PARTNERSHIP FOR CLEAN INDOOR AIR

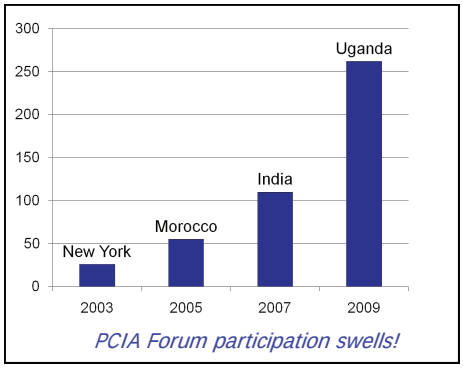
April 2009 Issue 19

PCIA Bulletin

This quarterly newsletter provides updates on the activities of the Partnership for Clean Indoor Air (PCIA) and its Partners to improve health, livelihood and quality of life by reducing exposure to indoor air pollution, primarily among women and children, from household energy use. More than **280** governments, public and private organizations, multilateral institutions, and others are working together to increase the use of affordable, reliable, clean, efficient, and safe home cooking and heating practices. *Visit www.pciaonline.org to join!*

Our PCIA Global Community in Action

Some 262 Partners from 35 countries gathered at the 4th Biennial Partnership for Clean Indoor Air Forum in Kampala, Uganda March 23 – 29, 2009 to document results to date, learn from effective programs & activities – celebrate results, review, further develop and affirm strategies for success and commit to organizational and global actions aimed at bold future goals. A record number of participants made this the largest gathering of household energy and health practitioners, leaders and experts focused on clean and efficient cooking technologies and fuels to date.



PCIA Forum participation swells!

Participants from Government, NGOs, academic institutions and private companies represented a wide range of sectors, including environment, energy, health, gender, education, and development. Participants shared best practices in the four priority areas proven to be essential elements of sustainable household energy programs: meeting community needs, improving stove design and performance, commercializing cooking technologies and fuels, and assessing impacts of interventions.

An engaged and enthusiastic participant group and captivating speakers made for a tremendous event!

2009 PCIA Forum Proceedings

Forum agenda, roster and presentations are now online!
Posters, photos, films and awards details are coming soon!

http://www.pciaonline.org/proceedings/2009Forum

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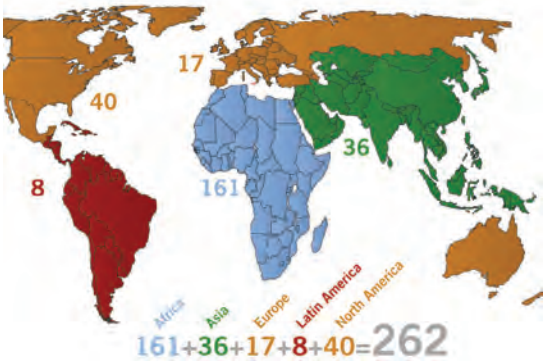
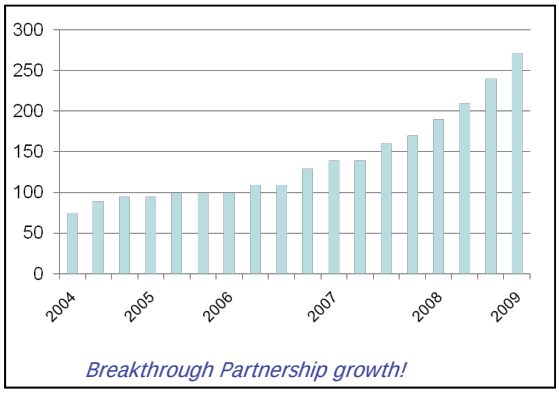


Partners came from across the globe to make this Forum our most successful ever!

Since the launch of PCIA with a handful of Partner organizations in 2002, the Partnership has grown to more than 280 organizations working in 115 countries around the world to reduce people's exposure to harmful indoor air pollutants from burning solid fuels for cooking and heating. With your help actively recruiting new Partners, the Partnership will continue to grow.



