

Tegucigalpa is the capital of Honduras. The city was built in a bowl-like valley, as population increases, communities are built precariously into the steep slopes.



Honduras Fuel-Efficient Stoves Help Protect Forest and Family Health

By Claudia Menendez

In the Central American country of Honduras the capital city is located in a deep valley where it is surrounded by rolling hills. The hillsides near the city were covered with mahogany and pine trees decades ago, but since then most of the trees have been cut down to make room for new communities and also cut down for cooking fuel.

Some of these new communities are located on the highest parts of the hills making them difficult to access, and therefore often exist without any running water,

sewage, electricity, or telephone lines. Aside from lacking basic services like potable water these communities are also threatened by land erosion due to the fact that they live on unprotected, steep hillsides. Since the majority of the trees were cut down the landscape is bare and the heavy rains can cause great damage, as there are not enough plant or tree roots to absorb the plentiful rainfalls.

Doña Gabriela making tortillas

Doña Gabriela is a single mother of four girls ages 25, 22, 13, and 12 and has three small grandchildren. They all live in a simple two-room house made of wooden boards and a tin roof weighed down by rocks on a hillside community called Buena Vista, which means nice view.

To make a living Doña Gabriela and her oldest daughter devote their time to making tortillas, which is like a flat and thin pancake made out of corn. Tortillas are a staple of the Honduran diet and people eat them with their breakfast, lunch, and dinner. Since they are so popular Doña Gabriela and her daughters are very busy keeping up to demand.

In the early morning smoke filters out from between the boards of the kitchen. Inside and out the walls are blackened from years of soot build-up. The kitchen is filled with smoke and the thick smell of burning wood as the stove is lit to prepare for the day's work. The dried corn is boiled with lime the day before and in the morning one of the youngest daughters balances a large pail of cooked corn on her head and walks



In a two-room house...

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to the mill where the corn is turned into dough.

While the corn is milled the oldest daughter lights the stove so the grill is hot, hot, hot by the time the dough returns. Once the stove is ready and the dough has been kneaded then begins the long process of palming the dough into flat, thin circles that are put to cook on the grill. Each one takes less than a minute on each side and will puff up when it's ready.

They make tortillas in the morning and the late afternoon. They sell 3 tortillas for 1 Lempira and on average make 220 Lempira a day. This means they spend most of their day over the hot stove making 660 tortillas, the equivalent to 30 lbs of corn. Doña Gabriela used to cook on a stove made out of a barrel. It had a metal shelf to hold the firewood and no chimney so the kitchen was always very hot and smoky. This old stove burned a lot of fuel, as the stove was really just a hollow barrel with the lid as a grill and burned a ferocious, wild flame

that always seemed to burn more on the outside than the inside of the stove.

As you can imagine there are a number of negative aspects to cooking with this type of open flame stove. One of the negative sides is the damage to the health of the cooks and anyone in the kitchen, as they are forced to inhale the smoke and feel the heat bellowing from the stove.

Exposure to this situation can be dangerous for children, as many have been badly burned by the heated barrel walls or from the escaping flames. Other effects are pulmonary (lung) infections and irritation of the eyes caused in adults and children by the heavy smoke. These infections can be very harmful and expensive to treat.

These stoves also have a negative impact on the forests as the more wood that is burned in inefficient stoves the more trees that will be cut down. Lastly from the economic perspective these inefficient stoves mean spending more money on fuel for families already on a tight budget.

WORKING TOGETHER

New Brunswick youth travel to Tegucigalpa

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A group of youth from Carleton County, New Brunswick and Falls Brook Centre worked to help Doña Gabriela with a donation to build her a fuel-efficient stove. The new stove is made of bricks, has a chimney, a

special combustion chamber, or fire box, that burns an intense hot, contained, clean fire of wood or any dried vegetable matter such as pine cones, and is insulated with ash to keep the stove's outer walls from heating

up.

The fuel-efficient stove has many benefits. It improves family health by eliminating all smoke from the kitchen or cooking space. It also reduces the amount of wood-fuel burned, which in turn means savings for the family.

In Doña Gabriela's case she used to spend 25 Lempira daily on wood. Now she spends 15, saving her 300 Lempira monthly. With these savings she can more easily pay for her two youngest daughter's schooling.

Finally from an environmental standpoint the fuel-efficient stoves are very beneficial helping to reduce the amount of wood burned and this helps to conserve Honduran forests reducing the environmental impact while at the same time bringing awareness to families and communities about how to better manage and conserve one of the most important natural resources- our forests!

Discussion Questions

Curriculum Connection Environmental Science 122/123. Introduction Unit: Lifestyles and Sustainability and Sustainable development Unit. World Issues 120: The future of the global community Unit

1. What are needs and wants? List specific examples in your life.
2. How is the satisfaction of human needs affecting the environment in this story? What particular solution is given to combat environmental degradation and health issues for the person described in the narrative? Can you think of any particular needs or wants you have that have an impact on the environment or your health? What measures can you apply to diminish that impact?
3. In Atlantic Canada, many people use wood to heat their home. What is being done to increase fuel-efficiency in Canada?
4. In your opinion, what are the main factors that contribute to a good quality of life? How did the fuel-efficient stove improve Dona Gabriela's quality of life?
5. Imagine you are part of a youth group from Carleton County that went to visit Dona Gabriela with a donation to help her build a fuel-efficient stove. Write a short story about the imaginary visit and how it changed your world view.

