Global Network for Solar Food Devices: Future Priorities

Bev Blum, Solar Cookers International Association
4271 Round Valley Circle
Stockton, CA 95207 USA
association@solarcookers.org or blumbev@aol.com
Tel. +209-477-5970

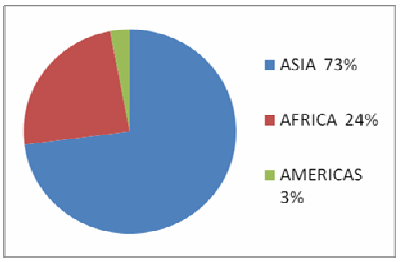
1. Abstract

The worldwide need for - and benefits of - solar cookers and food processers are great and so is the potential for collective efforts to spread access to them. As individual promoters we often feel at the mercy of skeptical policy makers, doubtful consumers, and lack of money. At the 2006 International Conference on Solar Cookers and Food Processing in Granada, Spain, an international network was formed to collectively overcome these and other shared challenges. Called the SCI Association, its membership has grown to 95 organizations and 150+ individuals. It has lobbied policy makers on our relevance to carbon credits, health and environmental hazards, and created an interactive web site featuring all members. Conference attendees are urged to comment on questions in this paper and contribute ideas for this network's goals and structure for the next years, especially future networking in the Asian Pacific Region.

2. Introduction

We're here to celebrate the sun and its uses to solve major problems. Both traditional cooking fuels and modern cooking fuels are unhealthy for people, hard on the planet and unsustainable in the long run, and already scarce for 1 billion – that's one thousand million people! At least half of them live in sun-rich climates, but only about 1% of them have access to solar cookers and food processers. So we're here also to explore new ways to spread access to solar devices to the other 99%. Where do they live? By my very rough estimates, most live in just 25 countries, and 73% live in just six Asian countries:

World distribution of ½ billion who urgently need solar cookers



BEST COUNTRIES FOR SOLAR COOKING

World rank	**ASIA PACIFIC REGION**	Total Population in millions (1,000,000s)	Est. % pop. short of fuel with ample sunshine	**Urgently need solar cookers** **today** (1,000,000s)	**by 2050**
1	India	1,169	13%	**152**	**200**
2	China	1,320	8%	**105**	**111**
3	Pakistan	164	23%	**38**	**80**
10	Afghanistan	27	17%	**6**	**16**
12	Nepal	28	17%	**6**	**11**
22	Sri Lanka	12	11%	**2**	**3**
	ASIA total			**307**	**420**

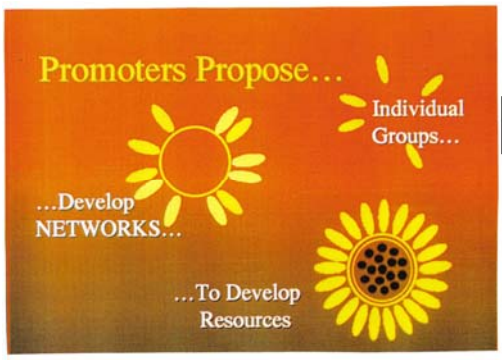


Diagram from SCI's 1994 Conference in Costa Rica

Hundreds of groups worldwide are spreading access to simple solar tools for fuel-scarce regions of the world. At each of twelve international and regional conferences between 1992 and 2005 there were discussions about more networking. At the 2006 International Solar Cookers and Food Processing Conference in Granada, Spain, Solar Cookers International Association (SCIA), was formed. SCIA's purpose is to "Improve health, economics, societies and environments through collective actions to spread solar cooking, pasteurizing and food processing." Its legal umbrella is Solar Cookers International (SCI), source of the 'archive' website, the *Solar Cooker Review,* and most of the above conferences. So far, SCIA has

- issued statements on carbon credits and solar cookers' relevance to indoor air hazards, and worked to build credibility with UN agencies WHO and HCR
- created an interactive web site featuring all organizational and individual members
- brought together SCI's U.N. Representatives and other key advocacy activists through its Advocacy Task Force
- grown to 95 member organizations and 150+ individuals with diverse devices and a common passion to spread these technologies for health, economic and environmental benefits.

SCIA is ready to take bigger steps and seeks ideas to recommend to its membership for its next goals. A question to keep in the forefront is: Which tasks might be easier collectively than as separate, independent individuals and groups?

3. Background: Challenges for promoters

As promoters of low-tech thermal solar devices many of us – at least outside of Asia – complain about skeptical policy makers, doubtful consumers and lack of money. I would add gaps in projects and incapacity to upscale. These are poor excuses to give up easily. Let us instead gather our collective wits and deal with, transcend or bypass these challenges.

