CLEAN BURNING STOVE PROJECT

1. Institutional Profile and Facts:

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1.5 ProPeru is the NGO sister organization of ProWorld. ProWorld finances all ProPeru program components. ProWorld is a project driven organization. While our volunteers make these projects possible, we put the projects and community needs first. Our priority lies with the sound assessment and execution of community development projects. We prioritize sustainable development projects that fall under the following three portfolios: health, environment, and social and economic development.

2. Project Name: Clean Burning Stove Project

3. Antecedents:

3.1 There exists a great need to protect the natural areas of the Sacred Valley proximate the Historic Sanctuary of Machupicchu. For this ProPeru has taken the initiative to execute a program oriented at protecting and restoring the areas that are considered the last natural forests of the Valley including the forests of Polylepis that are considered some of the tallest in the world, with the great majority located in the river basins, in close location to the mountain glaciers that nourish the water and that have become the last natural refuges in the zone. In actuality they are more vulnerable due to the presence of unplanned social and economic activities of its population. Unfortunately the protection of this forest has not been considered a high priority of the local government and governmental institutions.

3.2 The protection and reforestation of the endangered forests in the Sacred Valley are addressed by the following range of ProPeru environmental initiatives:

• **Construction of Multipurpose Ecological Houses**

- All constructions will be based primarily on *faenas* or community work days where community members organize and come together to participate in a project or activity that will directly or indirectly improve their daily lives. In addition, the constructions will be in accordance with the ProPeru Collaborative Development Model, where community beneficiaries alongside ProPeru staff and volunteers participate together in the actual labor required of the construction.
- Construction designs will be based on the influential architecture of the Incas.
- Communities will contribute materials as well as labor to the constructions.
- The benefits will be for the communities.
- Possible uses of the ecological house can include investigation, education, security, and ecotourism.
- ProPeru constructed their first ecological house in Februray of 2004 in the community of San Isidro de Chicon in the province of Urubamba. The house is referred to as "Canpanchuyuq".

• Clean Burning Stove Project

ProPeru originally received funding for this project by the Rotary Club of Buffalo Grove, Illinois. Since that initial funding, ProPeru has funded the innovation of the stove design as it has passed through 4 years of field testing and improvements. Some direct health and environmental benefits include:

-An estimated savings in consumption of wood that ranges between 20% and 50% depending on the traditional stove the family beneficiary is using.

- Improved health for the people that cook that no longer have to respire smoke because of the installed stove and chimney.
- Savings in man labor.
- Improved Personal hygiene and comfort.
- Finance in totality the cost of the traditional stoves for the family beneficiaries, in exchange ProPeru would plan one or two days of reforestation in the area in which all community members would participate in those activities.
- ProPeru has installed 90 stoves in the community of San Isidro de Chicon.
- ProPeru has installed 233 stoves distributed amongst the communities of Huayacari, Pucara, and Wakawasi between September and November of 2004.
- ProPeru has been committed to installing an additional 450 traditional stoves in seven new Sacred Valley communities. To date approximately 2,000 stoves have been installed.

• Environmental Education

A long term goal is to implement a standardized environmental awareness program in all educational institutions in the zone in which all children of all scholarly levels would visit the natural forests with the objective of familiarizing themselves with the ecological diversity, problems that afflict the forests and the potential resources they offer with the goal of developing an appreciation and respect for the natural forests which would indirectly encourage them to put into practice ecologically safe practices. Initially the environmental education program was developed with the participation of ProPeru staff and volunteers gradually educating and training local professors.

-ProPeru has executed guided educational visits to local natural areas with children and professors from the following educational centers in the province of Urubamba: 711, 712, Huayocari, Colegio Agropecuario Urubamba, San Isidro de Chicon, and Palqaraki.
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• Reforestation

As a permanent activity with the objective of reforesting the natural forests with native species, native fruits, and some exotic species for communal use, ProPeru is planting trees in the zone in an effort to strive towards reducing the environmental effect that the inhabitants of the zone are having on the local forests. Some reforestation activities considered by ProPeru are the following:

- Determine exact areas of reforestation in the Sacred Valley
- Construct communal tree gardens for communities and schools.
- Develop a calendar of reforestation.
- Reforest the local zone with community, student, and volunteer participation.
- ProPeru has initiated reforestation efforts around the ecological house referred to as "Qanpanchuyuq" in the community of San Isidro de Chicon with ProPeru staff and volunteers as well as children and professors from local educational institutions. ProPeru and the community of Chicon have proposed to reforest a minimal of 50 hectares of land in the community. ProPeru has also constructed a tree nursery in the community of Chicon with the participation of the youth that produces several varieties of delicious South American fruit.