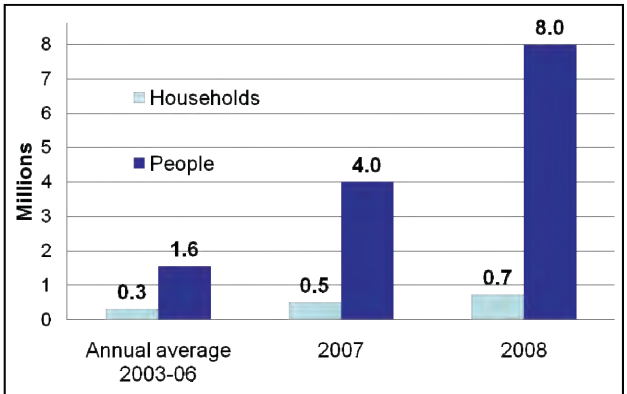
Breakthrough Partnership growth!

Global Assessment of Partner Results

We started the Forum with 46 Partner organizations reporting results. By the last day of the Forum, we had doubled that number with 93 organizations having submitted results reports, and they're still coming in!

Some current facts on Partner results:

- Some individual Partners are routinely doubling the numbers of households and people served with cleaner, more efficient cooking technologies every other year -- and in some cases, every year.
- PCIA as a whole – all of us together – are more than doubling the numbers served... every two years!
- Partners disseminated 500,000 improved stoves in 2007 and 700,000 improved stoves in 2008, impacting the lives of 12 million people during the last two years.



Results from 87 reporting organizations: Partners are helping millions use cleaner cooking technologies!

During the Forum, Partners in the room set breakthrough goals for the coming three years:

Year	Improved Stoves
2009	4,986,133
2010	10,906,856
2011	26,364,817

We believe this level of breakthrough growth is within our reach. **We believe it because individual partners and PCIA overall are already doing it!**

PCIA, on behalf of all its Partners, is thinking big, for the long term, for real. PCIA is committed to regularly and routinely doubling the impact and results of our Partners, year after year.

☼ HIGHLIGHTS FROM THE FORUM

Monday– Call to Action
Daniel Wilusz, US Department of State

The Forum kicked-off with opening remarks from several prominent speakers who highlighted the purpose and importance of the gathering. Reinhard Buchholz, German Ambassador to Uganda, warned that several of the MDGs will not be achieved without addressing the problem of indoor air pollution (IAP). John Hoover, the Deputy Chief of Mission at the U.S. Embassy to Uganda, encouraged the group to set ambitious goals and to turn best practices into common practices. Honorable James Baanabe Isingooma, from the Ministry of Energy and Mineral Development (MoEMD) in Uganda, warned that, at present rate, his country will consume all of their biomass fuel by 2025. To address the problem his Ministry supports four approaches: research and development, capacity building, awareness campaigns, and dissemination of improved biomass energy technologies.

In the second session Godfrey Ndawula, also from MoEMD, presented a government plan to distribute four million improved stoves by 2017. He called on development partners to help the government achieve their goal. The rest of the session focused on indoor air pollution, and PCIA. Dana Charron of the Berkeley Air Monitoring Group overviewed the health effects of indoor air pollution. She emphasized that emissions from biomass burned efficiently are relatively benign, but emissions from biomass burned inefficiently contain products of incomplete combustion that cause an estimated 1.6 million deaths each year. Brenda Doroski, United States Environmental Protection Agency (USEPA), described the impressive growth of the Partnership: from 100 member organizations in 2006 to 250 in 2008, and from 110 Forum participants in 2007 to 262 in 2009.

The welcome reception and poster session was a big hit

In the evening everyone gathered outside to meet other participants and learn about their work at a reception and poster session, one of many formal and informal networking opportunities. Over forty organizations displayed posters showcasing research findings, project results, and sample communication materials. The PCIA organizers offered a prize to whoever hunted down the most answers to a questionnaire about the posters – congratulations to the winning sleuth, Margaret Ottah Atikpo of CSIR CSIR-Food Research Institute, Ghana!

Tuesday – Building Better Stoves
Jim Jetter, US Environmental Protection Agency

Day 2 of the PCIA Forum in Kampala, Uganda focused on stove testing and provided participants with knowledge and tools needed for evaluating stove performance. Philippe Simonis, GTZ-Uganda, provided a rousing keynote and call to action, noting that one of the key factors for success is enthusiasm, optimism and perseverance; and that best practices are all over – it is upon each of us to turn them into success stories.

