



## Hybrid Solar Oven : Burkina Faso

Saving wood resources by using solar-power ovens

### Project description

The “Hybrid Solar Oven” is a large-capacity hybrid oven that uses solar and gas-fired power. This saves valuable wood resources and reduces emissions of greenhouse gases. The aim is to create income for the rural population by promoting the benefits of switching from wood to solar power for baking and roasting.



### Business model

The ovens are heated by a 16m<sup>2</sup> solar dish and, if supplementary power is required, by a gas burner. This innovation, developed by the clean-tech company ISOMET, enables economically viable production at all times. The oven will be distributed through local women's cooperatives by means of a franchising network.

ISOMET will train the women and be responsible for installing the ovens, providing technical assistance and supplying raw materials to franchisees.

### Scaling up activities in 2012

- Improve the design of the product and explore possibilities for linking it to biogas digesters to ensure a continuous supply of power
- Design and develop special new food products that can be produced using the ovens
- Establish two to three pilot bakeries in Burkina Faso
- Define the terms and conditions of the franchise concept and initiate negotiations with women's associations

### Immediate needs

- Financial support for installing a large demonstration bakery in Ouagadougou
- Technical support for carrying out product improvements
- Technical support for developing and improving additional components of the bread production process (bakery moulder, mixer)
- Expert support in developing bread baking processes and new food products





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### Partnership

- **ISOMET** a clean-tech company, is lead partner and initiator of the project, responsible for management
- **Solarfood Networ** an international NGO, promotes the initiative through its worldwide network, as well as providing financial support
- **The SNV Netherlands Development Cooperation** provides technical assistance



### Social, environmental and economic impacts

**Social impact:** The franchise network creates jobs and generates income for women in rural areas. These women also benefit from technical and management training. One oven provides income for at least three people in one village. Furthermore, households enjoy greater purchasing power thanks to the reduction in the price of bread, and improved living conditions due to the more hygienic method of food processing.

**Environmental impact:** The innovative technology is environmentally friendly, reducing the level of CO<sub>2</sub> emissions (by substituting wood burning) and also the

consumption of fossil fuels. One hybrid solar oven can save up to 40 kg of wood being burnt per hour. In addition, bread which was previously transported to the village is now produced locally, thus reducing emissions from transportation.

**Economic impact:** The initiative aids local economic development. It also creates further opportunities for income-generating activities related to food processing. For example, using the hybrid solar oven conserves shea trees, which in turn increases the harvest of shea fruit that can be sold.

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### SEED Partners

SEED's founding partners are the United Nations Environment Programme (UNEP), the United Nations Development Programme (UNDP); IUCN (International Union for Conservation of Nature) and SEED is hosted by UNEP-WCMC. Other current partners are the governments of Germany, India, the Netherlands, South Africa, Spain, the United Kingdom and the United States of America; the European Union; Conservation International; and SEED's corporate partner, Hisense.

### About the SEED Initiative

The SEED Initiative identifies and supports promising small scale social and environmental entrepreneurs around the globe, entrepreneurs that while working towards a greener economy also tackle poverty, marginalisation and social exclusion.

SEED provides these social entrepreneurs with know how and networks, taking the lessons learnt at local level up to decision-makers to promote evidence-based policy making.

More information: [www.seedinit.org](http://www.seedinit.org)

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