

Lessons Learned from the Central American Solar Energy Project (CASEP)

The Central American Solar Energy Project (CASEP) currently works in Guatemala, Honduras, and Nicaragua. This solar oven group was started in 1991 by Dr. William Lankford, a now-retired physics professor at George Mason University. He now runs the project from Charlottesville, Virginia, with the help of community resource center staff in each country. The CASEP contact information is

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An analysis of their project is published on the CASEP website (see www.solaroven.org/resources/solarovendata/eindice.htm). This analysis provides some data, graphs, and brief discussions on the solar oven workshops, use, and follow-up.

The most important information in this analysis includes the following data:

- During the course of 10,000 visits, utilization rate of the solar oven was 47%.
- Surveys show that 68% of women use the solar oven at least 30% of all sunny days.

These data are used to support CASEP's conclusion that solar oven use is high and the project has been successful.

This report shows that several factors were essential to the success of the project. The follow-up with the women who attend the solar cooking workshops is extensive: typically, there are monthly visits for two years, then visits every six months. Data analysis indicated that there was no added benefit to visits more frequent than every two months, but there was a large decrease in solar oven use with less than six visits per year. They also discovered it was very important that these follow-up visits continue for years. The incorporation of community resource centers and coordinators in each country permits longer, more rigorous initial workshops and follow-up visits.

CASEP believes that the communities themselves also see the project as a success. Some evidence supporting this conclusions is the following:

- Half the newly scheduled workshops were in communities where previous workshops were held.
- A significant fraction of the solar ovens are still in use four years (80%) and even over ten years (33%) after their construction.

Some findings in this study will allow CASEP to improve their project implementation in the future. There was a significant difference, for example, in later use of the solar oven depending on its month of construction. The earlier in the dry season the workshops were held, the better continued use of the solar oven was. This provides more time to practice and adopt the technology before the rainy season starts. They also found that there was a significant

improvement in solar oven use if follow-up visits began soon after construction (especially within three months).

This analysis uses quantitative data and statistical analysis to support its findings. Lankford concludes the project analysis by saying, “I hope that this analysis demonstrates to you all that the solar oven is a technology that can be accepted if one introduces and promotes it intensively.”