

**Solar Cookers
International**
1919 21st Street, #101
Sacramento, CA
95814 USA
Tel. 916-455-4499
Fax 916-455-4498
E-mail:
info@solarcookers.org

Solar Cooker Review

August 2000

Solar Cooking Archive:
<http://solarcooking.org>

Volume 6, Number 2
[Back Issues](#)

Paper Circulation: 8,000

In This Issue

[A Solar Pioneer in Mali](#)
[Solar Cooking Promotion Grows in Haiti](#)
[Building on Strength](#)
[News You Send](#)
[Bob Larson: In Fond Memory](#)
[Willing Ways and the Power to do Good](#)
[Shine On, Shine On](#)
[Spreading Solar Cooking in Gambia](#)
[A Solar Birthday Celebration](#)
[Letters](#)
[Conference to be Held in South Africa](#)
[Solar Dryers in Burkina Faso](#)
[Gifts that Keep Giving](#)

A Solar Pioneer in Mali

by Ramón Coyle

Gnibouwa Diassana of Bla, Mali, exemplifies the qualities of perseverance and experimentation that have made the spread of solar cooking possible to date. Mr. Diassana has built and distributed 32 solar box cookers and 11 solar panel cookers



in Bla and other nearby communities. The cookers in Bla receive frequent use.

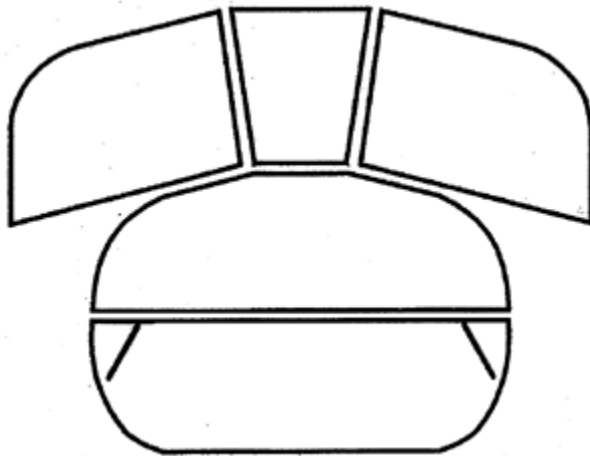
Mr. Diassana first contacted Solar Cookers International around 1995, writing in French and receiving from SCI plans in French for

building solar cookers. As SCI urges, Mr. Diassana *adapted* the plans to materials that were available locally and suitably durable. For example, he builds the outer box of a solar box cooker from plywood, providing a durable casing. The inner box, which should be low in mass so that it doesn't absorb too much of the heat, is made from cardboard or thin sheet metal.

While many correspondents to SCI from West Africa and other regions tell of the difficulty in finding solar cooker construction materials, Mr. Diassana, through perseverance, has been able to find sources for all the materials in or near Bla. "Cardboard is available in big towns," he writes. "Plywood, glass, aluminum foil, sheet metal and plastic bags are available in Bla and neighboring towns."

Mr. Diassana also applies creative thinking to obtain low-cost materials. He notes that tea, a very popular beverage in Mali, is shipped from China in boxes lined with aluminum foil which can be recovered and reused for making reflectors for solar cookers. "It works well," he says.

What is lacking in Bla, however, are large pieces of cardboard. To adapt to this problem, Mr. Diassana makes solar Cookits from five pieces of cardboard (see figure 1), which he patches together using small thin pieces of cardboard or pieces of satin fabric (glued or sewn into place to hold the large Cookit parts together, see figure 2).

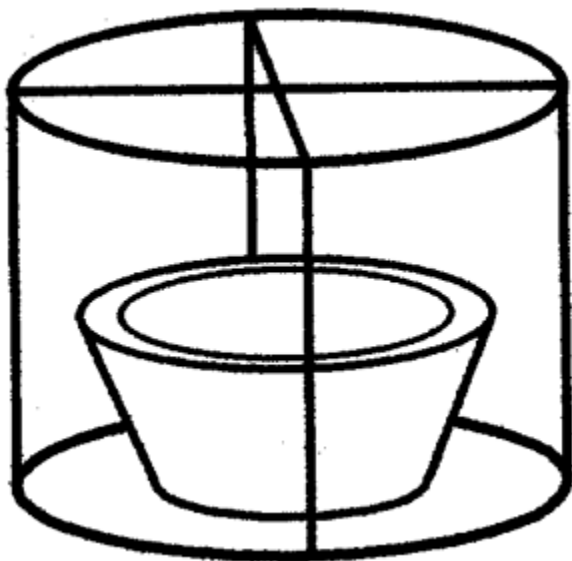


[figure 1]



[figure 2]

The plastic bags available in Bla are not especially heat resistant. To surmount this problem, Mr. Diassana has designed a frame made from electrical wire, over which the plastic can be slipped. This keeps the bag away from the hot cooking pot, so it is less likely to be damaged or melted (see figure 3).



