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International Program Development
Kenya Report
(October/November 2007)

This report will reflect my trip to Kenya from October 24th – November 14th, 2007.

The primary goal of this trip was to familiarize myself with current projects and procedures in Kenya, as well as the SCI/East Africa Staff. The secondary goal was to accompany Bob Metcalf to meetings regarding the proposed water-testing project to begin in 2008. These goals were accomplished well and I obtained a good deal of perspective on SCI's procedures and priorities in general, as well as insight into possible future developments, both locally and internationally.

Nairobi:

During my first week in-country, I was fortunate enough to observe as well as participate in a very well put-together demonstration at the Pastoralist Exhibition from October 29th – 31st in downtown Nairobi. Faustine, Stella and contributing SCOREPS and volunteers put on a very professional presentation of a variety of solar cookers and hay baskets, along with lovely crafts made by our solar cooks. A bit of food was available and the crowd was consistent, assisted by an ever-attentive SCI staff. The public demonstrated great interest and a general agreement on the state of the environment and deforestation, and all seemed to see the benefit of solar energy and were quite interested in purchasing a solar cooker 'at some point'. Some food was cooked at the demonstration, but not very much; it is my opinion that a solar cooking demo is not complete without the proof in the pudding (so to speak) and food should be a large part of any demo, in Africa and in the US.

Nyakach:

My second week in Kenya consisted of a voyage to the Kisumu region, northwest of Nairobi by Lake Victoria, and supplied me with a good idea of how solar cooking has been adapted in the western area of Kenya where Sunny Solutions was founded almost five years ago. John Amayo has a motivated crew in the Kadibo office (founded about a year and a half ago with funding from GVEP). The nine Kadibo SCOREPS were enthusiastic and excited about their work. The SCI office in Kadibo is located directly across from the weekly farmer's market, so it's quite visual in the community. Reportedly, the Kadibo office has moved more quickly than the Nyakach office, which was the start of Sunny Solutions and is reported to be phased out in the near future. John and the Kadibo SCOREPS expressed concern that, although SCI/EA is receiving an increased widespread acknowledgement through radio broadcasting, SCI/Kadibo is not able to respond to requests for training in outlying areas without transportation. The Kadibo SCOREPS were also able to participate in a water-testing workshop with Board

President Bob Metcalf, who I had the pleasure of traveling with on the Safe Water Project mission. As Bob likes to say, we are ‘demystifying’ microbiology so that everyone in the world can understand and use a PML (Portable Microbiology Laboratory).

Possibly an under-tapped resource in Kadibo, The Ministry of Agriculture (MOA) seems to be very involved in promoting solar cooking in the Kadibo region (much more so than the Ministry of Education (MOE), providing local demos, information and food at local venues. The MOA staff uses CookKits at home and for demos where integrated (not just solar) cooking is promoted. The MOA is closely associated with energy conservation (including heat, wood and environmental), food, HIV/AIDS assistance to women / youth and tenement groups. We met with Joyce Naporter of Environmental & Land Development, and Rhoda Apunda of Home Economics; both of whom have given local demonstrations in over seven regions. In much the same way that we are beginning to work with the Ministry of Health (MOH) and the Water Resource Management Authority (WRMA) with our water-testing project, it is my opinion we should have a heavier collaboration with the MOA & MOE, possibly working to subsidize the distribution of CookKits and hay baskets in Kenya. More education, also, is needed in schools and health clinics explaining deforestation, water-borne diseases, and air quality in local languages.

Dinah, our Sunny Solutions Project Officer, was so welcoming and took the time to show me around the Nyakach region for the majority of a week, visiting individuals’ houses as well as women’s groups in each of the four regions of the Nyanza province, and we were guided well by SCOREPS in charge of each particular area. There are about twice the SCOREPS in Nyakach than in Kadibo, and twice the ground seems to have been covered. These solar cooks in Nyakach are, more often than not, in very remote parts of the region, and it was heartening to see so many local people actively using their CookKits on a regular basis. Regarding women’s groups, they seem to be a good target for solar cooking since they are inclined to pool their money and make investments based on developing projects that might sustain them as a group. Groups appeared to be consistently able to pay for the CookKits through selling solar cooked food, in addition to other craft-oriented projects like mat-weaving, vegetable gardens, soap making and the building and selling of hay baskets.

