

Food processing and preservation techniques in Gambia.

Yusupha Kujabi is helping rural Gambians use solar technology to process and preserve food in an effort to improve their diets, incomes, and standard of living. In doing so, he is replacing fossil fuelbased technologies with clean sources of energy and reducing damaging pollution.

The IDEA

Yusupha Kujabi designs easy-to-make solar energy devices and trains rural groups to use and reproduce them. To these, he adds solar food processing and preservation techniques that can be used to generate income and achieve self-sufficiency. These new strategies meet urgent needs in West Africa where the rural poor face chronic food shortages aggravated by the absence of cheap food-preservation technologies. To prepare and preserve food, the poor often resort to inefficient and environmentally unsound technologies that burn coal and create health hazards. To avoid dependence on costly imported solutions for this problem, his organization also trains the grassroots populations – women's groups in particular – to manufacture and service the solar equipment. Yusupha works at length with communities to help them adjust to and accept his technologies and to ensure that they are cost-effective. His designs are flexible and accommodate the needs of diverse communities from rural to peri-urban, from Gambia to Cape Verde and Senegal. His vision is to improve the human and ecological health of the region itself, and to this end he is replicating his work as broadly as possible.

THE PROBLEM

Gambia and many other West African countries do not take advantage of solar energy, potentially a very important source of clean energy in these tropical zones. In fact, solar energy never figures prominently in the national social and economic agenda, in part due to the sheer cost of sophisticated, imported solar devices. Moreover, imported solar equipment is rarely adapted to local environments and is difficult to maintain because parts are unavailable and local technicians are not trained to work on it.

Meanwhile, man-made environmental and food shortage problems – such as the widespread felling of trees for wood-fuel, the lack of knowledge and skills in food processing and preservation techniques, post harvest crop losses, food spoilage and spillage – continue to devastate local economies and ecosystems. The problem of food spoilage is particularly acute in West Africa, where, because of the seasonal cycles of wet and dry weather, food is alternately abundant and scarce. Survival and economic success turn on people's ability to make seasonal harvests stretch to cover the entire year, and this requires effective, inexpensive food preservation techniques. Without such techniques, small producers lose money on crops because they must dump excess food when it threatens to spoil. The population at large, meanwhile, is malnourished during parts of the year.

Available technologies are not only polluting, but either expensive or ineffective. Imported technologies require the expertise of trained engineers for maintenance and therefore cost too much and eventually fall into disrepair. Wood and charcoal dryers, meanwhile, are dirty and comparatively ineffective.

Source: <https://www.ashoka.org/fellow/yusupha-kujabi>