Elisa Derby, Winrock International, opened the testing sessions with an overview emphasizing the importance of knowing how stoves perform. Results reports indicate that 50 of 87 Partners reporting have performed some kind stove performance testing. Jim Jetter, USEPA, presented results of testing performance and emissions in the laboratory. Nordica MacCarty, Aprovecho Research Center, presented results of testing and explained fundamentals of the Water Boiling Test (WBT). Mariana Butrón, GTZ-Bolivia, presented results of stove testing in the field.

All conference participants had the opportunity to join one of eight groups for interactive, hands-on practice conducting the Water Boiling Test. Group leaders with testing experience shared valuable knowledge with many participants who had limited or no experience. Enthusiastic participants asked many questions, and lively discussions occurred during and after the testing demonstrations.

Participants learned that vital information can be obtained from testing stoves with simple,

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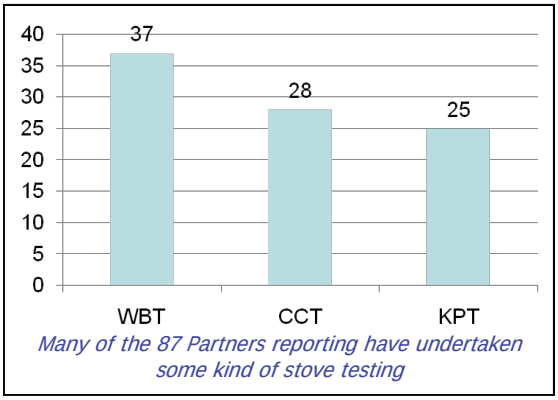
inexpensive equipment including a scale, used for measuring masses of fuel and water, a thermometer, used for measuring the temperature of the water, and a watch, used for measuring time to boil and simmer. A spreadsheet that makes calculations easier is available for free online. Participants learned that, while the basic principles of stove performance testing are easy to learn, carrying out tests requires practice, concentration, and skill.

During lunch, conversations on stove testing continued, and after lunch, Nordica MacCarty presented basics of the Controlled Cooking Test (CCT). Erika Tyler, Columbia University, presented a case study that involved the Controlled Cooking Test. All conference participants then had the opportunity to join one of five groups for an interactive demonstration of the Controlled Cooking Test. Stoves were operated by local cooks preparing a local food, as specified in the test protocol. Ugandan cooks prepared posho, a thick mixture of water and maize flour. Participants learned that, although the protocol instructs testers not to interfere with cooks, it is sometimes very difficult to resist giving advice to cooks!

Participants raved about getting to do hands-on stove testing during the Forum

After all testing demonstrations were completed, Nordica MacCarty processed the test data and presented interesting results. Participants learned that testing shows important differences between stoves, and testing can be used to improve stoves. Participants also learned about the appropriateness of various tests and about limitations of testing. Laboratory tests are often not predictive of field performance. The Kitchen Performance Test (KPT) protocol provides a method of evaluating performance in the field.



Many of the 87 Partners reporting have undertaken some kind of stove testing

Dean Still, Aprovecho Research Center, presented on Using Design Principles to Improve Your Stove's Performance. On Thursday during the field trip, Dean put words into action by showing a local stove manufacturer how to use testing and design principles to improve "real world" stove performance.

Larry Winiarski, humanitarian engineer and inventor of the well-known Rocket stove, received the PCIA Lifetime Achievement Award and a moving tribute with a multi-media presentation. Please see page 20 for an interview with Larry!

At the end of Day 2, a participant remarked in the evaluation that the testing demonstrations had helped "to overcome the fear of stove testing." Many others commented on the value of testing at the end of this very active day.

Wednesday - Engaging Your Community and Commercializing Your Stove Technologies

Dexter Matelakengisa, GTZ

Dr. Amare Gebre Egziaber from the United Nations High Commission on Refugees (UNHCR) delivered the day's keynote address. He spoke of the work that the UNHCR is doing to help refugees and the challenges that they face in terms of household energy. He pointed out that the UNHCR works with partners to protect the livelihood of refugees by introducing alternative energy including solar and ethanol. They also monitor to confirm that the intervention has made a difference in the environment and the lives of the refugees. They are very concerned with making sure that refugees' lives are improved by introducing improved cook stoves. It is for these reasons that he has taken it upon himself and his organization not to leave any stone unturned in

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finding the solutions to the problems of household energy and IAP. He requested help from PCIA Partners in terms of technologies.