[figure 3]

Another important step practiced by Mr. Diassana was to learn to solar cook locally popular foods. "It has been wonderful to cook very easily the Tô in the solar box compared to the traditional way on fire," he writes. "Tô is a basic meal in Mali, Burkina Faso and Senegal, cooked with cereal flour (millet, sorghum and corn) accompanied by sauce."

Having proven for himself the value of solar cooking, Mr. Diassana then moved on to spreading the word to others. For example, on March 13, 1999, he gave a solar cooking demonstration for 80 handcraft workers, a demonstration for 70 farmers on March 16, a demonstration for 120 people in Mougna village on June 6, and several demonstrations reaching 150 primary school students in 1999.

In January, 2000, Mr. Diassana produced 10 solar box cookers for pastors' families in the Bethel Bible school in Koutiala, Mali.



In short, through the activities of this one man, more than 40 solar cookers now are at work in the greater Bla area, while over 1,000 people have been made aware of how solar cookers can help them. The story of Gnibouwa Diassana reminds me of another man who learned about

solar cookers and started spreading the word to others, a few at a time at first, and then larger numbers of others. This man's name is Bob Metcalf, and, with some of his early recruits, he founded Solar Cookers International to spread the solar cooking news. The moral of the story is that solar cooking information is meant to be shared, and in doing so, one person, with perseverance and creativity, can make a great deal of difference.

Mr. Diassana says that it would be "a real pleasure for me" to respond to questions or requests for advice from other solar pioneers in Mali and West Africa. Contact: Gnibouwa Diassana, W.V.I., BP 26, Bla, Mali.

Solar Cooking Promotion Grows in Haiti

Solar Energy Program of the Free Methodist Church in Haiti.

We have realized 36 demonstrations ... and 13 seminars with 216 people trained this year. We have multiplied our contacts with non-governmental and

governmental organizations. We have noted the presence of members of the NGOs in our seminars, such as: World Vision, Christian Service of Haiti, Floresta, Hope for Haiti's Children, MEBSH (Evangelical Baptist Mission of Southern Haiti), World Neighbors and Concern World Wide. Some governmental organizations are Bureau of Mines, Ministry of the Environment and Ministry of Public Health.

At the request of one of the leaders at St-Vincent and from the Director of SHAA (Haitian Society to Help the Blind), a demonstration was organized with plans for a seminar for the blind ... to be held in the near future.

Many more people were exposed to the program during the year 1999, thanks to our participation at two big fairs. ... Our presence at these fairs showed people that the food products are important but to have fuel (gas, wood or charcoal) for making them cook is another thing, and solar energy responds to this problem. ... About 1000 handouts were distributed to the public. ... Interviews were given to newspapers, a local periodical *Audience*, radio stations and television channels.

We were invited to give a demonstration during the large conference on community health organized at Kaliko Beach by World Relief. ... There were about thirty doctors and health technicians ... (and) representatives of different organizations such as Words and Action, Hospital of Hope, Community Hospital, World Vision and Salvation Army. Nine cakes were cooked in the sun, which enthused the participants to the point that one of them took the occasion to buy, on the spot, a panel with the accessories necessary for cooking.

A big seminar was realized at Terre Blanche for three Free Methodist churches: Finel, Dubédou and Terre Blanche. ... There were 22 participants. At the end of the seminar, three committees were formed, one for each locality.

An organization was born from the program called GAVOL: Groupe animateurs Volontaires (Group of Voluntary Promoters). It is located in different regions of the country with more than 200 members. They are located at Gonaïves, La Gonâve, St-Marc, Marchand Dessalines, Jérémie, Port-au-Prince, Hinche, Camp-Périn and Anse Rouge. Their responsibility is to organize demonstrations and seminars where ever they are.

An especially active committee of GAVOL members has been formed in Gonaïves. ... They work independently within the framework of our national Solar Energy Program. They meet and organize demonstrations and seminars on their own initiative. It is second only to Port-au-Prince at having the most trained and informed people on solar cooking methods. The Committee was able to mobilize all the city of Gonaïves by means of Télé Star of Gonaïves. ... The TV coverage permitted the inhabitants of the city and its environs to follow, for three weeks, a large part of the seminars.

In their annual plan for the year 2000, the committee foresees training 250 people: 50 at l'Estère, 50 at Carrefour Paye, 50 at Jaco, 50 at Gonaïves and 50 at Ennery. With the repeated demand of former students of the area for accessible materials,

in addition to the already existing solar outlet store in Port-au-Prince, a mini solar boutique was implanted at Gonaïves and is administered by a member of GAVOL. The ready access of the materials represents a strong point for the program and its participants.

Many of the people benefiting from the spread of this campaign are completely uneducated, unable to read, and yet they are able to make their own CookKits (panels) and to cook foods in them. Because the participants make their own cardboard cookers, they tend to take good care of them and are able to easily fabricate another should the need arise, as surely it will.