Skeptical policy makers

Policy-makers looking for solutions to fuel shortages and smoke-related problems often only know about fuel efficient stoves. Our challenge is to find out how they did it and make solar devices equally accepted as valuable and complementary options. Big institutions are conservative - rarely ever innovative change agents and nearly always the last to take chances on new things. Many nations' policies make unreplaceable fossil fuels appear cheaper than solar alternatives because they charge no carbon taxes and even give subsidies. On the plus side, solar is a popular buzz word these days, and SCI's U.N. reps report high interest when they mention our network and they feel it strengthens their influence. Some governments respond to public pressure, and we can add our voices to surmount that inertia.

Doubtful consumers

Solar cookers promoters often re-invent strategies that don't work and we all suffer from that accumulation of failures. Until adopted and endorsed by trend setters and local leaders, introducing solutions to the neediest is usually costly and surprisingly difficult. Who among us

yearns for new technologies targeted only to the desperately poor? The first “risk takers” in any community to try new cooking devices (or anything else) are community leaders such as school teachers and other professionals with a bit of extra income. The rest of us are not risk-takers. Ironically, the quickest path to serving the poorest must pass through a commercial marketing phase to the affluent. Projects with too-short time frames imposed by funders also usually fail.

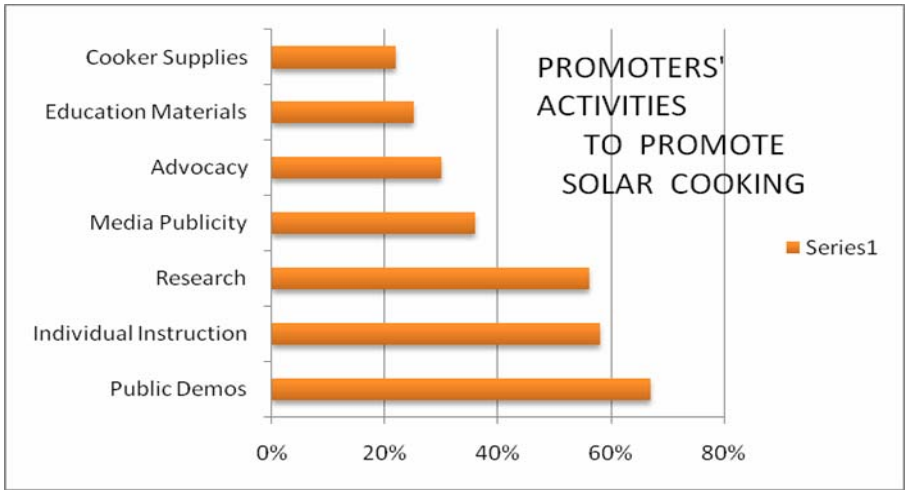
Lack of money

There are ongoing debates on the merits of give-aways, subsidies and affordable products. Our two principal markets – public commerce and humanitarian agencies – can both be either commercial or subsidized, but when subsidies end, so do their projects. We have often failed to exercise a common sense, business approach that aims for long-term sustainability and pays close attention to and responds to customer needs.

The good news is that today there are truly cost-benefit, affordable solutions that compete price-wise and durability-wise with consumers‘ other alternatives in every price range - even for the huge marketplace of least affluent– the so-called Last Billion. Charitable subsidies and free gifts will always be needed to help elderly, disabled, refugees and the poorest. I believe we accelerate access to the neediest best by promoting commercial enterprises, reduce unit costs and effectively market our products to charities.

Money doesn’t remove all challenges, but all programs and especially upscaling do require money, so everybody needs it. Since most money sources are cautious institutions, a plus of SCIA is that its long membership list helps build confidence in our technologies when we seek loans or grants. Is this benefit enough? A key question for the network is whether it should compete with its members for funds? If so, for what activities?

Gaps in programs



We also often omit key elements for success, so ready, eager consumers aren’t served (see chart above). Are there any ways to collectively assist independent promoters to reduce gaps in their projects and increase sustainable results?

A word about integrated projects: Using solar cookers together with fuel-efficient stoves and retained-heat cookers mean maximum fuel savings and smoke reduction, so integrated cooking is a ‘best practice’ for all of us. Should each solar cooker program therefore become expert in all three? Only very superficially is introduction and promotion of solar cookers similar to that for fuel-efficient stoves or other household technologies. Each of these simple devices have diverse and complex variations in fuel and money savings, safety, convenience and

technical details of production, consumer education, and marketability. It is difficult for any one agency to achieve sustained impact for one, let alone several technologies. Can we instead strengthen links to the experts in related technologies toward more integrated programs?

Not ready to upscale

Now, if we suddenly persuaded key policy makers and they were ready to order millions of solar food devices, who is ready to fill those market demands? Very few, except in Asia, have yet developed capacities for training, marketing, production and distribution for even tens of thousands, let alone millions toward the 99 million needed. The vast commercial market potentials for solar cookers and food processers among both the general public and international relief and development organizations, are hindered by small-scale, high-cost products.