Dr. Amare: "I have personally committed myself to understand household energy – in order to improve the lives of women refugees in Africa."

The first part of the day on Wednesday focused on manufacturing and technologies and fuels. Forum organizers asked participants to reflect on several questions as they listened to the presentations: How do we ensure quality control in the manufacturing process? What would be the benefits of integrating additional technologies, fuels into your project? What technologies/fuels would be appropriate for your target audience? What manufacturing processes can enhance your stove's performance?

Richard Grinnell of HELPS International, Dean Still from Aprovecho Research Centre, John Kuteesakwe from GTZ-Uganda and Priya Karve from Appropriate Rural Technology Institute presented on their semi-industrial and artisanal manufacturing processes in their areas of work.

A common theme to the presentations was that they are all distributing safe, efficient and effective high standard and low cost cook stoves. The key lessons learned from all presentations were, 1) testing is key; 2) the need to approach the projects as a business as donations dry up; 3) scaling up mass production; and 4) that spare parts be available at local stores. The challenge faced is meeting the demand and manufacturing quality with the increasing prices of raw materials.

Participant feedback on the presentations included observations on the great possibility for lightweight materials and the importance of getting user feedback to improve the stove design.

There were then three presentations on different types of fuels. Prakash Ghamire (SNV) and Bikash Pandey (Winrock International) presented on biogas; Margaret Owino (Solar Cookers International) presented on solar; and Milkyas Debebe (Gaia Association) on ethanol. The focus of the presentations was on the low emissions or no emissions of the fuel and efficiency.

The main points from the presentations were the importance of manufacturing stoves to meet the target people's need, testing the stoves to make sure they reduce emissions and that they are efficient and effective.

Engaging Your Community

Inputs from Lisa Feldmann, GTZ

During Wednesday's session on Engaging Your Community, participants heard case studies from Faisal Khan of Aga Khan Foundation-Pakistan; CAPS Msukwa of Development Technical Assistance Services, Malawi; and Jörgdieter Anhalt of Instituto de Desenvolvimento Sustentável e Energias Renováveis (IDER), Brazil. Forum organizers asked participants to think about what new strategies and approaches for engaging their local community they might try in their programs as they listened to presenters.

One focus of Faisal's presentation was on community exchange visits, through which target beneficiaries from a new intervention area are brought to post-intervention villages for experience and information exchange. Families in the post-intervention villages tell visitors among other things about the advantages and/or disadvantages of their new stoves. In one example cited, 38 people visited a village, were convinced of the benefits of the improved technology, and upon returning to their own village convinced another 219 households to adopt the improved stoves/water warming facilities. Lessons gleaned from these experiences is that peer to peer learning is reliable, more effective and less time consuming than other behavior change communication methods, a real confidence builder for participants.

CAPS spoke about mainstreaming household energy in Malawi, which aims to convince NGOs and other organisations to become active in the field of cooking energy by showing them how cooking energy can help them to achieve their

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own goals, including in such diverse sectors as food security, forestry, health, and HIV. The presentation highlighted several examples of successful mainstreaming projects with results including widespread adoption of clay stoves, household rocket stoves and institutional stoves.

Jörgdieter's presentation on environmental education focused on involving local communities in stove distribution and social research. This has taken the form of education in schools via theatre and information days; replanting firewood; and adapting stoves to the needs of local women as per their input.

A common theme to the presentations was that working with governments and working with communities is essential for success of projects.

Commercialization
Lisa Feldmann, GTZ

How can commercial stove dissemination be successful? What are relevant marketing principles? Why do we need commercial dissemination at all? Questions of that kind were discussed in the afternoon of Day 3 of the 2009 PCIA Forum. Five presentations were held discussing the experiences on commercialisation in Ethiopia, Burkina Faso, Ghana, and Senegal. The most important points and conclusions drawn by the presenters and the participants are included here.