The participants pay a fee to attend a seminar. This fee covers the cost of training and materials. At each training workshop, the participants are motivated to bring, by consensus, that which was decided upon as food for the day. They all work to prepare the food together. The participation of the people at this level, acquiring materials and food, represents an important element for the future of the solar cooking method in Haiti. At the end of the seminar, the participant goes home with one panel which she has made; cardboard, glue and foil enough to make a second one; one cooking pot, two plastic bags, a grill and a thermometer.

More than 600 people in less than three years have received training on the methods of fabrication and appropriate technology of the solar panel cookers. A follow-up questionnaire to the program participants, from a representative sample, has shown us that 65% of those trained use solar energy for cooking on sunny days, 20% use it on the weekends, and 15% use it occasionally or on a whim.

Ms. Land writes that she and her husband are missionaries living in Port-au-Prince, Haiti, since 1981, and they began teaching about solar cookers in the pastoral training school. She notes:

The able and dedicated chairman of our national solar committee, Rev. Eliodor Desvariste, one of the students from the first class I taught ... has given strong leadership to this endeavor. Following a seminar in April 1997, one of the participants, Hubert Paul Normil, a young man with a university degree in development, expressed his interest in working in our program. A timely sizeable monetary gift to the program allowed him to be hired at a very minimal salary. Not only have we hired Hubert, but we have two full-time employees, one who works in the solar outlet store located inside the mission bookstore, and another who works wherever needed, baking goods for sale or giving demonstrations.



Ms. Land reports that her group has calculated how much charcoal would have been needed to cook the food prepared at four solar cooking demonstrations. From that figure they have found "that it is possible to economize between 50 and 125 gourdes (about \$2.60 to \$7.00 in US dollars) per

person per month in the savings of charcoal and wood destined for cooking food. This level of economy is not at all negligible when one knows how saving is difficult to realize in the poor homes of the urban and suburban regions.

We want to thank you (SCI) for your efforts at spreading information on this most important technology. With the ripple effect, your organization has been responsible for more good than any of us will perhaps ever know.

Contact: Della Land, Eglise Methodiste Libre, Programme Energie Solaire, Delmas #200-202 (28B), Port-au-Prince, Haiti.

Building on Strength

by Terry Grumley

In the last *Solar Cooker Review* I had the opportunity to share my experience of the first months of work with SCI and in particular my visits to the projects in Ethiopia, Kenya and Zimbabwe. It is clear that these solar cooking projects provide SCI with a solid base for future growth in pursuit of our mission to spread solar cooking. Building on that base in the months ahead, we will identify steps to maintain our current strengths and direct attention to areas for improvement.

One of SCI's greatest strengths is the special emphasis placed on a participatory approach to planning and implementation of project activities, recognizing that all successful projects draw on local experience and expertise. SCI specialists spend weeks, often months, working closely with local leaders in the initial phases of project planning and implementation in refugee camps. Information about eating and cooking habits, fuelwood usage and collection, and other pertinent information is provided by refugee women and community leaders. Together, SCI and community leaders solar cook local foods, make adaptations as needed, then identify through further discussions with group representatives how best to begin demonstrations and select trainers. Solar cooks who display the most enthusiasm and actual use of the CookKits are then invited to receive training and afterwards train their neighbors. Thus, leadership quickly transfers to local women.

In addition to the initial training, solar cooking families are visited frequently by their trainers to monitor progress and gather feedback. Group meetings provide an opportunity for solar cooks to share their experiences, address issues through group problem-solving, and reinforce enthusiasm. SCI's respect for local cultural interests is reflected in its partner relationships, which contribute to advancements including the adaptation of solar recipes using local staples and the incorporation of basket weaving skills into an innovative plastic reuse program to help reduce camp litter.

Another area that SCI will reinforce is the capacity to design, implement and evaluate its projects in a manner that yields increasingly measurable results. While

we know from direct experience that the use of solar cookers is indeed spreading, we can benefit from an improvement in our capacity to convey this with more specifics. In addition to the studies already conducted that demonstrate widespread usage and acceptance, we need to incorporate ongoing monitoring and evaluation procedures as a regular component of our projects. This requires additional effort in the design phase to identify specific objectives, budgets, monitoring and evaluation criteria. We have these components in our projects now and intend to improve them in order to deliver a more substantiated message to donors, supporters and potential partners as well as to reinforce communication with solar cooks.

Increasing our ability to quantify results addresses the need to confirm the impact we are having. Most contributors are unable to visit the projects firsthand, so the provision of clear, concrete results helps to reinforce the reports of visitors and individual stories from solar cooks. Potential partners would like to see as much statistical support as possible in order to justify a collaboration.

While previous client participation has been strong in planning and implementation phases, an increased participation in measurement and evaluation phases improves the likelihood of project sustainability. The more we involve users, the more likely that attitudes and behaviors will change and that the benefits will continue on and multiply. This encourages a stronger ownership by the beneficiaries in each project and reinforces the development of an increased capacity of beneficiaries to manage their own projects. Consequently, we are committed to continuous learning and using the best methods to stimulate the highest degree of participation possible by all stakeholders in our projects.

