance with the instructions included in the VCS project description template as it is indicated below: 1. The project title and the project proponent name are not the same in all sections of the document and it is not consistent with the title and name registered in the SD VISta website. 2. The end of the project lifetime is not correct. 3. The format of the title of the section 1 has been modified. 4. The section reference column of the contribution nº 8 does not refer to the validation report under the relevant program: "VCS validation report"		
Project participant response		**Date: 03/07/2020**
1. The project title registered in the SD VISta website is "Tuik Ruch Lew Improved Cookstove Project for Lake Atitlan". References to the project title throughout the PD have been updated accordingly. In the PD text, the title is sometimes abbreviated as the "TRL ICS Project". 2. The end of the project lifetime has been changed. 3. Formatting errors have been corrected in the updated PD. 4. The section reference column of the contribution nº 8 has been updated to refer to the validation report under the relevant program: "VCS validation report".		
Documentation provided by project participant		
1. Updated PD V1.4, https://verra.org/project/tuik-ruch-lew-improved-cookstove-project-for-lake-atitlan/ 2. Updated PD V1.4 title page and section 2.1.3 3. Updated PD V1.4 4. Updated PD V1.4 Table 1, Row Number 8		
DOE assessment		**Date: 21/08/2020**

The updated PD V1.4 has been completed in accordance with the instructions included in the VCS project description template. **Therefore, the CAR is closed.**

CAR ID	02	**Date:** 28/04/2020
Description of CAR		
The PD has not been completed with correct and complete information in the issues indicated below: 1. Section 2.1.1. does not include information on the project activities 3, and 4, nor on the target 1.4. 2. Information included in section 2.1.1. is not consistent with the information of table 1. 3. The estimated emission reductions of 7331 tons of CO2 achieved by the project activity 1 is not consistent with the value presented in the spreadsheet provided. 4. The estimated emissions 4617.395 tons of CO2 avoid by the project activity 2 is not consistent with the value presented in the spreadsheet provided 5. Section 2.1.2. indicates a number of stoves installed before September 2018 different to the number indicated in section 2.1.3. 6. Section 2.1.6 does not include information on the scope of the project nor the SD Vista Sectoral Scope 1 (Agriculture, forestry and other land use). 7. Causal chain diagram does not include all SDG indicator, such as 7.2.1., 15.1.1, 15.2.1, 15.4.2 and 15.5.1. 8. Appendix 1 is not included. 9. Section 2.1.10. does not include threats to the project activities 2, 3, and 4. 10. Numeration of section “Stakeholder Identification” and following sections is not correct. 11. Numeration of section “Avoidance of Corruption” and following sections is not correct.		
Project participant response		**Date: 03/07/2020**
1. Section 2.1.1. of the PD has been updated to include information on the project activities 3, and 4, and on the target 1.4. 2. Section 2.1.1 and Table 1 have been updated for clarity and consistency. 3. Updated VCS calculations for Project Activity One estimate 7821.8057 tonnes of CO2 e in emission reductions. References to this value have been updated accordingly throughout the PD. 4. Updated VCS calculations for Project Activity Two estimate 4863.8020 tonnes of CO2 e in emission reductions. References to this value have been updated accordingly throughout the PD.		

5. Information about stoves installed before September of 2018 were originally included to provide context of the PP's previous experience. However, these stoves are not considered part of the achievements of the TRL Improved Cookstove Project for Lake Atitlan. To avoid confusion, specific numbers for cookstoves not relevant to the project's ERs were removed from the updated PD. All registries of these stoves are in the client database in the tab "Non VCS" and made available to the VVB. 6. Section 2.1.6 of the PD was updated to include more information on the scope of the project (energy efficiency) and the SD Vista Sectoral Scope 1 (Agriculture, forestry and other land use). 7. The causal chain has been updated and made available in a folder with the appendices. 8. Note, appendix 1 refers to the PNG of the causal chain, which is now appendix 2 in the updated PD. A google drive folder has been shared with the VVB that contains all the appendicies. The final version of the PD will be uploaded as a PDF with the appendices included in the document. 9. Section 2.1.10. of the PD was updated to include threats to the project activities 2, 3, and 4 10. Formatting and numeration errors have been corrected in the updated PD. 11. Formatting and numeration errors have been corrected in the updated PD.
Documentation provided by project participant
1. Updated PD V1.4 section 2.1.1 2. Updated PD V1.4 Table 1 and section 2.1.1 3. Updated PD V1.4, Updated VCS Calculations Spreadsheet 4. Updated PD V1.4, Updated VCS Calculations Spreadsheet 5. Updated PD V1.4, Client Database 6. Updated PD V1.4 section 2.1.6 7. Google Drive Folder: "SD VISTA Appendices" > "(2) Causal Chains.png" 8. Google Drive Folder: "SD VISTA Appendices" 9. Updated PD V1.4 section 2.1.10 10. Updated PD V1.4 11. Updated PD V1.4
DOE assessment — **Date: 21/08/2020**
The updated PD V1.4 has been completed with correct and complete information in the issues requested in this CAR. **Therefore, the CAR is closed.**

