



## **Solar Cookers for South African Townships - 2010** **A Global Rotary Club Project organised by The Sustainability Trust**

### **The Project:**

- Most people associate **South Africa 2010** with the **FIFA World Cup**, but a very important **Climate Change-related Rotary humanitarian project** is being introduced into **AIDS affected townships** in February 2010.
- **The Sustainability Trust** has been the catalyst to bring together the participants in this exercise.
- **Five Rotary-based organisations** have joined forces (see below for details) to introduce **solar cooking principles** to help alleviate poverty and improve health in **South African townships**.
- The project will bring solar cooking to **townships in Cape Town and – 500 miles to the east – to Grahamstown**, via **two Rotary Clubs**.
- **The Rotary Club of Fresno**, in California promotes the solar cooker technology, using a 15-year development programme created by Club member Wilfred Pimentel.
- **The cookers** they have developed are easy and cheap to make, produce no carbon emissions, avoid firewood collection and burning and are healthier to use than conventional cooking and water-sanitising methods.

### **Summary:**

- **Wendi Hammond and Patti Thornton** from the Rotary Club of Fresno, California, both expert trainers in solar cooking, will be travelling to South Africa as volunteer trainers for the Sustainability Trust sponsored solar cooking project between Feb 27 and 4th March 2010.
- They will meet up with **Adre Smit of the Rotary Club of Kirstenbosch**, Cape Town, who is coordinating the project in South Africa on behalf of the Trust.
- **The project will involve** training Rotary Club and local community teams in Grahamstown - about 500 miles east of Cape Town - on how to use, make and trade in solar cookers, rocket stoves, WAPI water purifiers and hot-boxes. Grahamstown Rotary Club will host the training session and use the methods learned to promote solar cooking principles to townships in their area.
- Adre and colleagues from Kirstenbosch Club will participate in the training programme in Grahamstown and, after graduating from the Fresno training programme, they plan to carry out a similar training exercise of their own in

conjunction with other Rotary Clubs and local community groups in Cape Town.

- The Trust will monitor progress of the two legs of the project over coming months with feedback from the Clubs involved.

#### **The Need:**

- **The Grahamstown townships** have 82% unemployment with approximately 35% incidence of HIV positive - and consequently many AIDS orphans. Grahamstown has 6,000 orphans out of a population of 150,000.
- Households use paraffin or electricity. Usage per annum for cooking emits about 0.2 tons CO<sub>2</sub> equivalent. Families spend 16% of their revenue on cooking fuel.
- Very poor families search for firewood, which in areas such as Cape Town province is only available after long treks separating mothers from children.
- Burning it in confined spaces produces a smoke-filled living space and carbon emission.
- Some depend on food parcels including raw vegetables, but have no fuel to cook with.
- **Kirstenbosch Rotary Club** is one of Cape Town's 25 Clubs. Through [Kirstenbosch](#) member Adre Smit, the [Rotary Club of Grahamstown Sunset](#) is providing hosting and travel for representatives of California's Fresno Rotary Club to provide the training course in Grahamstown. Kirstenbosch Rotarians will learn the techniques in Grahamstown and then conduct their own training exercises in Cape Town.

#### **Why Solar Cookers:**

- Easily / cheaply manufactured locally from recycled cardboard, glue and foil.
- Long lasting ([minimum](#) one year) with zero fuel costs.
- No emissions and reduced risk of burning.
- Rocket stoves are also an option: need to identify appropriate fuel source.
- Hot boxes already deployed but not readily accepted.

#### **Entry Barriers:**

- Cooking by solar requires a different and less traditional approach, which the Fresno Rotary trainers have techniques to explain and demonstrate.
- The consumer needs to be offered different solutions to low energy cooking: the course will train in all 3 types of cooker plus appropriate recipes and hygiene.
- The fact that solar introduces invisible heat is a risk that can be overcome through training.

#### **The Proposal:**

- The most significant investment in this initiative is **training** and as such we are looking to train key personnel in South Africa to take the initiative forward.
- Personnel from Rotary Club of Fresno California are undertaking their second round of training in Swaziland in February 2010, where it is running its own

project to train over 600 Health Visitors to take solar cooking technology to the villages they cover.

- They are going to undertake this training program in South Africa on the same trip.
- Fresno Rotarians have previously “trained the trainers” in many places, including Guatemala, Uganda and Mexico.
- The training covers the practice of using solar cookers and hot boxes as well as the manufacture of solar cookers.
- Kirstenbosch Rotary Club will be the lead Club in the Cape Town area, where it aims to involve others among the 25 local Clubs as the project develops.

#### **The Cost:**

- This “train the trainers” initiative, which transfers know-how from California to South Africa, will cost US\$3600.
- Training after that will be very economical, using local personnel who have learned the techniques through this project.
- With good recycling facilities, the cost of ovens is only the labour involved.

#### **Partners:**

- **The Sustainability Trust**, which has co-ordinated the project (previously the CO<sub>2</sub> Offset Trust) – A Global Rotary Club Project seeking humanitarian solutions to Sustainability and Climate Change issues. See [www.TheSustainabilityTrust.org](http://www.TheSustainabilityTrust.org)
- **Rotary Club of Fresno**, California Rotary District 5230. See [www.fresnorotary.org](http://www.fresnorotary.org)
- **Rotary Club of Grahamstown Sunset**, Rotary District 9320, encompassing the central area of South Africa and Lesotho, South Africa. See <http://people.ru.ac.za/amwd/rotary>
- **Rotary Club of Kirstenbosch**, Rotary International District 9350, which comprises Western Cape, parts of the Northern and Eastern Cape, Namibia and Angola. South Africa. See [www.rotary9350.co.za](http://www.rotary9350.co.za)
- **U.K. Rotary District 1100** Environmental project – (Hereford, Cheltenham, Swindon, Bristol area) see [www.rotary1100.org](http://www.rotary1100.org), led by Bob Gower of the Cheltenham Sunrise Club - [www.sunriserotary.co.uk](http://www.sunriserotary.co.uk)

#### **Donations:**

- Start-up funds are being provided by Kirstenbosch Rotary Club, Rotary District 1100 and The Sustainability Trust.
- Fresno Club is paying for materials that cannot be sourced locally.
- Bob Gower of the Cheltenham Sunrise Club sourced funds for his recce visit to South Africa from a Cheltenham based charity.
- **More funding is needed** and any member of the public, Rotarian or Rotary Club wanting to offset their carbon emissions or simply make a straight donation using a credit card, can do this at [www.TheSustainabilityTrust.org](http://www.TheSustainabilityTrust.org) **Even better –**

become a Sustaining Member of the Trust and your US\$100 donation will go to the 2010 project.

- **The Trust website opened this Sustaining Member Appeal 1<sup>st</sup> February 2010 for a donation of US\$100 per Rotary Club or per individual.** Access is at [www.co2offsettrust.org/basm.htm](http://www.co2offsettrust.org/basm.htm)

**Quote from 'South African Star' Newspaper 16 October:**

- *Persons living in a poor Country are 79 times more likely to suffer from climate related disaster than someone living in a developed Country.*
- *600 million more people in Africa likely to suffer from malnutrition due to Climate Change.*
- *Malaria set to spread to new areas and increase the already horrendous number of 800.000 annual child deaths.*
- *Securing a budget for this from developed nations is essential for African Countries at Copenhagen.*