As an initial step, we recently sent our East Africa Regional Representative, Margaret Owino, to INTRAC, a recognized leader in development training, to attend a weeklong course in "Managing a Participative Monitoring & Evaluation Process". We will work together to identify how best to put that knowledge into practice as we move ahead with efforts to improve our programming process. As further support to this initiative, we have taken advantage of opportunities to exchange experiences with other organizations, to gather relevant reference materials and to seek ways to nurture a continuous learning process within SCI and in our work with others.

These efforts will reinforce our capacity to help people not only gain solar cooker technical knowledge and skills that will significantly improve their lives and environment, but also reinforce their ability to work with their neighbors to address the difficulties they confront in their daily lives.

News You Send

AFRICA AND EUROPE

GAMBIA

Valerie Down of the **Gambia Fellowship Association** tells of more solar cooking activity in Gambia. Four units for the production of solar cookers have been developed in Gambia by the Gambia Fellowship Association working with the **British High Commission**, the **Gambia Energy Department** and the **British Foreign Office** in London. The Association has also made a film about solar cooking which is periodically shown on Gambia television.

Ms. Down also sent news from the **Boka Loho Organization** in Gambia, which has built several solar box cookers and has been demonstrating them at the Abuko Livestock Show and other gatherings in Gambia. The **Gambia Renewable Energy Centre**, which works closely with the Gambia Fellowship Association on solar cooking projects, reports that Boka Loho and other local organizations are involved with training youth in the construction of solar cookers.

Contact: Valerie Down, Gambia Fellowship Association, Boundary Oak, 32 Oak Tree Drive, Newton Abbot, Devon TQ12 4NN, England, United Kingdom; **Baboucar Touray**, Boka Loho Organization, P.O. Box 4153, Bakau, Gambia, email: bokaloho@commit.gm; **Abu Garba**, Gambia Renewable Energy Centre, Ministry of Trade, Industry & Employment, Independence Drive, Banjul, Gambia.

GUINEA



Volontaires Guineens pour l'environnement reports they have been working on solar cooker production and promotion in Guinea since 1995. "For every one cooker that is bought, we always make sure that we fabricate one for a poor family in the rural village," writes **A. S. Diallo**. "By this system, we have now put in place about 250 cookers just for the village population." Mr. Diallo reports that the Volontaires have a solar cooking training staff but have trouble obtaining the necessary materials for building cookers. Contact: A.S. Diallo, Volontaires Guineens pour l'environnement, c/o Mission Verte/Agenda 21, P.O. Box 1861, Conakry, Guinea. Tel: 224 22 00 13, fax: 224 41 32 34.

SPAIN

Miguel Angel Soria of Barcelona, Spain reports on a solar cooker workshop held in Cataluña: "Various volunteers dedicated themselves to teaching the possibilities of the solar cooker to different groups—students, adults, immigrants, etc. In this workshop the children learned how to make the solar cooker and how it functions. Afterwards, they cooked recipes that later will be eaten, in this case hamburgers and pizza...I wish you well in the grand task that you are performing. ..." No contact information available.

TANZANIA

Solar Innovations of Tanzania (SOIT) is spreading solar cooking through the Singida region in central Tanzania. They work with local craftsmen to make and sell solar cookers and teach solar cooking skills to individuals in the area. They sell their solar box cooker for around US \$40, but hope to have a less expensive version, perhaps based on SCI's CookKit, available in the future. P.O. Box 12809, Dar es Salaam, Tanzania. Tel: 00222 26 68721, email: sonet@twiga.com

Consumers of the German electric utility **Bayernwerke** are supporting a solar cooker production and promotion campaign to benefit inhabitants of Zanzibar and Dar es Salaam. SK14 solar parabolic cookers, from **EG-Solar** of Germany, will be built in a local fishing village by young men and women, who will be taught to use, promote and market the cookers to institutions and households. The cookers will be promoted locally by integrating them into a handicraft and nutrition program. The workshop itself will be built from locally available wood and mud, and will incorporate advanced features including a composting toilet, rainwater collection and storage tanks, solar electric lights and a solar cooker-friendly kitchen. Sponsor organizations include **Green Ocean**, the **Commission of Natural Resources, Zanzibar**, and the NGO **Mali Island Conservation Association**. Additional sponsors are needed. Contact: Antje Förstle or Yusuf Vierkötter, P.O. Box 152, Zanzibar, Tanzania. Tel: 00255 (0)811 610560, email: green_ocean@hotmail.com

UGANDA



Amos Byakacaba of the **Welfare Society for Disabled People (WSD)** sent in the photo (above) showing a number of solar cooker types built by the WSD. "I undertake to expand my efforts in manufacturing solar cookers, panel CookKits and parabolic cookers." Contact: WSD, P.O. Box 403, Hoima, Uganda.

THE AMERICAS

GUATEMALA

Compatible Technology, Inc., a volunteer organization improving nutrition and creating jobs in developing countries, is expanding their corn processing program in the department of Jalapa by introducing a solar cooker and dryer component. Contact: **Erik Streed**, CTI, Hamline University, Box 109, 1536 Hewitt Avenue, St. Paul, MN 55104-1284, USA.