Clarification Requests (CLs)

CL ID	01	Date: 28/04/2020
Description of CL		
The project proponent shall provide to the audit team the source of the following data: 1. The installation of 800 new Onil stoves. 2. The installation of 2000 LED light bulbs to replace incandescent light bulbs. 3. Increase monthly income of families due to the reduction of the wood consumption. 4. Save an average of 2 days/week in time for families who collect firewood. Clarify if this value is the same in the project activity 1 and in the project activity 2. 5. Reduction HAP by 99% in homes where there are installed a ONIL stove. 6. The installation of 100 British Berkefeld water filters. 7. The amount of savings in woody biomass, and the equivalence to trees or forest area. 8. The number of individuals benefitted by the installation of the 800 ONIL cookstoves. 9. Percentage of children under five died due to ALRI. 10. Number of species on the IUCN Red List of Threatened Species conserved due to reduced demand for firewood. 11. The 1923 stoves installed before September 2018. 12. Templates of the two different surveys designed inhouse: adoption metrics and female empowerment. 13. Poverty Probability Index (PPI) and national and international poverty lines. 14. The St. George's Respiratory Questionnaire and Clean Cooking Alliance indicators to monitor and evaluate health outcomes 15. The stove is 70% more efficient in the use of wood fuel 16. Similar stove designs are more expensive than the ONIL stove. 17. Each installed LED light bulb saves 90 pounds of CO2 each year. 18. Families save Q210 per light bulb per year. 19. The cost of each LED light bulbs is 15Q. 20. KML file with the project location. 21. Number of inhabitants of Sololá Department (421,583 people) 22. Open a factory from which stoves and replacement parts are sold and maintenance visits scheduled. 23. Begin a financial literacy program to empower female stove owners to increase savings 24. Digital training materials via online sources to educate beneficiaries in both Spanish and Tz'utujil, empowering beneficiaries to conduct maintenance without TRL staff present		

25. The engagement of TRL with residents of the Aldea San Antonio Chacaya neighborhood in November 2017 about the possibility of a large-scale implementation of the ONIL stove project.
26. ICS technology exposition held in the central park in September 2019.
27. TRL meetings and demonstrations designed to educate and promote the project conducts several times a year.
28. The stated terms and conditions of project participation.

Project participant response	Date: 03/07/2020

1. TRL estimates it can install 10 stoves a month, at minimum in normal circumstances. Actual installations are subject to several factors, most significantly, potential participants' ability to complete the Q350 copayment. For example, in some months such as December, installations are usually much lower as potential clients tend to save funds for holiday related purchases. In other months, they can be much higher, particularly if the local economy is strong. Furthermore, TRL works with donors who are willing to give stoves to the most vulnerable members of the community, in exchange for artisan products. Installations are much higher during these months. In order to arrive at a reasonable estimate, the PP decided to look at average installations for the current batch, as these months reflect normal circumstances for the region. The Client Database shows for Sep 2019 - August 2020 batch (j=2) in VCS calculations, average monthly installations amount to 13.8 stoves. Therefore the number 10 was chosen to be conservative. 10 stoves a month times 12 months equals a total 120 stoves a year which is then multiplied by the 7 year project lifetime. 840 is rounded to 800 for simplicity in calculations. MRs will reflect true achievements based on the actual number of installations achieved.
2. TRL estimates it can replace 2000 incandescent light bulbs with LED light bulbs for the following reasons. 1) The majority of households serviced have 2-3 bulbs. 2.5 times the 800 households we reasonably expect can be visited while we distribute and visit ONIL stoves amounts to 2000 projected installations. 2) While the first box of LED bulbs was given to TRL as an in-kind donation, bulbs are sold at cost. Therefore sales from the first box will be used to purchase the next box, and so on ensuring the sustainability of the program. MRs will reflect true achievements based on the actual number of replacements completed.
3. The source is TRL survey data. For families that purchase their wood in the area, one “tarea” (a local measurement of wood that weighs 0.408596493 tonnes on average) costs Q250. TRL’s data demonstrates that users that switch from open fire cooking to an ONIL stove save 0.6755 tareas on average, amounting to Q168.88 in savings. Calculations have been included in a spreadsheet presented to the VVB. Numbers in the updated PD have been corrected.

