Executive Summary of a Solar Oven Promotion Program In Ethiopia: 1997 - 1999

Background

Aisha refugee camp is in northeastern Ethiopia near the Somali border. It was established in 1990 to receive refugees fleeing the violence in Somalia and has a population of approximately 14,000. The camp is under the control of the United Nations High Commission for Refugees, and is administered by ARRA, the Ethiopian agency for displaced persons. ARRA distributes food and medical care. Other relief organizations conduct various projects to improve conditions in the camp and deal with increasingly serious environmental degradation of the area surrounding it.

One of these organizations is Solar Cookers International, a U.S. nonprofit with broad experience in African refugee camps. Founded in 1987, SCI initiated the Aisha Solar Cooking Project ten years later. The goal was to reduce the drudgery of foraging for fuel wood and the damage it caused. The project distributed inexpensive solar ovens called CooKits and trained refugees in their use. Despite a fitful start, by 1999 almost all families in the camp had been equipped.

Evaluation Protocol

In order to measure the impact of this project, an independent consultant was retained with the support of UNESCO, ARRA and SCI. The evaluation, conducted over 30 days in October and November 2001, documented the level of solar cooker use and resulting fuel wood savings. Ancillary information was also collected about the factors influencing the use of solar cookers and the impact on the morale and self-esteem of the camp's women.

Interviews were conducted in households of the camp. Focus groups were organized to discuss the issue. Community leaders, and staff solar cooking instructors were surveyed. Relevant literature and secondary sources were exploited.

Survey findings

A baseline survey had been conducted in 1997, before the SCI project started. At that time, 75% of households in Aisha camp used only wood-burning stoves. (Others used charcoal as well.) At the end of the project, a survey of 180 households found that exclusive use of fuel wood had dropped from 75% to 3.3%. Almost all families had adopted a combination of technologies for cooking. While only 2.2% of households reported exclusive use of the CooKit, 94.3% use the CooKit for some cooking in combination with other cooking devices.

The impact of the CooKit's introduction was measured by comparison of fuel wood use before the project was launched and at its completion. Frequent users of the CooKit consumed 44% less firewood and 78% less charcoal. For occasional users, the average was 27% less firewood and 22% less charcoal. The refugee camp is using approximately 32% less fuel wood than before the introduction of the CooKit.

Overall, Aisha residents were pleased with the performance of the CooKit. They found it easier to use than cooking on an open fire and believed the food tasted better. They were not concerned with the slower cooking time or the limitations of bad weather. On the other hand, residents expressed marked displeasure with the CooKit's lack of durability, complaining that none lasted more than 5 months. They asked that the CooKit be strengthened or that they be provided with a better one, which they believed existed. Finally, interviews confirmed refugees recognize the benefits CooKits have for the environment.

Conclusions

The evaluation team concluded SCI had great success disseminating the CooKit and teaching refugees how to use it, which resulted in significant adoption of it by the target community.

The evaluation team also found that the project could have been better planned and that SCI should have better defined its partnerships with UNHCR and ARRA. Finally, the team predicted that the project's accomplishments will not be sustained without the continuing participation of SCI.

* * *