Villagers were consistent in reporting that solar cookers are beneficial in that they reduce the time and money required to collect and pay for wood. Women also reported having more time to do other things while the food is cooking; they enjoy being able to leave the pots as they go to work, gather water or shop, and food is ready when kids come home from school / husband from work. The average villager spends approximately 50C per day on firewood and/or charcoal. People see the benefit of solar cookers in their daily lives, they understand that trees are slowly being depleted from their environment and that, because of this, they can’t afford to purchase fuel to cook with.

SCOREPS:

Challenges in the field reported by staff and SCOREPS:

- Attitude towards changing behavior are hard to overcome
- Cookit too expensive ~ payments not made
Cookit only able to be purchased, pot needs to be bought later
Often one payment is made & no more are possible
- Radio announcements create requests in far out regions of Kenya, making increased mobility more necessary
- Rain & bad weather make the terrain & roads difficult to traverse
SCOREPS travel in the rain to make house visits (request gumboots)
- Phones are few & far between, making communication in remote areas difficult
Many SCOREPS now have cell-phones
- Catch 22 ~ more sales in urban areas (higher salaries) but rural is the target
- Still the 'what will I do when it's cloudy' question – need to incorporate integrated cooking at a grander scale
- Cloudy days in Kenya are increasing
- Villagers are sometime reluctant to leave cooker outside, b/c of animals or theft
- Tea in the morning cannot be warmed with a solar cooker
I met a number of women who professed to heating water on [a traditional] stove the night before and having water hot enough to eat porridge in the morning when kept in a hay basket over night
- Ugali with sorghum does not cook properly, the sorghum floats to the top

Solutions suggested:

- Need more marketing (M)
- ITDG – Practical Action, more participation
- Community support – one woman watches cookers while others work / collect water, etc.
- Suggest one month trial (perhaps 2 Scoreps could try first):
Provide cookit & keep the money saved on firewood to pay for cookit (ke)
- All energy related organizations collaborate
Common meeting w/ facts presented
- Engage as many organizations as possible
- Set government standard of documentation; provide incentive for government workers to work with solar
- MOA emails reports to upper ministry regularly (cc SCI)
- Education: People need to be educated on the state of the environment; rates of deforestation and air and water quality issues. Open wells, dirt and feces... Pamphlets in the local language distributed to schools and clinics.

- Sifted Ugali without sorghum cooks very well without the need for pounding or stirring (as with the traditional method)
- Women's groups are very good at pooling their resources to make purchases, sell goods, outreach to community; many are familiar with micro-finance and budgeting money ~ focus more on groups, schools, health clinics, assisted living groups.

SCOREPS in all 3 areas requested:

- ~ Light grey t-shirts (darker colors get sun stained & appear dirty)
- ~ Umbrellas
- ~ Gumboots
- ~ Regular shoes
- ~ Bikes
- ~ A salary (!)

Hard working SCOREPS do a good deal of footwork for SCI/EA and one can't help but wonder if they are utilized enough. It is hard to know the reality, since SCOREPS say they are in dire need of the things listed above but SCI/EA staff says they are well-provided with these items & that their salaries are commiserate with average local pay. I do believe that SCOREPS should always be provided with the materials needed to work in the conditions in which they are asked to work, and that a minimum of two t-shirts should be provided to all staff, perhaps more for those who wear them as a uniform to work. If SCOREPS lose motivation &/or momentum, it is up to SCI to provide adequate incentive to maintain productivity.