4. The manufacturer claims "women who use the ONIL stove gained the equivalent of two days a week in time saved from gathering wood" (Helps International website page is cited below). Project participants are also surveyed so that the project can corroborate this estimate. Surveys designed in Kobo Toolbox include questions about who in the household is collecting wood and how much time they dedicate to this activity. Templates are included in a Google Drive Folder that is shared with the VVB. This value is only applied to Project Activity One for the time being.
5. Manufacturer specifications claim a 99% reduction in CO emissions and a 99% reduction in carbon particles for homes where an open fire is replaced with an ONIL stove. A document with these specifications, provided by the manufacturer, is included in a Google Drive Folder that is shared with the VVB.
6. TRL estimates it can install 100 water filters over the course of the seven year project lifetime. Like the cookstoves, actual installations are subject to several factors, most significantly, potential participants' ability to complete the Q300 payment and/or availability of donor funds. The client database demonstrates that for the most recent batch, 11 filters have been installed in 7 months (an average of 1.57 each month). 1.57 times 12 months per year times the 7 year project lifetime is 131.88 filters. Value is rounded down to 100 for conservativeness and simplicity in calculations. MRs will reflect true achievements based on the actual number of water filters distributed.
7. The sources are TRL survey data and Global Forest Watch's reported above-ground live woody biomass density of 182t/ha. TRL's data and VCS calculations demonstrate 13332.5095 tonnes of woody biomass savings over the 7 year project lifetime, equivalent to 73.26 ha. The manufacturer also estimates savings of 1 commercial tree per month, amounting to 31969 trees. Numbers in the updated PD have been corrected.
8. Average household size in the project area (the Solola Department) is 4.92 according to the 2018 Census. Only one stove is distributed per household. Therefore the estimation is calculated by multiplying 800 cookstoves by 4.92 people. The result is 3,936 individuals.
9. The background section of the cited study states, "Acute respiratory infection (ARI) is a leading cause of death in children and contributes to a substantial amount of mortality in adults worldwide. It is estimated that 11–22% of deaths among children aged < 5 years and 3% of deaths among adults aged 15–49 years globally are due to ARI [1, 2]." The second source cited states that in Guatemala in 2012, pneumonia (an example of an ARI) was the leading cause of death in children under five.
10. The Lake Atitlan basin is home to over 65 species on the IUCN Red List of Threatened Species. The cited websites states, "236 bird species are found there, 28 % of them are listed in the Red List of Threatened Species (67 in total)" The forests in this region provide habitat for these bird species. Savings in firewood made possible by the ONIL stove reduce the demand for wood fuel, and thus slow deforestation in local forests.

Calculations based on woody biomass savings estimate 73.26 hectares of habitat for these species are conserved.

11. Information about stoves installed before September of 2018 were originally included to provide context of the PP's previous experience. However, these stoves are not considered part of the achievements of the TRL Improved Cookstove Project for Lake Atitlan. To avoid confusion, specific numbers for cookstoves not relevant to the project's ERs were removed from the updated PD. All registries of these stoves are in the client database in the tab "Non VCS" and made available to the VVB.
12. Templates of the two different surveys have been added to the SD VISta Evidence folder and made available to the VVB.
13. The template for the Guatemala Poverty Probability Index (PPI) has been added to the SD VISta Evidence folder and made available to the VVB. This includes the questions, and a scorecard that uses responses to determine the likelihood that the respondent will fall below the national and/or international poverty lines.
14. The St. George's Respiratory Questionnaire has been added to the SD VISta Evidence folder and made available to the VVB. The link to download the Clean Cooking Alliance indicators is below.
15. The manufacturer states "The ONIL cook stove is a safe alternative to open fires, removing smoke from the home and reducing firewood usage by 70%" on its website cited below. A screenshot of the linked page has been added to the SD VISta Evidence folder and made available to the VVB.
16. An example of similar stove design that is more expensive than the ONIL stove is the "Ecoplancha". The receipts of ONIL stoves display a per unit cost of Q840 for the physical cookstove, before factoring in transport from the factory to the project area. The least expensive Ecoplancha model is Q875.
17. The PD has been updated to reflect proper units. For each LED light bulb that replaces an incandescent bulb, the project avoids an estimated .03467957 tonnes of CO2 from being released into the atmosphere each year. This value is calculated in a spreadsheet, using the estimated kwh saved and a value for the CO2 Emissions per kWh of electricity consumed for Guatemala. The source of this value is the Electricity-specific emission factors for grid electricity (cited below and a spreadsheet shared with the VVB.
18. The cost of electricity in Santiago is Q2 per kwh. Assuming a light is used roughly 5 hours a day, a switch from an 60W incandescent bulb to a 9W LED will provide for about Q183.60 in yearly energy savings. Calculations are demonstrated in a spreadsheet provided to the VVB. A sample energy receipt has beed added to the Google Drive SD VISta Evidence folder and made available to the VVB.
19. A log from the field team's written records demonstrating 2 LED light bulbs sold for Q30 (each costs Q15) on March 11, 2020 has been added to the SD VISta Evidence folder and made available to the VVB. The VVB also witnessed a LED purchase during the site visit.