• Environmental Investigation

Investigations that can be coordinated in alliance with national universities, students, scientists, and foreigners interested in the preservation and conservation of the area are considered some of the following:

- Realizing inventories of biodiversity
- Scientific studies and inquiries of diverse themes that would contribute to increasing the knowledge about the local natural areas.
- Installation of meteorological stations
- Zoning the area (determining untouched areas, the areas for extraction of firewood, pasture areas, areas for ecotourism etc.)
- Sustainable management of the wild flora and fauna.
- Determining a strategic plan for preservation and restoration of the forests and repopulation of the wild fauna that could potentially provide future generations with economic resources.

• Ecotourism

Incorporate this new activity in the communities as an alternative activity for generating economic resources without deteriorating the local forests. Ecotourism efforts consist of the following:

- Forming ecotourism business ventures in the local communities.
- Training local community members to become tourist guides.
- Provide classes and workshops in the instruction of foreign languages to community members.
- Identify and determine routes that contain natural protected areas that tourists can visit.

- ProPeru has organized and continues to work developing the first ecotourism business in the community of San Isidro de Chicon with the participation of the youth in the community. In the province of Calca, ProPeru is also working in coordination with the Municipality of Calca in developing an ecological business that could lead treks to and work to preserve the mountain of Pitusiray.

4. Executive Summary of Stove Project:

4.1 ProPeru acknowledges that a majority of the rural agricultural population in the province of Urubamba do not have an adequate traditional stove to prepare their food. They frequently cook in precarious conditions inhaling large quantities of smoke. This population does not live in sanitary conditions, have adequate housing infrastructure, nor fulfill their basic needs. Social and economic indicators of development consider these rural agricultural populations to be living in conditions of poverty and extreme poverty.

4.2 ProPeru has perceived the need to assist in the implementation of improved traditional stoves that would expend less wood and include chimneys which would diminish the amount of smoke inhaled, improve personal hygiene and be overall more economical.

5. Stove Project Justification, Local Objectives, and Goals:

5.1 The Sacred Valley of the Incas is not only distinct for its historical and cultural legend, but for its rich flora and fauna as well which has drastically declined as a result of its human inhabitants in the zone because it has considered forest wood as a principal source of energy for cooking food. Their has been an irrational degradation of such diversity of forests such as Chachacomo, Alizo, Queña, and Ucna which protect the habitat of animals and birds in the zone. Simultaneously the population that uses this forest food for cooking have precarious stove constructions that inefficiently consume energy. The design of the traditional stove does not allow adequate ventilation and individuals involved in cooking suffer from inhalation of toxic and harmful smoke that can be injurious to one's health. For this reason ProPeru Service Corps, with its support from our volunteers and the original donation from Rotary Club implemented the project of clean burning stoves that will directly benefit rural agricultural families living in the province of Urubamba.

5.2 Improve the quality of life of the rural agricultural communities of Urubamba and preserve the flora and fauna in the zone aiming towards a more sustainable consumption.

5.3 Provide training, support and assistance in the installation and maintenance of the improved clean burning stoves with the staff and volunteers of ProPeru Service Corps.

5.4 The project has a goal of implementing a clean burning stove in the home of 1013 family beneficiaries and 10 educational institutions, prioritizing the families that live in close proximity to natural forests.

6. Stove Project Prepares for National Scale Up

6.1 In the summer of '07independent studies were performed by both the Pan American

Organization for Health(PAHO) and representatives from the Center for Global Health at the University of Colorado. Both studies corroborated the effectiveness of the ProPeru stove design, with PAHO choosing to contract ProPeru partner with them in a 3,500 stove installation campaign in the Departments of Cusco and Puno.

6.2 Other supporting stakeholders, include the executive office of the Peruvian Government, heading up the program, Juntos, who have committed logistical support to the project.

6.3 Finally, funding for a million stove launch is seen as within our reach via subsidies found through the voluntary carbon offset markets. Offestters.ca is currently performing its due diligence in order that it might certify the carbon offset produced by each stove installation. It is currently estimated that each stove generates approximately 1 ton of CO2 offsets with an approximate market value of 7-13 USD. With the cost of the stove under 15 USD, ProPeru is currently seeking to close the gap on the funding deficit via contributions from multinational development organizations.