Takeshi Takama from Stockholm Environmental Institute opened the session with a question: "Why are perfect stoves not always chosen?" His answers included various reasons, such as stoves must be cheap and affordable for the target group. They don't have to be necessarily perfect stoves but good enough stoves to be chosen by poor people. He also emphasized that communication with the policy level can also be one of the factors influencing success or failure of a stove project.

Results from Burkina Faso were presented by Andrea Reikat from GTZ, who emphasized the influence of marketing campaigns in the rise of sales figures. Besides billboards and media campaigns she recommended sponsoring of events such as fashion games or girls soccer games. Andreas advice: marketing has to focus on issues such as saving money or anything else relevant for the customer, since environmental protection is not the reason why people decide to buy stoves. One of the reported challenges was the equivalence between production and demand. While stove producers were reluctant to produce on stock before the marketing campaign started, potential customers were discouraged by the scarceness of available improved stoves in the beginning. Similar challenges were faced in other countries as reported during the following discussion. A perfect solution on how to manage demand and supply has not yet been found.

Atsu Titiati, from Enterprise Works/VITA in Ghana reported about the branding of the product which was one of the success factors in the dissemination of the VITA stove, which has been named "Gyapa" meaning "good fire". He found market demonstrations a strong promotion tool. "No subsidies on stoves", he pointed out and stressed the importance of giving business development assistance to create a market instead.

Two other approaches were presented by Hiwote Teshome from Ethiopia and Mireille Affoudji from Senegal (both from GTZ). In Ethiopia, a coupon system is used for a certain time period to stimulate the market. People can buy coupons for stoves at a reduced price then go to the producer exchanging coupons for a stove. The producer cashes the coupon at the bank. An advantage of this system is that stove sales are known and that cross-checking is possible, making monitoring easier. Nevertheless, the administrative efforts in distributing and handling the coupons are quite intensive. In Senegal, a traditional market system *(Bëccëk* system) of selling clothes door to door on a credit base has been adapted to stoves. A functioning commercialised approach requires that all persons in a market chain can make profit. Mireille also emphasized that a good blacksmith is not necessarily a good seller and vice versa.

All in all, despite different approaches some points were stressed by all participants:

- Even if there is a perfect stove: if it is too expensive or people don't like it for various reasons, they won't use it;
- Stove dissemination has to be commercial to

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ensure sustainability;
- Marketing and promotion are key; however, messages have to be adapted to the target group and have to address their needs;
- Subsidies on stoves should be avoided;
- Supply and demand have to be balanced; and
- Producers are not always good sellers and vice versa.

Thursday Field Trips

On Thursday participants had the opportunity to choose from among six different field trip destinations to visit local Partner project sites. Field trips included visits to (1) local stove manufacturer FOWE, including to their showroom, and production and testing center, as well as to a secondary boarding school using institutional stoves; (2) stove manufacturer PEES, making portable metal rocket stoves both for household and institutions as well as improved charcoal stoves, including in-progress viewing of stove building; (3) stove manufacturer Ugastove to see improvements in their production process of portable metal rocket stoves, improved charcoal stoves and institutional stoves, as well as their fuel-efficient kiln; (4) a girl's secondary boarding school using institutional rocket stoves and visit to the village of Kirugu, which consists of 280 households, out of which 111 are using ICS; (5) a community-based organization and village of Mukono incorporating households that use Rocket Lorena stoves and mobile stoves disseminated by GTZ; and (6) a local professional bakery.

Details from trip #4 are included below.

Berkeley Air Monitoring Group had previously installed IAP monitoring equipment at several of the field trip destinations, so participants could see the monitoring in action.

At the Nagalabbi Coronation Site in Buddo we visited a tree that was 7 PCIA Partner arm-spans around!

The field trips each also included a visit to a cultural site, with destinations including Sezibwa Falls, Bujagali Falls, Uganda Wild Life Education Centre, Entebbe Zoo, the tombs of Buganda Kings at Kasubi (a UNESCO World Heritage Site), and Nagalabbi Coronation Site in Buddo, where the Kabakas of the Ugandan Kingdom of Buganda have been crowned for the past 700 years.