20. The KML file with the project location has been added to the SD VISta Evidence folder and made available to the VVB.
21. The source of the number of inhabitants of Sololá Department (421,583 people) is the 2018 Guatemalan Census. The table cited below has been downloaded, added to the SD VISta Evidence folder and made available to the VVB. Value is found in cell C16.
22. A sample budget has been added to the Google Drive SD VISta Evidence folder and made available to the VVB. This budget serves as evidence of meetings about future plans to open a factory.
23. PD is updated to avoid confusion. Replaced with: "Continue to enroll women in the TRL savings group, working to improve financial literacy."
24. Removed from the updated PD to avoid confusion.
25. Much of TRL's consultation with community members in the past was informal. This is an example in which there was an opportunity to apply for grant funds to allow for a larger subsidy for the cookstove. However the funds were not yet officially secured at the time of the consultation. Consequently, the team visited Aldea Chacaya to carefully gauge interest among potential clients without making any formal promises, in the case the grant was not won. This involved casual conversations about what an accessible price would be for residents of that village, as average income in that area is much lower than other areas serviced by TRL. TRL opted to not hold a formal meeting and this was prior to the implementation of TRL's chosen digital survey platform, Kobo Toolbox. Unfortunately there is no written documentation of the consultation, nevertheless TRL gained value feedback from this informal context. As a result, when TRL has had access to additional funds that allow for a higher subsidy or alternative payment methods, this is one of the areas prioritized. The PD was updated to speak more generally about this type of consultation.
26. A photograph of the ICS technology exposition held in the central park in September 2019 has been added to the SD VISta Evidence folder and made available to the VVB.
27. A photograph of an example of a demonstration designed to educate and promote the project has been added to the SD VISta Evidence folder and made available to the VVB.
28. The stated terms and conditions of project participation are listed in the "Site Visit" questionnaire on pages 5 and 6. The questionnaire has been added to the SD VISta Evidence folder and made available to the VVB.

Documentation provided by project participant

1. Client Database
2. Client Database, Google Drive Folder: "SD VISta Evidence for VVB" > "Photo Evidence" > "Box of LEDs.jpeg"
3. SD VISTA Calculations Spreadsheet V1.4, Updated PD V1.4.
4. Google Drive Folder: "SD VISta Evidence for VVB" > "Other Claims" > "Manufacturer Stats ONIL Products _ helpsintl" (https://www.helpsintl.org/onil), Google Drive Folder: "SD VISta Evidence for VVB" > "M&E: Surveys, Interviews, Questionnaires" >

"Template 1: Includes: Consents, Adoption Metrics, Health Survey and PPI - 2020 Client Info and Site Visit" and "Template 2: Female Empowerment Questions - within 2020 3rd Visit (3).pdf"

5. Google Drive Folder: "SD VISta Evidence for VVB" > "Other Claims" > "Estufa de plancha ONIL"
6. Client Database
7. Updated PD V1.4. Global Forest Watch. "Land cover in Sololá, Guatemala". Accessed on 02/03/2020 from www.globalforestwatch.org. "SD VISta Evidence for VVB" > "Other Claims" > "Aboveground live woody biomass density.png". https://www.helpsintl.org/onil, SD VISTA Calculations Spreadsheet V1.4
8. Google Drive Folder: "SD VISta Evidence for VVB" > "Other Claims" > "Departamento Sololá - Portal de Resultados del Censo 2018.pdf"
9. Tomczyk, S., McCracken, J.P., Contreras, C.L. et al. Factors associated with fatal cases of acute respiratory infection (ARI) among hospitalized patients in Guatemala. BMC Public Health 19, 499 (2019) doi:10.1186/s12889-019-6824-z. Accessed 8 Nov. 2019. https://bmcpublichealth.biomedcentral.com/articles/10.1186/s12889-019-6824-z . Health in the Americas, 2012 Edition: Country Volume N ' Pan American Health Organization, 2012. P. 362. https://www.paho.org/salud-en-las-americas-2012/index.php?option=com_docman&view=download&category_slug=hia-2012-country-chapters-22&alias=132-guatemala-132&Itemid=231&lang=en .
10. https://www.globalnature.org/en/atitlan . Google Drive Folder: "SD VISta Evidence for VVB" > "Other Claims" > "Aboveground live woody biomass density.png". SD VISTA Calculations Spreadsheet V1.4
11. Updated PD V1.4, Client Database
12. Google Drive Folder: "SD VISta Evidence for VVB" > "M&E: Surveys, Interviews, Questionnaires" > "Template 1: Includes: Consents, Adoption Metrics, Health Survey and PPI - 2020 Client Info and Site Visit" and "Template 2: Female Empowerment Questions - within 2020 3rd Visit (3).pdf"
13. Google Drive Folder: "SD VISta Evidence for VVB" > "M&E: Surveys, Interviews, Questionnaires" > "Guatemala-PPI-2014_TarjetaPuntuacionTablaDeProbabilidades"
14. Google Drive Folder: "SD VISta Evidence for VVB" > "M&E: Surveys, Interviews, Questionnaires" > "SGRQ-C-Spanish-Guatemala- CT" . Clean Cooking Alliance. Indicators and Metrics. https://www.cleancookingalliance.org/binary-data/ATTACHMENT/file/000/000/344-2.xlsx Accessed May 2020.
15. Google Drive Folder: "SD VISta Evidence for VVB" > "Other Claims" > "ONIL Stove uses 70% less firewood - Community Development_Guatemala_Helps International" https://www.helpsintl.org/communitydevelopment
16. Google Drive Folder: "SD VISta Evidence for VVB" > "Other Claims" > "Receipts from HELPS, Cookstove Transport, Cookstove Storage, Field Team Transport.pdf" and