Alternative Technologies:

During a 'community meeting' involving most of the supervisors, SCOREPS and stakeholders in the northern region, it was mentioned repeatedly that the name "*Sunny Solutions*" implies that the solutions themselves are plural, not singular as in the form of a single technology (namely the CookKit). Farmers and field workers in villages seem to be looking for additional solar technology to supplement the benefits gained from the CookKit. These comments came at a time when I had just observed the amazing number of solar panels on individual houses in the bush, indicating that advanced solar technology has already penetrated the very depths of African villages and more access and availability are inevitably on the way. SCI has recently expanded its core mission from promoting solar cooking and water pasteurization only to the addition of a safe water initiative, via Bob Metcalf's revolutionary PML being made available to the Ministries of Health and Water in Kenya. I believe that it would be beneficial to SCI and the communities that we assist to incorporate small photovoltaic (PV) devices to our solar repertoire. Simple solar panel-powered devices like flashlights, lanterns and chargers are fairly inexpensive but extremely practical and effective for rural areas.

Partnerships:

For a nonprofit project like ours, based in a community whose individuals have difficulty raising the funds to purchase a relatively inexpensive product like the Cookit, partnerships will most likely be the most effective way to get solar cookers out into rural communities without relying on unpredictable sales to those who can't afford them. In addition, nonprofits in developing countries have the reputation for giving things away, not selling them, so there very well may be underlying expectations on the part of individuals asked to buy materials from an organization like ours.

Here are some of the nonprofits that the EARO has had involvement with: World Vision bought 1,000 cookers and distributed them to villagers, and it is their goal to distribute 5,000.

NYACODA helped to establish SS in the Nyakach area.

AVIF – Volunteers in Kenya; <http://justfriends.moonfruit.com> who have provided SCI's contact information to interested institutions in the area. Organizations such as these are instrumental to our success, and need to be fostered. Partnerships are an invaluable resource to a company that depends on donations.

ITDG – Practical Action; EPA has offered financial assistance on the condition that SCI works with ITDG. Both parties have agreed.

Here are some contacts listed in the Archive, currently doing nonprofit work in Kenya and based in Nairobi, that look like good folks to continue networking with:

- Charles Lepantas Leshore * Solar Health & Education Project
- Mark Hankins * Energy Alternatives Africa, Ltd
- Mr. Joel Kingori Maina * Igoko Enterprises
- John Ngatia * Trans World Radio * SOLAR COOKER DEPT
- Charles Onyango-oloo * Altener Solar Ltd
- Secretary * Mugunda Fighters Of Aids (mufoa)

Integrated Cooking:

The Jiko: Jiko means stove in Swahili, and the Domestic Jiko is one of the locally made fuel-efficient stoves available in Kenya. The Jiko is a simple stove, easily manufactured by local women out of clay, and available in few different styles to compliment different cooking methods.

Vi Agroforestry has provided a template for a jiko stove to local women who are making and selling these products for profit.

Suppliers of The Domestic Jiko:

Program Officer, Wambugu (Central Highlands), PO Box 5069, Nyere, Kenya

- Mr. Richard Kimani, Jerri International, PO Box 52747, Nairobi, Kenya
Institutional stoves:
- M.r C.J. Davey, Bellerive Foundation, Ngong Road, PO Box 42994, Nairobi, Kenya Tel.: 254.2.720 274; Fax: 254.2.726 547
- Charles Gitundu, Rural Technology Enterprises, PO Box 28201, Nairobi, Kenya, Tel.: 796352
- <http://ces.iisc.ernet.in/energy/paper/tech101/jikostove.html>

While the hay baskets being constructed in Kenya are attractive and effective, I did not see any evidence of their use in any of the districts or houses I visited. Integrated cooking is the collaboration between organizations and technologies that provides the greatest overall reduction in fuel wood burning. It is important not only to promote integrated cooking as the most effective way to cook using the least amount of firewood, but to establish contact and partner with local organizations involved in fuel efficient stoves, air pollution and deforestation issues. Integrated cooking cannot happen without each technology promoting the other. Surprisingly, proponents of fuel efficient stoves often overlook the benefits of solar cooking, thinking of it as a competitive rather than complimentary technology. Work is needed to bring these technologies together to a similar mindset for the benefit of people and communities.

