



PREP

Promotion of Resource
Efficiency Projects

PREP Topic: Renewable Energy in the Food Supply Chain

Background:

Household end-uses like cooking are among the main sources of energy consumption in developing countries. In rural areas of most developing countries cooking is usually done on open fires fuelled by wood. In cities, stoves are more common, fuelled by wood, charcoal or kerosene. In most regions, oil-derived fuels are expensive, and wood-based fuels are becoming increasingly scarce as rising demand leads to deforestation and therefore to decreasing supply. Cooking requires a lot of energy and about 50-70% of worldwide wood use is used for cooking. Next to household end-uses also food vendors, bakeries or breweries contribute to the consumption of fuelwood. Large positive effects may therefore be won with effective and successfully implemented measures regarding energy use in the food supply chain.

Improved cooking stoves are a first step. These would reduce the use of firewood drastically, as well as help reduce indoor air pollution. Another possibility is to use alternatives to traditional fuels, such as household devices that run on solar power or biofuels. Particularly in countries with a high solar radiation level, solar technologies can greatly assist sustainable development in communities. A further possibility would be to replace kerosene with biofuels.

In addition to cooking, there are other stages in the food supply chain that can run on renewable energy, such as storage devices or food dryers. Drying is the most widely used method for preserving foods for home use or for sale, yet it is very energy intensive. Using solar dryers would lower post-harvest losses and rural farmers would be able to sell their produce at market when prices are higher.

Cultural, architectural, climatic and economic factors play a primary role in what a household expects from its cooking, storage or drying system. When a device gains acceptance by households, the benefits of using renewable energy sources in the food chain are numerous: deforestation is reduced, health risks from indoor pollution are lowered, and local economic activities gain valuable support, which assists sustainable development.

In this context, WISIONS is looking for examples of good practice in the use of renewable energy in all parts of the food supply chain and invites the submission of examples of good practice.

Fields of interest include:

- cookers, ovens, storage devices, dryers
 - o run by solar power
 - o run by biogas
 - o run by other renewable energy sources
- projects on household-level or on company-level