"Evidence of a similar stove that is more expensive - Nuestras Estufas _ ECCOMAL.pdf".' 17. Electricity-specific emission factors for grid electricity" p. 20 table: Emissions per kWh of electricity consumed (value for Guatemala) https://ecometrica.com/assets/Electricity-specific-emission-factors-for-grid-electricity.pdf. SD VISTA Calculations Spreadsheet V1.4. 18. SD VISTA Calculations Spreadsheet V1.4. Google Drive Folder: "SD VISta Evidence for VVB" > "Photo Evidence" > "Sample electric bill.jpg" 19. Google Drive Folder: "SD VISta Evidence for VVB" > "Photo Evidence" > "LED Price from Maria's notebook - WhatsApp Image 2020-05-12 at 4.23.10 PM.jpeg" 20. Google Drive Folder: "SD VISta Evidence for VVB" > "Sololá_Area.kml" 21. Devised from the data of the Population and Housing Census 2018, Guatemala. "Table A1 – Total population by sex, five-year age groups and area" Cell C16 https://www.censopoblacion.gt/explorador . Google Drive Folder: "SD VISta Evidence for VVB" > "Other Claims" > "Cuadro A1 - Población total por sexo, grupos quinquenales de edad y área" 22. Google Drive Folder: "SD VISta Evidence for VVB" > "Other Claims" > "Copy of Budget Stove Fabrication [1]" 23. Updated PD V1.4. VVB may speak with the team member responsible for the management of the savings program for further evidence if needed. 24. Updated PD V1.4 25. Updated PD V1.4. The PP can arrange for an interview between the VVB and the TAS that conducted this consultation, if necessary. 26. Google Drive Folder: "SD VISta Evidence for VVB" > "Photo Evidence" > "ICS technology exposition.jpg" 27. Google Drive Folder: "SD VISta Evidence for VVB" > "Photo Evidence" > "Example of demonstration.JPG" 28. Google Drive Folder: "SD VISta Evidence for VVB" > "M&E: Surveys, Interviews, Questionnaires" > "Template 1: Includes: Consents, Adoption Metrics, Health Survey and PPI - 2020 Información del Cliente y Visita de Sitio.pdf"
DOE assessment **Date: 21/08/2020**
The evidences provided by the PP to the audit team regarding the source of the data requested are considered complete and adequate. **Therefore, the CL is closed.**