PERU

Manuel and Gay Reynaga lead the **Peru Children's Trust**, a sponsorship program benefiting disadvantaged youth in Peru. In 1997, they met with **Enigma**, the youth group of **St. Mary's Maidenhead**, to discuss their work and some of the issues Peruvian youth face. One such issue is the constant struggle, both financially and physically, to find firewood and other cooking fuel sources. This struck a nerve with **Quinton Stowell**, an Enigma organizer and engineer by trade. So Mr. Stowell, with help from others in the group, began a crusade to bring inexpensive, effective solar cookers to these children in need.

After researching various types of cookers, Mr. Stowell and his wife, Jody, made two prototypes and eventually settled on a small parabolic-type solar cooker (pictured below) made from plywood, cardboard, and metal. The materials cost around US \$10 for each cooker. The cookers were assembled in Peru in 1999 by the children themselves, with guidance by Mr. Stowell, Mr. Reynaga and Mr. David Coe.



For more information about the Peru Children's Trust visit the website www.sunspot.org.uk/perustrust or write to PCT, South Ridings, Shoppenhangers Road, Maidenhead, England, United Kingdom, or to Manuel & Gay Reynaga, Apt. 654, Huancayo, Peru. To contact Quinton Stowell visit his website at www.sunspot.org.uk or email: q@sunspot.org.uk

ASIA AND PACIFIC

AUSTRALIA

Dave "Sunny" Miller and the **Solar Cooking Interest Group** in Maddington report on a number of ongoing activities in West Australia. The group regularly conducts solar cooker construction workshops and distributes solar cooking information. Dave reports on a test of various modifications that can affect the power of a solar box cooker. According to the tests, a reflector that is as large as the top of the box cooker can add 48% more power to the cooker. A metal absorber (for example, a 0.4 mm galvanized steel tray, painted black) on the bottom of the cooker increases cooker power by 75% compared to a cooker with no absorber tray. Raising the absorber tray with supports so that it is about 10 mm above the floor of the cooker (allowing hot air to circulate under it) increases power by 10%. Double glazing (that is, using two layers of glass in the window) increased power by 28% in the Australian tests.

A quick, efficient cooker can be made from a wheelbarrow, the Solar Cooking Interest Group reports. **Jenni Creen**, from Allambee, made her cooker by lining the inside of a wheelbarrow with aluminum foil, putting in a dark pot, and covering the wheelbarrow with a framed glass window. She cooked potatoes and pumpkins to show off her cooker's effectiveness at the 1999 Alternative Technology Association Fair in Hanging Rock.



Dave Miller also reports that the Solar Cooking Interest Group has distributed hundreds of copies of SCI's *How to Make, Use and Understand Solar Cookers* self-help manuals. With permission (easily obtained) from SCI, the Group made modest adaptations to the manual for local use, and they reproduce as many copies locally as needed. Dave says twenty libraries in the area now stock the manual. Other copies are sold, with the proceeds helping support the Solar Cooking Interest Group. Contact: D. Miller, 23 Morley Street, Maddington, W.A. 6109, Australia. Email: s.miller@central.murdock.edu.au

In Fond Memory



Bob Larson

July 19, 1945 ~ April 18, 2000

May he rest in peace.

In honor of Bob's life and devotion to the spread of solar cooking, these members and friends of Solar Cookers International established the "Bob Larson Memorial Fund."

Beverly & George Blum
Patricia Bruce
Sherry Cole
Barbara Kerr
Chuck Larson
Julie K. Loring
Virginie & John Mitchem
Dan & Laura Perin
Clark & Eleanor Shimeall
SCI Staff

Willing Ways and the Power to Do Good

Solar Cookers International is making a world of difference. Your thoughtful gifts will be gratefully received and used to strengthen the spread of this wonderful solution.

Please consider these giving options: *Remember SCI in your will* "I give and bequeath to Solar Cookers International of Sacramento, California \$_____ (or _____% of my estate) to be used for its humanitarian purposes." *Investing in SCI* If you have a choice between donating appreciated stock or cash to SCI, there are two tax advantages of donating stock. First, you receive an income tax charitable deduction for the full market value of the stock at the time it is donated. Second, you avoid paying any capital gains tax on the increase in value of the stock. You can invest in SCI and invest your cash in current stock. It's a win-win situation! *Spreading the word* Recruit potential members by asking interested friends, "Did you know that a forty dollar membership in SCI provides cookers and cooking supplies for 6 refugee families?" or, "Did you know that twenty five dollars provides food for two workshops lead by local refugee trainers?"

Please contact Virginia Callaghan at 916-455-4499 to discuss donations and stock transfers. Thank you.

Shine On and On!

Solar Cookers International cordially invites members and friends to be our guests for Shine On and On! Come experience highlights of SCI's humanitarian solution for people and a planet in need.

