

## **Final Report**

### **Solar Cooker Project for Nairobi, Kenya**

San Diego Coastal Rotary Club  
San Diego Downtown Noon Rotary Club 33  
Nairobi Mashariki Rotary Club  
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The San Diego Rotary Clubs cut out 292 "double curve" solar cookers made from reflective bubble insulation and shipped them to the Nairobi Mashariki Rotary Club. The cookers used a new design developed by Roger Haines of San Diego Club #33, and new materials consisting of a 4-foot square of reflective bubble insulation, and a clear polycarbonate cylinder that elevates and insulates the cooking pot.

Because we purchased the materials in the United States in fairly small quantities, and shipped finished cookers, our costs per cooker were high. Kenya has very high fees and taxes on imports, and East Africa Rotary District 9200 DGE, Bimal Kantaria, personally contributed \$2,000 to get the cookers through Kenya customs and transported to Nairobi. After buying pots in Nairobi, and paying for training, etc., our cost per cooker approached \$30, so we used extra donations beyond the \$6,000 budgeted for this project.

The Nairobi Mashariki Rotary Club, under the excellent project leadership of Past President Kathy Mbondo, worked with Faustine "Mama Solar" Odaba, the founder of NAREWAMA, a solar cooking NGO, to select recipients in several different areas near Nairobi. Recipients were trained in solar cooking, and how to care for the cookers. Three months after the cookers were distributed, Rotarians and Ms. Odaba interviewed 73 of the recipients (25%) about their experience with the cookers.

Two thirds of the recipients were 35 years or older, with an average family size of six. One-third first learned about solar cooking through NAREWAMA. Only one had been raised in a family that used solar cooking.

More than half said they loved solar cooking because it allows them to multi-task (i.e., it requires little supervision). One third of recipients said they used their cooker every day, and another half said they used it weekly. Of these, one-third used the cooker to cook one meal a day, and another half were able to cook two meals a day. Half reported that a friend or relative wanted to buy a solar cooker, and 86% said a friend or relative wanted to be trained in solar cooking.

Ninety-two percent of recipients reported that the solar cooker enabled them to reduce their expenditures on fuel, by on average, 785 Kenya schillings (\$9 USD) per month. In addition, they were able to reduce their firewood use by 77 percent. All recipients reported that they liked the taste of solar cooked food, and that it was nutritious. Almost all recipients said the cookers were accepted by both male and female members of the family.

Seventy-five percent of recipients used the cooker to pasteurize water. The others had not received a Water Pasteurization Indicator (WAPI) during the training because we received the WAPIs after some training had been completed.

**Conclusion:** This project was an overwhelming success! Three months after distribution, five out of six recipients were solar cooking meals at least weekly, and three of six recipients (50%) used their cooker every day. A third of recipients cooked two meals a day. On average, they saved \$9 USD a month on fuel costs, and reduced their use of firewood by 77 percent. Almost everyone had a friend or relative who wanted to buy a cooker or to receive training in solar cooking.

The Next Step: This project shows there is a market for more cookers in Nairobi. Club 33 has obtained a second District Grant, P-352, to provide solar cookers to Gulu, Uganda. To avoid the high costs per cooker that we experienced on Project P-151, and to create a "supply chain" for solar cookers, a Nairobi company, Global Hardware, Ltd. has agreed to stock the materials to make solar cookers at low cost, and we will buy from them.