CL ID	**02**	**Date:** 28/04/2020
Description of CL		

The PP shall clarify how the impacts due to the following contribution of the project activities can be directly attributed to a quantifiable change in the SDG indicators referred: 1. Save time for collecting firewood to the indicators 1.1.1., 1.2.1., 1.2.2. 2. Reduction of time that women spend on unpaid domestic and care work to the indicator 5.4.1. 3. The contribution nº 9 to the indicator 15.4.2.	
Project participant response	**Date: 03/07/2020**
1. According to the manufacturer "women who use the ONIL stove gained the equivalent of two days a week in time saved from gathering wood" (Helps International website page is cited below). In the past, clients have shared how freed up time from ONIL stove use has been redirected towards income-producing activities. To confirm and measure this impact, surveys and interviews designed in Kobo Toolbox include questions about who in the household (men, women, and/or children) is collecting wood and how much time they dedicate to this activity. For example, interviews of female clients ask non-leading questions about how they spend their time. Responses that indicate the ONIL stove use has saved women time that has been redirected towards an income generating activity will be included in MRs. For these clients, the quantifiable change in the SDG indicators 1.1.1., 1.2.1., 1.2.2. is measured by the PPI. We monitor whether the client has been able to generate more income due to the time saved, and whether this has impacted their poverty level over time. Survey and interview templates are included in a Google Drive Folder that is shared with the VVB. 2. Tz'utujil women are often very productive generating income through weaving, embroidering, beadwork and food preparation (for street vendors). Having an ONIL stove makes a great contribution as it reduces the time dedicated to the following unpaid domestic and care work activities. 1) Women are tasked with the care of children. With an open fire, they must constantly monitor small children to ensure they are not burned. A ONIL stove is much safer than an open fire. Cooking with the intense fire, contained in the small, enclosed combustion chamber, can even be safely attended to by a child of a certain age, allowing a woman to focus on these income-producing activities. 2) Should a child or family member contract a respiratory illness or burn themselves, the women must spend time caring for these family members. An ONIL stove eliminates these risks. Now those hours can be spent in a productive manner that brings extra income into the household. 3) For the widowed women, or women that for some reason do not have a man to collect wood on their behalf, they will spend less time collecting twigs and small branches. Again this time can be redirected. Interviews of female clients ask non-leading questions about how they spend their time. Responses that indicate the ONIL stove use has saved women time that has been redirected towards an income generating	

activity will be included in MRs. However, as the project does not have the resources to monitor the parameters necessary to directly attribute this impact to a quantifiable change in the indicator, row six of Table 1 has been changed to "implement activities to decrease".

3. The indicator 15.4.2 refers to the Mountain Green Cover Index which measures changes in the area of green vegetation in mountain areas (forest, shrubs and pasture land, and cropland). The area in which wood is extracted in the project area is a mountain area. Lake Atitlan is situated in a volcanic caldera at an elevation of 1562 meters. The highest point in the area is the peak of Volcano Atitlan, which reaches 3535 meters above sea level. Savings in woody biomass made possible by the ONIL stove slow deforestation in this mountain ecosystem, therefore, the project is implementing activities to increase the amount of green vegetation in a mountain area.

Documentation provided by project participant

1. Google Drive Folder: "SD VISta Evidence for VVB" > "Other Claims" > "Manufacturer Stats ONIL Products _ helpsintl" (https://www.helpsintl.org/onil), Google Drive Folder: "SD VISta Evidence for VVB" > "M&E: Surveys, Interviews, Questionnaires" > "Template 1: Includes: Consents, Adoption Metrics, Health Survey and PPI - 2020 Client Info and Site Visit" and "Template 2: Female Empowerment Questions - within 2020 3rd Visit (3).pdf"
2. Google Drive Folder: "SD VISta Evidence for VVB" > "M&E: Surveys, Interviews, Questionnaires" > "Template 2: Female Empowerment Questions - within 2020 3rd Visit (3).pdf" and "Guatemala-PPI-2014_TarjetaPuntuacionTablaDeProbabilidades.pdf"
3. http://www.fao.org/sustainable-development-goals/indicators/1542/en/

DOE assessment	**Date: 21/08/2020**

The PP has clarified correctly how the impacts due to the contribution of the project activities can be directly attribute to a quantifiable change in the SDG indicators referred.

Therefore, the CL is closed.

CL ID	**03**	**Date:** 28/04/2020

Description of CL

The PP shall clarify the reason because the project activity 2 includes only 700 improved stoves when the PD indicates that the organization assumes responsibility for the

maintenance of more than 1000 legacy stoves, installed under the Cojolva Association of Maya Women Weavers before September 2018.

Project participant response	**Date: 03/07/2020**
All legacy stoves are eligible for an energy efficiency improvement, however TRL estimates it can complete about 100 a given year in normal circumstances. Specific numbers regarding the legacy stoves were removed from the updated PD to avoid confusion. Actual energy efficiency improvements are subject to several factors, most significantly, potential participants' ability and desire to complete the Q60 payment of the combustion chamber. MRs will reflect true achievements based on the actual number of energy efficiency improvements completed.	
Documentation provided by project participant	
Updated PD V1.4	
DOE assessment	**Date: 21/08/2020**
The PP has provided proper information to clarify the reason because the project activity 2 includes only 700 improved stoves **Therefore, the CL is closed.**	

CL ID	**04**	**Date:** 28/04/2020
Description of CL		
The PP shall provide evidence that the St. George's Respiratory Questionnaire, designed by St. George's University in London, England, has been approved for randomized controlled therapy trials as well as population surveys. On the other hand, the PP shall clarify if the "prior" and "post" version surveys are conducted for each additional instance of the project activity 1 and the project activity 2, or only for the project activity 1.		
Project participant response		**Date: 03/07/2020**
The St. George's Respiratory Questionnaire website states: "The SGRQ has been used in a range of disease groups including asthma, chronic obstructive pulmonary disease (COPD) and bronchiectasis, and in a range of settings such as randomised controlled therapy trials and population surveys." Footnote 3 citing this website has been added to the updated PD.		

