

## SOLAR FOOD WORLDWIDE AND ITS POTENTIAL IMPACT ON TERRITORIAL DEVELOPMENT

Solar food technologies are increasing their impact all around the world. The use of clean energy in food production and conservation has become a matter of importance in an international context marked by issues of environmental sustainability, the need to reduce energy dependency from traditional sources and to preserve natural resources such as wood used for cooking, thus reducing deforestation.



Research to develop and produce solar food products and technologies is a cross-cutting interest in many countries. The products of this research are used by institutions of the interested nations to promote sustainable development policies, by environmental and international cooperation organizations and by citizens interested in adopting environmentally friendly ways of life.

China, for example, is managing a national impact country strategy for using solar cooking technologies in rural areas. Over two million people benefit from receiving and using 500,000 parabolic solar cookers. The thermal efficiency of the solar cookers averages 65% compared with 12.3% for traditional unimproved coal fires. It is estimated that solar cooker use has reduced emissions equivalent to taking 200,000 automobiles off the road. Manufactured locally at a unit cost of \$44 USD, the cookers require no externally sourced parts, and components are recyclable.



The [Solar Cookers International Network](#) is an example of the international impact of these new technological tendencies. This organization, which associates NGOs, promoters, professionals, designers and manufacturers, promotes solar cooking in more than 100 countries. In the wiki-based site of Solar Cookers International Network significant information about [methodologies](#), workshops and involved donors can be found, as well as [solar cooker construction modalities](#). The initiatives realized by the participants and ongoing in [different associated countries](#) show the variety and the importance of the involved actors around the world and the different technologies adopted.



[CEDESOL](#) (*Centro de Desarrollo en Energía Solar*), e.g., is carrying out an important work to spread the use of Solar Cooking by training, dissemination, technical assistance and by producing solar cookers with local materials.

Another important international point of reference for developing and producing solar food products and technologies is the [Solar Food Processing Network](#) supported by the [International Solar Energy Society](#) and by the German NGO [Solar Future](#). The network, which associates engineers, food scientists, farmers and SMEs in

the food and RE industries, works to identify the most effective solar processing technologies and products in terms of quality and cost effectiveness. In the Network website a [useful section of links](#) with institutions working on solar cooking projects is available. The projects ongoing in India, Cambodia, [Afghanistan](#), [Mexico](#), [Burkina Faso](#), Gambia and Namibia show the different typologies of technologies adopted for different uses of food production.

The 3 most common designs are [parabolic, box and panel cookers](#). Several research centers and universities are working to the improvement of the existing technologies to respond to the needs of local populations. Thanks to these research efforts, the parabolic panels become more efficient and smaller in size and new models with innovative design are created, such as the nice [Solar Powered Grill published in the Inhabitat website](#) dedicated to green design, innovation, and the future of clean technology.

These technologies, if adopted systematically at the territorial level through structures responsible for their promotion and for providing technical assistance in the field to potential users, can have a very significant impact on development. They not only permit to reduce energy dependence from traditional sources and enhance environmental resources but also to promote forms of green economy by creating small enterprises and cooperatives specialized in the production of solar ovens, using local materials and recycling waste.

### To know more

[CEDESOL ecological-cookers](#)

[Different kinds of solar cookers-Wikipedia](#)

[Solar Cookers International Review](#)

[Video on Solar Food Processing Network in Youtube](#)

[Build a Solar Cooker-International Network](#)

[Build a Solar Oven-Planet Science](#)



[Cocina Solar de México](#)

[Olla Solar de México](#)

[Construye tu horno solar-Fundación Tierra](#)

[El Kiosko Solar-Fundación Tierra](#)

[Cocinando con el sol en España](#)

[All American Sun Oven](#)

[Options for Using Solar Cookers in Developing Countries-GTZ](#)

[Solare Bruecke - Germany](#)

[Solar Cookers Manual-GTZ-Fastonline](#)

[IFEED – Cooking with solar energy-Germany](#)