Upscaling is complex for many reasons. Money alone can't buy quick cost-effective, efficient and professional upscaling. Large-scale efforts to introduce new ideas by the biggest, best development organizations with lots of funds often fail. Bad press and cynicism then re-enforce caution among those with greatest resources to make future things happen.

Upscaling requires multiple partnerships to bring together resources, expertise, and participation by target populations. Government agencies, UN agencies, businesses, educational and health institutions, and NGOs, each have unique roles to play. Partnerships by nature are time-consuming and unpredictable. Small agencies always hope to persuade larger agencies to take on their mission and to continue community-based approaches working with local leaders and institutions -- much harder to do on larger scales. Yet, upscaling will lower unit prices and accelerate acceptance. Are there any ways SCIA might accelerate capacity-building for effective upscaling?

4. Project: Possible 2010 goals for SCIA

After considering bigger questions, SCIA needs clear priorities and short-term goals for the immediate future. For example, could we collectively double the number of solar cookers and food processors from 1 million (estimated today) to 2 million in the next two years?

It would take endorsements and major funding by big agencies. Currently there are multi-year advocacy campaigns underway targetting the U.N. World Health Organization, the U.N.High Commissioner for Refugees and various U.S. government agencies. Indian and Chinese governments are already the largest promoters. Does this goal seem modest enough?

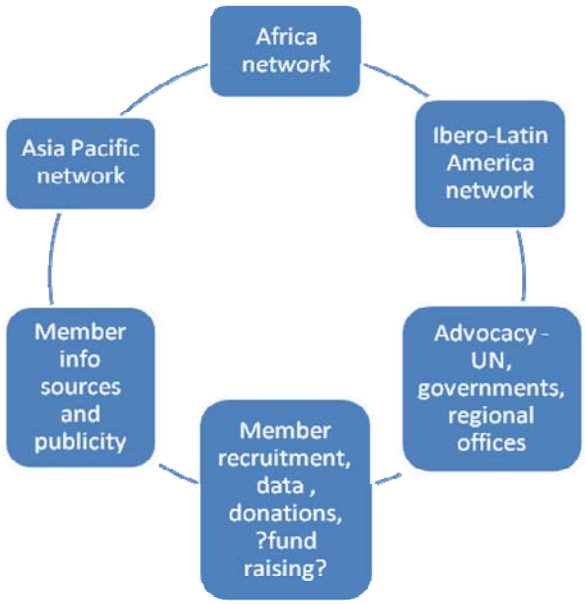
It would also require major upscaling in selected countries by not one, but many, promoter agencies for training, production, distribution, marketing for long term projects. Might we collectively explore the possibility of, for example, 20 agencies distributing 50,000 (more) solar devices each? Would a more formal Asian Network be useful? How else might 1 M solar devices be made accessible? What else would it take?

Our network has a number of useful communication forums: SCI's universal web site, the journal *Solar Cooker Review,* and its query-response service; SCIA's interactive website and member newsletter and occasional conferences like this for collective debate. As another goal, what tools might be most helpful to reduce gaps and increase successes in all members' projects? Would more regional forums help promoters? Are there other ways for larger programs to mentor smaller ones in their region? Should we collectively begin organizing a next international conference? Might we 'piggy-back' on other, larger conferences about every four years?

SCIA's original structure was very loose, with SCI as its legal umbrella, a volunteer secretariat and seventeen individuals comprising a Steering Committee. All seventeen are engaged in

their own intensive projects. I propose a smaller Steering Committee composed of reps from six or seven member agencies especially focused on advocacy, networking and communications. As the current Secretariat, I recommend its functions be distributed to other member agencies for a stronger foundation for the network, but retaining SCI for its U.N. consultative status and communication services. Mergers with other networks might be desirable. I also recommend a new name to represent its broad base of members, such as International Solar Food Network or International Network of Solar Cooking and Solar Food Processing or Global Solar Food Technologies Network. Other suggestions are solicited An organization chart might look something like this:

NEW NETWORK STRUCTURE POSSIBILITY for discussion



More ideas on the above suggestions will be greatly appreciated and recommendations from this conference will be forwarded to the membership to vote on. This conference also offers an ideal opportunity to ask, “What short range outcomes are most important in Asia and which of them could be done best collaboratively? Would a more formal Asian Pacific Network make sense? What would it look like? All suggestions and comments will be gratefully received.

5. Conclusion

Together, independent promoters of solar food devices are increasing successes by building on each others’ strengths and experience and collectively confronting challenges. This conference is a valuable opportunity to gather recommendations to submit to international members and also to explore future networking in Asia on behalf of the half billion people still without access.