Text added to the updated PD to clarify that the “prior” and “post” versions are conducted for each additional instance of only project activity one, one year apart.
Documentation provided by project participant
Updated PD V1.4, section 2.1.2, http://www.healthstatus.sgul.ac.uk/sgrq

DOE assessment	**Date: 21/08/2020**
The evidence provided by the PP and the information included in the updated PDD have detailed properly the clarification requested. **Therefore, the CL is closed.**	

CL ID	**05**	**Date:** 28/04/2020
Description of CL		
The PP shall clarify if the TRL’s ONIL stoves are a standard design or if they are customized the specific requirements based on the beneficiaries’ needs and provide the manufacturer spefications.		
Project participant response		**Date: 03/07/2020**
Text is added to the updated PD to clarify that the design is standard, however cookstoves are manufactured in-country, and thus customized by the manufacturer to suit the needs specific to families in rural Guatemala. These needs are in line with the needs of the beneficiaries.		
Documentation provided by project participant		
Updated PD V1.4, section 2.1.2		
DOE assessment		**Date: 21/08/2020**
The updated PDD included proper information to clarify that the cookstoves are a standard design of the manufacturer and it is consistent with the information obtained from the manufacturer.		

CL ID	06	Date: 28/04/2020
Description of CL		

The PP shall provide the evidence of the following milestones in the project's development and implementation included in section 2.1.3.:

1. Register of TRL as a registered Guatemalan nonprofit on 21 September 2015.
2. TRL as an organization installs its first ONIL stove on 30 May 2016.
3. TRL assumes responsibility for the maintenance of 1,355 legacy stoves, installed under the Cojolya Association of Maya Women Weavers, on 30 May 2016.
4. TRL applies and is approved for collaboration with Princeton in Latin America in June 2016.
5. TRL sends in October 2017 final grant report to Journey Latin America detailing project activities concluding five-year grant cycle.
6. A $14,000 unrestricted donation is made to support operating costs of TRL in January 2018.
7. TRL is accepted into Verra's Sustainable Development Verified Impact Standard (SD VISta) pilot project in February 2018.
8. TRL accepts first Princeton in Latin America (PiLA) fellow for 2018-2019 cycle in July 2018.
9. Project Start Date on 01 September 2018: Project Activities commence with a new series of ONIL stove installations and energy efficiency improvements in existing biomass-fired cookstoves under the new, Improved Cookstove Project. TRL also begins the distribution of British Berkefeld water filters as an additional project activity.
10. Implementation of digital survey system begins with mobile platform KoboToolbox in November 2018.
11. A $30,000 unrestricted donation is made to TRL to benefit stove project on 19 February 2019.
12. A $10,000 unrestricted donation is made to support operating costs of TRL in March 2019.
13. Seattle International Foundation (SEAIF) and TRL begin coordinated partnership enabling TRL to use SEAIF as a fiscal agent, thus expanding institutional funding access in March 2019.
14. TRL receives an in-kind donation of 100 LED light bulbs and completes its first installation in a beneficiary's home, commencing the start of a 4th project activity on 24 October 2019.
15. TRL receives first institutional grant since founding in June 2020 – monthly ONIL stove installations increase.

Project participant response	Date: 03/07/2020

Evidence of the listed milestones has been added to the SD VISta Evidence folder and made available to the VVB. Directions for how to locate each piece of evidence is in the box below.