Friday evening, August 18, 2000
5:30 p.m. to 7:30 p.m.

Open House with light solar appetizers and fine wine

Location: Sierra Health Foundation Facility on the Sacramento River:

1321 Garden Highway
Sacramento, California

Just back from Africa, Bob Metcalf and Terry Grumley will present shining examples of successful projects from Tanzania and Kenya

Please call SCI to RSVP and receive directions: 916-455-4499

Spreading Solar Cooking in Gambia

For the past few years, **Rosalyn Rappaport** has worked to bring solar cooking knowledge and equipment to the people of western Gambia. Her latest trip involved repairing damaged solar box cookers from years past, constructing new box cookers and developing solar panel cookers, and testing the performance of different models. Many key principles that Ms. Rappaport follows in her work closely resemble those taught by Solar Cookers International—namely, creating local partnerships, remaining flexible and open to local adaptations, and searching out local resources and supplies. (For more details on SCI's recommendations see the publication *Field Guide: Spreading Solar Cooking*.)

Organizations she works with in western Gambia include the **Methodist Agricultural Mission in Brikama**, the **Gambia Renewable Energy Centre (GREC)** and the **Women's Solar Cooking Club of Marakissa (WSCC)**.

The WSCC members currently use a couple of solar box cookers left with them in 1998. They established a rotation system whereby each of the 20 members gets to keep one cooker for a weeks time, while the other cooker remains in the gardens to be shared by all. By cooking their midday meals in the fields, they avoid the need to walk home during the work day and reduce the need to collect firewood. They have not used any firewood in the previous two dry seasons—a testament to the power of the sun!

[photo]]

During Ms. Rappaport's latest trip she provided the WSCC with one additional box cooker, and left other locally-made cookers with the St. Martha Skillcentre, Sisters in Banjul, and Mrs. **Adele Njie**, who will incorporate solar cooking into her book *A Taste of the Gambia*. Given that many Gambians are farmers, and that they must often use wheelbarrows to transport their heavy wooden box cookers to the fields,

Ms. Rappaport thought a solar panel cooker would prove useful. So she worked with a local carpenter to design and build a wooden panel cooker similar to SCI's CookIt. The cooker is small enough for a child to carry and costs less than a box cooker (US \$20 compared to \$40 +). The hinged panels are held together by a clever loop and string system. Ms. Rappaport found a suitable, though slightly opaque, substitute for traditional cooking bags in the plastic lining of sugar sacks, which can be purchased at local docks.

[photo K]

Ms. Rappaport's tests showed both cookers having maximum cooking temperature above 100° C. The solar panel cooker reached maximum by 12:00 solar time, and the solar box by 13:30. During periods of brief cloud cover, the solar box cookers maintained higher internal air temperatures, though the pot contents of the solar panel cooker continued to increase in temperature during these periods as well.

Ms. Rappaport recently worked with author Adele Njie to adapt local recipes for use in solar cookers. West Africa cookery favors stews and porridges usually cooked in a single pot, lending itself nicely to solar cooking. Two national dishes of Gambia, *benachin* and *domoda*, literally mean "one pot." It is common practice to cook rice as an accompaniment to these dishes. Another common food in Gambia is a bean, meat and grain dish called *mbahal*, meaning "boiled together." Two sample recipes follow:

Goat Meat Benachin

- meat, cut into even pieces
- 3 pints vegetables, finely chopped
- onions, pounded
- wrinkled peppers
- lime juice
- salt
- black pepper
- garlic

Put all ingredients into black-colored cooking pot and solar cook for four hours. Alternatively, the onions and meat may be fried first, reducing solar cooking time to three hours.

Churah Gerteh

- 3 cups water
- 1 cup rice
- 1 cup ground nuts, pounded
- salt
- sugar (optional)
- milk or sour milk (optional)

Put all ingredients except sugar and milk in a black-colored cooking pot and solar cook for four hours. Fluff with fork when done. Sugar and milk may be added before eating if desired.

Without more governmental support, Ms. Rappaport fears the solar cooking solution to deforestation will be a slow journey in Gambia. She is hopeful, however, that videos of her work will soon appear on local television programs, which would be a step forward in the dissemination of solar cooking knowledge through Gambia. Contact: R. Rappaport, 31 Lodge Lane, London N12 8JG, United Kingdom. Tel: 44 20 8446 3690.

A Solar Birthday Celebration

We are all searching for novel ways to tell our friends and families about the work of Solar Cookers International.

In thinking about that desire and her approaching birthday, rather than gifts this year, Sacramento's Nancy Valentine asked her family and friends to make contributions to SCI in celebration of her birthday. "I knew that my family and friends would want to support the work of SCI in educating people around the world about solar cooking, if I could tell them about it and give them a way to do it." A few weeks before her birthday Nancy sent a personal note expressing that idea with an SCI informational brochure and a donation envelope to her friends and family. "People called and responded very positively to the idea," reports Nancy. "I think everyone contributed and many people were very glad to hear about SCI."

