

**ECO-FRIENDLY STOVE PROJECT  
NUEVO SAN CARLOS, RETALHULEU**

**1. Background and Justification**

Open fire cooking is a common practice in Guatemala, almost in every rural community you will find this kind of cooking setup. Where the house and person cooking are surrounded by the smoke created in the open fire. Exposure to smoke from open fires within a home has been shown in several studies to be one of the leading causes of respiratory illness.

Most of the substances contained in the smoke emitted by biofuels (coal, firewood, crop residues, animal manure, etc.) can harm human health, the most important particles being: carbon monoxide, nitrous oxide, sulfur oxides (mainly in coal), formaldehyde, and polycyclic organic matter (often causing cancer).

Particles whose diameter is less than 10 microns, mainly those with a diameter less than 2.5 microns, can penetrate deep into the lung tissues and are those that cause the greatest damage to health. See the photo below to understand the damage and danger that this type of cooking method represents.



This project aims to solve this problem with the installation, training, and follow up; of the eco friendly ONIL stoves. This stove has a very efficient combustion chamber which allows and efficient flow of heat, while keeping the smoke contained and then expelled by a chimney. Some of the advantages are the following:

- Reduction of up to 70% in the consumption of firewood, thus helping to conserve the forest.
- Saves time and money, as the consumption of firewood is reduced, less time is spent collecting or money to buy it.
- Reduces eye irritation or respiratory illnesses by eliminating kitchen smoke.
- Increases self-esteem and empowerment of women.
- Long-lasting, using it properly and providing it with good maintenance, it can last more than 20 years.
- It can be installed in just 40 minutes and can be used immediately.

**2. Goals**

To install 150 stoves in the community of Nuevo San Carlos Retalhuleu, using a Global Grant as a tool to finance 70% of the cost of each stove. And leaving the remaining 30% to be covered by the community and beneficiaries via community work (which the local government and private industry will compensate by paying the 30%). This way we ensure that the beneficiaries not only appreciate the stove but will put it to use.

**3. Reach**

The stove Project aims to help over 150 families, or around 750 people. Helping them save money and time on firewood recollection, promoting better health for the whole family by eliminating the smoke inhaled. All of this while helping the environment whit fewer felling of trees, and a lot less smoke production.

**4. Budget**

COST PER STOVE	QUANTITY	TOTAL COST
\$ 180.00	\$ 150.00	\$ 27,000.00

BUDGET BREAKDOWN	
ROTARY FOUNDATION AND PARTNER CLUBS	\$ 18,900.00
BENEFICIARIES AND LOCAL AUTHORITIES	\$ 8,100.00

The cost of each stove includes the training, maintenance, mapping and follow up of each one installed. That way the investment made will be working for several years.

**5. Projection**

We have installed 2 stoves, one in a school kitchen we have just finished, and the other one with a community kitchen that prepares food for 40 – 50 a time as a business. These stoves will help us spread the word out and elaborate the beneficiaries list, as we want to help only those who really want it that way ensuring the sustainability of the project.