1. See SD VISta Evidence folder
2. Milestone on 30 May 2016 is removed from the PD to avoid confusion.
3. Milestone on 30 May 2016 is removed from the PD to avoid confusion.
4. See SD VISta Evidence folder
5. See SD VISta Evidence folder
6. See SD VISta Evidence folder
7. See SD VISta Evidence folder
8. See SD VISta Evidence folder
9. Per the SD VISta standard V 1 section 2.1.4 the project start date is "the date on which activities that lead to the generation of sustainable development benefits are implemented". For cookstoves, this would constitute the commissioning of the first instance under that project. The first cookstove of the TRL Improved Cookstove Project was installed in September of 2018 as evident in the client database. The client database does contain legacy stoves which were installed under previous projects. These are clearly documented in a separate tab "Non VCS". The most recent, the Journey Latin America (JLA) Stove project installed it's final stove on 21st of February of 2018. Correspondence between the PP and JLA document the final piece of funding disbursed in July of 2017. The final grant report was written in September of 2017. Careful use of funds allowed to project to continue operating until February of 2018. In April of 2018, a donation was made. This donation was raised by TRL to finance VCS and SD VISta related expenses. These funds allowed for the initial purchase of stoves made on August 30 and energy efficiency improvements to be completed in addition. These funds kickstarted the new, Improved Cookstove Project, with the intention that generating carbon offsets and SD VISta assets would enable the project to continue to be financially viable. The client database clearly demonstrates the close of the JLA stove project (in the "Non VCS" tab) and the beginning of the TRL Improved Cookstove Project (in the "New VCS" and "Improved VCS" tabs). All cookstoves included in the project are marked with a TRL logo. Cookstoves previously installed under JLA do not contain this logo. The first water filter that was distributed after the project start date was distributed on May 17, 2019. PD is updated to include this clarification as a separate milestone.
10. The tablet purchased to administer Kobo Toolbox was purchased in August of 2018. A trial and training period followed. Full implementation of the digital survey system with Kobo Toolbox did not begin until November of that year.

11. The $30,000 and $10,000 donations were distributed to TRL in the form of a grant from Greater Good. The grant award letter is made available to the VVB.
12. The $30,000 and $10,000 donations were distributed to TRL in the form of a grant from Greater Good. The grant award letter is made available to the VVB.
13. Upon closer review of correspondence between SEAIF and TRL (made available to the VVB), SEAIF offered TRL the opportunity to pursue a partnership in an email delivered on February 18, 2019. The PD has been updated accordingly.
14. TRL received an in-kind donation of 100 LED light bulbs on October 16 (see delivery receipt). The client database indicated TRL completed its first installation in a beneficiary's home on 24 October 2019. PD was updated to refer to the month of October in 2019 to encompass both components.
15. The SD VISta template instructs the PP to include planned dates and milestones, where available. At the time of the first draft of the PD, TRL had been verbally offered a grant from a foundation, with funds expected to be delivered mid 2020. The foundation later was forced to limit spending due to the economic implications of the COVID-19 pandemic. Milestone has been removed from the updated PD.

Documentation provided by project participant

1. Google Drive Folder: "SD VISta Evidence for VVB" > "Milestones" > "Inscripcion de la Asociacion Tu'ik Ruch Lew con el Gobierno Guatemalteco.pdf"
2. Updated PD V1.4, section 2.1.3
3. Updated PD V1.4, section 2.1.3
4. Google Drive Folder: "SD VISta Evidence for VVB" > "Milestones" > "PiLA Correspondence.png"
5. Google Drive Folder: "SD VISta Evidence for VVB" > "Milestones" > "Correspondence JLA.png" and "Asociacion Rtui'k Ruch'lew financial 3rd quarter report for 2017 (2)"
6. Google Drive Folder: "SD VISta Evidence for VVB" > "Milestones" > "CONFIDENTIAL_GYT Continental Bank Statement"
7. Google Drive Folder: "SD VISta Evidence for VVB" > "Milestones" > "SDVISta Acceptance - Tuik Ruch Lew _ Helping the Earth Mail - Fwd_ Tuik Ruch Lew -- Helping the Earth, SD VISta pilot application.pdf"
8. Google Drive Folder: "SD VISta Evidence for VVB" > "Milestones" > "PiLA Fellow Begins News Post.pdf"
9. Google Drive Folder: "SD VISta Evidence for VVB" > "Milestones" > "Correspondence JLA.png," "(4) Asociacion Rtui'k Ruch'lew financial 3rd quarter report for 2017," "CONFIDENTIAL_GYT Continental Bank Statement January 2018..pdf," "05 Stove Purchase August 2018 5.pdf," and Client database

10. Google Drive Folder: “SD VISta Evidence for VVB” > “Milestones” > “Proof of Tablet Purchase.pdf”
11. Google Drive Folder: “SD VISta Evidence for VVB” > “Milestones” > “Tuik Ruch Lew-GGO Grant.pdf”
12. Google Drive Folder: “SD VISta Evidence for VVB” > “Milestones” > “Tuik Ruch Lew-GGO Grant.pdf”
13. Google Drive Folder: “SD VISta Evidence for VVB” > “Milestones” > “Correspondence - SEAIF.png”
14. Google Drive Folder: “SD VISta Evidence for VVB” > “Milestones” > “Delivery Receipt LED.jpeg”, Client Database, Updated PD V1.4, section 2.1.3
15. Updated PD V1.4, section 2.1.3

DOE assessment	**Date: 21/08/2020**

Evidence of the listed milestones provided justify correctly the different milestones indicated in the updated PD.

Therefore, the CL is closed.