

## Solar Bakery in Burundi

by R20 / ⌚ 2016-09-29 11:35:33 / France / 👁 6348 / 🇪🇺 EN



Installation du four sur le site de la nouvelle boulangerie

**Builder**

Sun Oven

**Year of commitment** : 2015

**CO2 Impact** : 277 Tons of CO2 avoided / year per oven

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## GENERAL INFORMATION

The case study illustrates the implementation of two solar ovens in the outskirts of the second largest city of Burundi, Gitega. The solar bakery project aims to create sustainable jobs and lead to empower women entrepreneurs. This initiative reduces their vulnerability to the poverty they face.

Another objective is to reduce greenhouse gas emissions and deforestation.

The solar bakery project is an initiative designed by the R20 and CIRID (Independent Centre for Research and Initiative for the Dialogue) to provide two solar ovens to a small bakery employing 13 women marginalized in their communities. The funding for this project was supplied by R20 through a grant from the Partnership of Energy and Environment of the Eastern and Southern Africa (EEP S&EA).

Before the arrival of solar ovens, bakery was working with the firewood to produce bread. The bakers were exposed to large amounts of smoke endanger their health. Moreover, the already high price of wood continued to increase. These cost increases have forced bakers to close temporarily and eventually relocate in a more favorable area.

### Progress Status

Delivered

### Data Reliability

Self-declared

### Funding Type

Private

### Website Enterprise / Infrastructure

<http://www.sunoven.com/products/>

### Sustainable Development

### Attractiveness :

Each oven has a cooking capacity of 500 loaves a day and allows users to save 150 tons of firewood annually, which annually results in a reduction of approximately 277 tonnes of greenhouse gas emissions.

In Gitega, the bread produced by the ovens is 30% cheaper than the usual bread sold elsewhere.

The bakers earn 30% more than they earned when they worked as laborers farm during the temporary closure of the bakery.

### Well Being :

The findings of the qualitative survey reveal that bakers are generally happy to work in the bakery now because they are not exposed to harmful smoke from the use of the oven interior firewood.

The bakery also appreciate not to have to walk long distances to collect wood.

### Social Cohesion :

Thanks to training on trade and marketing basics provided by the project partners, employees have strengthened and continuously developing their skills. This will undoubtedly be beneficial for them in the management of the bakery and at any other post employment.

Moreover, by encouraging and supporting the bakery to take over operation of the bakery, the partners have laid the foundation for a sustainable business that will extend beyond the completion of the project, agreed to end July 2015.

### Preservation / Environmental Improvement :

Since the Burundi joined the Kyoto Protocol in 2008, the country has developed the First (2007) and Second (2010) National Communication on Climate Change, a National Action Plan on Climate Change Adaptation Policy and Strategy on Climate Change.

These reports highlight the following points:

- Burundi became more vulnerable to droughts, floods and landslides.
- Poor socioeconomic conditions hamper Burundi's ability to fight against climate change.
- Wood is the most consumed energy resource.
- The innovations on renewable energy (solar, wind, biogas) are underdeveloped.
- Hydroelectric power is a promising energetic source.
- The implementation of solar technology would be beneficial and effective.

As part of this project was extended beyond the distribution of solar cookers and reduce environmental damage local (deforestation) to improving health, improving livelihoods and

improving the professional development of women employed in the bakery.

## Testimony / Feedback

### Governance

R20 & CIRID

Sun Oven

**Builder Type :** Other

Once the solar ovens were installed in the new bakery, bakers followed a course of two weeks training on the use of ovens, on trade management (accounting, planning, strategy, etc.) and on marketing .

All bakers then elect a baker who is in charge of bakery management, which monitors and controls sales and expenses. The CIRID team also collects data and monitor progress.

The project partners, the R20 and the CIRID, involved the bakery early on organizing participatory consultation meetings to identify their needs and to communicate the plans of the new solar bakery. Regular meetings with the beneficiaries allowed the partners to find answers to their concerns as they arise.

### Sustainable Solutions

Sun Oven ▢

**Description :**

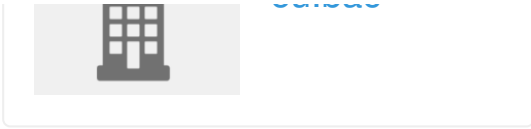
The technology used is called "*Villager Sun Oven*", manufactured by a company based in the US, called "*Sun Oven International*". The Villager Sun Oven is designed with the following characteristics: resistance and easy use. Its large capacity is able to adapt to changing weather in swivel to face the sun. It is also accompanied by a propane storage system that can be used in case of rain. In other words, the oven can be used whatever the weather. The furnace is mounted on a trailer, making transportation easy and folding reflectors allow storing it safely.

- Renewable energies
- Low-carbon materials/ infrastructure

<https://www.sunoven.com/sun-cooking-usa/benefits/>

Company (es) Website :



Company (es) Website :



## Contest

### Reasons for participating in the competition(s)

#### Building candidate in the category

Coup de Cœur des Internautes

Grand Prix Infrastructure Durable