When SCI received the membership contributions, Nancy was notified of the gift (not the amount) and the donor received a thank you and notice of tax deductibility. If you would like to try this idea on your next birthday call the SCI office at 916-455-4499, and the number of brochures and donation envelopes you request will be sent promptly. Given mail delays, it is best to make your request to SCI a month before your birthday.

And thank you, Nancy, for a great way to celebrate...Happy Birthday!

Letters

I saw Dr. A. Jagadeesh's article titled "Solar Cooking in India" in the April 2000 edition of *Solar Cooker Review*. I have been a regular user of solar box cookers for the past ten years. I reside in the southwest Indian state of Kerala where it rains heavily for many months. Yet my enthusiasm for solar cooking has not been dampened by the rains.

I am not in agreement with Dr. Jagadeesh on some of the points he has made. Firstly, he implies that one has to stand in the hot sun to cook food in the solar

cooker in the open. The fact is otherwise—one does not have to stand in the hot sun. The green house in the box cooker is what makes it so versatile and leaves you with time to attend to other chores.

Other points he makes include “No meal is served without fried curries in South India” and “Nobody wants to use two cooking systems, one for frying and another for boiling.” This is not true. Most curries are just boiled and you do a final operation of tempering—sputtering herbs like mustard seeds, cumin seeds, dry red chilly, asafoetida, etc. in oil and adding it to the curry—which takes a minute of ones time on a conventional oven. Some dishes may require direct frying in oil—but here again the frying is mainly required of the masalas—i.e. spices usually in conjunction with chopped onion/tomato to make a kind of gravy. Whichever cooking system is used the frying has to be a separate operation. Anyone who uses a pressure cooker—and this means the bulk of the middle class in India—uses it only for boiling. The frying is a separate operation, done before or after the boiling, for converting the boiled materials into a complete dish. Having to use a conventional oven to do a little bit of frying cannot outweigh all the advantages of a solar cooker. It will be more fair to say that one has to have a conventional oven because a solar cooker cannot work on days when there is no sun.

Alongside these so called deficiencies of the solar cooker let us also mention its advantages. Which other system allows you use an oven which is on all the day time into which you can pop in anything, anytime, and see it done in 1-2 hours. Which other system lets you attend to your other chores without a care and return to it to get your food piping hot? Which other system is versatile enough to boil water, dry things, roast nuts, can fruits and bake bread? And pray, which other system does all this for free?

The improvisation you can do with the box cooker is simply fantastic. The solar cooker is at the very least a Daley Thompson (decathlon) if not a Michael Johnson (sprint).

I also do not think as Dr. Jagadeesh suggests that the best and most simple approach is to use pre-heated water (50° to 60° C) utilizing solar energy in cooking. Such a use besides being burdensome and inconvenient reduces the solar cooker to being a hand maiden of the conventional cooker and does scant justice to the potential of the solar cooker. If he is referring to using a solar water heater for this purpose, where you will get hot water on tap, let us remember the cost of a water heater is 10 times that of a cooker—and that, too, after the subsidy on the water heater.

While I agree that it will be desirable to evolve sturdy, cheap and lightweight designs the existing design of the box cooker is not so unworthy that one needs to wait for the “ideal” design to arrive on the scene. The available solar box cooker is by itself a good work horse. There is also an intangible element in associating with the solar cooker which has to do with ones mental make-up. Solar cooking is spiritually uplifting. The very idea that the sun can cook for you, and that the box cooker is so ridiculously simple, makes you realize the fool that you have been to

have neglected it for so long. At any rate I have become so used to solar cooking that I feel quite unhappy on a day that I cannot use the cooker. I am trying out extra boosters held in place by lab-type retort stands to deal with marginal weather conditions.

The real cause of the decline of solar cooking in India is that with the abolition of subsidies in 1994 in all except two states in India, solar cooking has been left in the lurch. The irony is that all other solar devices except the cooker are pampered with subsidies over and above income tax benefits for businesses (but not for private use), not to talk of the heavy subsidies going into fossil fuels like diesel and kerosene. There is no promotional activity other than lip service on a generous scale. The real need is to demonstrate solar cooking to small groups of people, preferably by people who use it themselves and look for basic conditions for it to take roots—such as availability of space and sun, a certain privacy and security, and favorable circumstances at home, such as someone being available during the day who attends to the kitchen. Obviously solar cooking will not work in the slums or in high-rise buildings where access to sun may be difficult or for families where all the adult members go for work. But India is a vast country with one billion people and there are millions of households where it will work.

Frustrated at the lack of attention being paid to solar cooking, I have just finished writing a book which I have called *Making the Most of Sunshine—A Handbook for the Common Man* in which I have tried to evoke an interest in solar cooking. It is under print. Now that this preoccupation is off my back I hope I can devote some time to popularizing solar cooking, at least in my neighborhood for a start. I am looking for likeminded people in this effort and am happy to report some success.