Resource Center:

SCI/EA would like to expand its Sunny Solutions efforts to develop a Resource Center in the Kisumu area. Its main goal, according to the EARO, is marketing solar cooking products and to serve as the hub for solar training and information resources in the communication and trading confluence of Kenya, Tanzania, Uganda, Rwanda and Burundi that is Kisumu. To meet the growing demand for information resources on solar cookers and training on their use, EARO seeks to create the first multifunctional center that educates, trains, markets and distributes solar cookers and related fuel-saving technologies. The Center will be phased in over three-two year periods, with each phase having a broader geographic reach. Phase 1 will focus on Kenya's Nyanza and Western Provinces. Phase II will broaden activities to include eastern Uganda and western Rift Valley province. Phase III activities will also cover northwestern Tanzania and central Uganda. The Kisumu Marketing and Resource Center will be the cornerstone of SCI's larger initiative to increase market access to solar cookers in eastern Africa.

Safe Water Project for Kenya:

On the 26th of October I accompanied Bob to a meeting with the WRMA (Water

Resources Management Authority) head office in Nairobi to discuss the progression of the rural water testing Safe Water Project that Bob had proposed earlier in the year. While the Executive Officer was not available for this

particular visit, we were greeted warmly by a small group of active participants involved in the execution of the project, and given an excellent power point presentation by Rose Namori, the Water Quality Manager with a microbiology background. Rose and her team spearheaded the rural water testing project for WRMA, documenting scientific results comparing effectiveness between testing water in a laboratory vs. in the field with the PML. Results showed that the PML is an effective process by which to test water, prompting WRMA to adopt the technology and incorporate it into their official procedures (which currently is not able to reach very rural areas). The Ministry of Health was also contacted and has expressed a similar enthusiasm for incorporating the PML into government standardized water testing. This kind of adaptation by government organizations primarily involved in Water Management in Kenya is unprecedented and a breakthrough in the realm of rural water processing and treatment.

On November 2nd, Bob, Faustine and I traveled to the town of Embu, northeast of Nairobi, where we met with a previous acquaintance of Bob's: John Rimberia, who handles Quality and Pollution Control for WRMA. This meeting was attended by six other WRMA employees, along with a representative from the Ministry of Health in Chigoria and a Water Sector Reform Technical Advisor from Germany. John works closely with Rose Namori and might be willing to take on the role of Country Coordinator for the project.

Bob and I plan to provide a workshop for members of WRMA & MOH, SCI/EA staff and various other interested participants in the western Kenya community, however, plans for this to happen in January were put on hold following the outcome of the presidential elections at the end of December. Plans have been pushed to this summer and remain the same; specifically training select members of government organizations to then go on to train others in their domain.

As is commonly the case in working with Mr. Metcalf, appreciation of the introduced technology is obvious, and the enthusiasm level is high on the part of all participants. This is an exciting endeavor for SCI, and entering the field of water testing technology will be a nice enhancement to our strong commitment to the people and environment of third world communities. The fact that the WRMA and MOH have agreed to work together is a significant step, since there has never been a collaboration of this kind between government agencies in Kenya. This revolutionary process is bound to make big waves and influence countless countries in need of an alternative to current and expensive methods of testing water in rural areas.

Possible Small Projects for Funding:

➤ Korea Women's Group

Central Nyakach – November 9th, 2007

45 members, all have CookKits, widows

cook food as they work on mats, pasteurize water

Request borehole for gardens, chickens

SAGA micro-enterprise

Korea (sp?) Womens Group – Bore hole, Nov 9 – Hesbon's

SAGA is a microfinance org – they're interested, want more info

➤ Flashlights (Bogo Light)

Buy 2 flashlights – one goes to you, & one is donated to an NGO on their list (refugees, etc). I have requested to get SCI on their list, and we could possibly post their information on our website in return. I would like to add this item to small PV items to sell, either here or in Nairobi, or both.

➤ Osiepe Womens Group

Request \$600 for generator to pump water uphill to grow tomatoes, other crops

➤ Buy concrete for contaminated well in Kadibo
(Pix of me taking sample)