S. Narayanswamy
J-7, Jawaharnagar
Trivandrum 695 041
India

email: snswamy@md2.vsnl.net.in

Conference to be held in South Africa

The South African Department of Minerals and Energy (DME) will be hosting a solar cooking conference, tentatively scheduled for November 27-29 in Kimberley, South Africa. The conference will focus on results of a unique pilot project conducted by Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ) GmbH, a German technical organization, in conjunction with the DME.

The project was designed as a comparative test of various types of solar cookers. 70 families, from three test communities in northwestern South Africa, tested seven different models of cookers in a round-robin fashion over a one year period. Four cookers that achieved the highest user satisfaction—the ULOG, REM5, and

SUNSTOVE® solar box cookers and the SK-series solar parabolic cookers—are now being produced locally and distributed through selected markets.

Results from the project show that, on average, solar cookers were used at least once a day 38% of the time. Families were satisfied with 93% of all solar cooking outcomes.

For more information about the conference and project, write to: Solar Cooker Pilot Programme, c/o P.O. Box 3078, Pinetown, 2123, South Africa. Tel: +27 (11) 886-4661, fax: +27 (11) 886-7753, email: gtz@pdevc.co.za, web: www.solarcookers.co.za

Solar Dryers in Burkina Faso

*The following is a summary of an article appearing in the November 1999 issue of Sustainable Energy News, newsletter of the **International Network for Sustainable Energy (INFORSE)**.*

By 1993, over a period of less than a decade, annual commercial agricultural production in Burkina Faso had tripled to 130,000 tons. This rapid production growth led to market saturation, ultimately resulting in lower prices and surplus sales. To help counteract this situation, environmental NGO **ABAC-GERES (Bourkinabe Association of Community Action - Environment and Renewable Energy Group)** began promoting solar dryers, which would allow women to better preserve food to sell at a later date. The strategy included introducing the program to its beneficiaries, transfer of knowledge, marketing and technical components.

Since many of the women were somewhat hesitant to take entrepreneurial risks, ABAC-GERES decided to introduce the program through women's organizations instead of individuals. That way, the risks and rewards are shared among many. Training modules and didactic information tools were developed to educate the women on the operation of solar dryers. The women were also assisted in creating marketing strategies to counter opinions that dried foods are mediocre and heterogeneous in quality. The type of solar dryer used in this project is a "shellfish" dryer that can be individually adapted, is reliable, easy to clean, and affordable.

Four thousand dryers were purchased between 1993 and 1998, 2/3 by women's groups in rural areas. Using all dryers, more than 100 tons of food can be dried each 4-6 month agricultural season.

The project has helped communities both financially and from a nutritional point of view. The people now have a new source of food during periods of food shortage.

For more information contact: **Gabriel Yameogo**, ABAC-GERES, 01 BP 4071, Ouagadougou 01, Burkina Faso. Tel: 226 362630, fax: 226 360218, email: geres@fasonet.bf

Correction

In the December 1999 *Solar Cooker Review* we erroneously stated that cookers made by **Stanley Wooton Kitandala** of Tanzania contain a large metal bowl. The bowl is actually made of plastic.

Contributors to this Review

Many thanks to

Dave Ruppe, Impact Publications, Medford, OR, USA, for design and layout
Gnibouwa Diassana, Della Land, Hubert Paul Normil, and Rosalyn Rappaport
for your inspirational reports
Nancy Valentine, for the alternative birthday gift idea

Living Tributes

Sister Margaret Park in honor of her aunt **Grace Crate**

Gifts That Keep Giving

Alternative Gifts International (AGI) offers gift giving that remembers the less fortunate. Solar Cookers International (SCI) is one of the beneficiaries of AGI's work. Over the past four years AGI's donors have contributed 2645 solar cookers for refugee families in eastern Africa. For a free catalog call AGI (in the USA) at 800-842-2243 or write AGI, P.O. Box 2267, Lucerne Valley, CA 92356-2267. AGI's email is altgifts@sisp.net and website is www.altgifts.org. To go directly to information on Solar Cookers International's projects at AGI, click [here](#).

Solar Cooker Review is published two or three times a year, with the purpose of presenting solar cooking information from around the world. Topics include solar cooker technology, dissemination strategies, educational materials, and cultural and social adaptations. From time to time we cover related topics such as women's issues, wood shortages, health, nutrition, air pollution, climatic changes, and the environment.

Solar Cooker Review is sent to those who contribute money or news about solar cooking projects. The suggested subscription price is US \$10/year. Single copies are sent free to select libraries and groups overseas.

We welcome reports and commentary related to solar cooking for possible inclusion. These may be edited for clarity or space. Please cite sources whenever possible. We will credit your contribution. Send contributions to Solar Cookers International, 1919 21st Street, Suite 101, Sacramento, CA 95814-6827, USA. You may also send them by fax: 916-455-4498, or email: info@solarcookers.org

Solar Cooker Review is compiled and edited by the staff of Solar Cookers International, with layout provided by IMPACT Publications located in Medford, OR, USA. SCI is a 501(c)(3) nonprofit organization whose mission is to spread solar cooking to benefit people and environments worldwide.