Field Trip – Institution Stove in Girls School and Village Visit

Daniel Wilusz, US Department of State

On Thursday of the Forum one group of participants drove 100 miles through tea plantations and the oldest old-growth forest in Uganda to a girls' school near the city of Jinja. The school chef gave a tour of their three giant institutional improved stoves, which he uses to cook meals for 650 students and staff every day. The stoves have a rocket stove design using insulative brick and pumice to improve combustion efficiency and a chimney to transport smoke away from the kitchen. The chefs said they are satisfied with the stoves, and that operations and maintenance have not been a problem. He estimated that the stoves have reduced fuel consumption by 60%, and cost between $1,000 and $1,500 USD each.

In the afternoon the group visited the nearby village of Kiruga where forty percent of the households use improved stoves through a project supported by the Association for Rural Development and GTZ. The group watched project-trained artisans construct a new rocket stove in less than an hour using anthill soil, a banana stem, a pot, and a machete. The project trains three artisans in each village, who are paid by households for their labor. The group then visited a handful of houses using the stoves to cook their evening meal, including one with a demonstration air monitoring device set up by Berkeley Air Monitoring Group.

Friday - Utilizing Carbon Financing
Jacob Moss, US Environmental Protection Agency

Day 5 of the PCIA Forum was generously sponsored and developed by the World Bank's Carbon Finance Assist unit, and focused on climate change, with a particular focus on providing organizations with the tools they would need to pursue carbon financing.

Dr. Tami Bond (University of Illinois at Urbana-Champaign) opened the day with an overview of climate science, stressing that the impact of cookstoves extends beyond the indoor environment to the local and global environment. She gave the scientific basis for interest in emissions of black carbon and finished by challenging the group in two ways: 1) to reduce the climate impact of this sector, and 2) to convince donors with climate interests that household solutions are viable on a massive scale. She stressed the need for good data to be able to demonstrate such success.

Throughout the day the Carbon Finance Assist training team, Samira Elkhamlichi and Massamba Thioye, walked attendees through the basics of carbon markets – why different carbon currencies exist, what each is used for, comparing the formal versus voluntary markets, how the price of carbon credits has fluctuated recently, the carbon financing project cycle, and methodologies to estimate the amount of carbon credits your work may be eligible for – as well as the size limitations of projects for different methodologies. One particular highlight was that Tom Owino of JPMorgan/Climate Care announced that the Ugastove project in Uganda had just that minute received the first ever approval under their Gold Standard methodology.

Three speakers presented case studies of carbon financing for cookstove projects: Matt Evans of CEIHD presented on the Ugastove project in Uganda; Iwan Baskoro presented on the work GERES is doing in Cambodia; and Bindu Manandhar discussed work in Nepal related to a biogas project. Lessons learned from these projects include:

- Carbon financing should only be undertaken after careful financial analysis;
- Carbon financing is very labor intensive, but can help an organization mature its financial management since audit-ready systems are needed to proceed with carbon financing; and
- Carbon financing takes a long time, but it can help an organization grow – both in sales volume and in the ability to support R&D to innovate with new and better products.

Participants spent the remainder of the carbon day in break out groups according to how advanced their planning was on pursuing carbon financing. The break out groups were very well attended with vibrant discussion as many participants had industry experts, including from Carbon Finance Assist, available to them for the first time ever to help them walk through these different processes. These were some of the most highly rated sessions of the 2009 Forum.

Finally, some important themes worth highlighting emerged from different discussions:

- CO_2 is a good measure of the completeness of combustion. When we burn biomass in stoves, we want the carbon to be released in the form of CO_2 rather than black carbon soot, carbon monoxide, or methane.
- There was some cynicism that carbon financing may end up simply serving to enrich the north at the expense of the south, without providing meaningful benefits.
- Alternatively, carbon financing may lead to better results from stoves projects in two key ways:
  1. Carbon financing's need for demonstrable results could bring a much greater level of credibility to stove projects; tying funding to results is a profound change for the field.
  2. Since carbon financing entails substantial upfront costs that are independent of project size, it provides a powerful incentive for the use of long-lasting stoves to ensure ongoing revenue, and at a large scale.

Your comments are welcome!

This newsletter is published by Winrock International on behalf of the Partnership for Clean Indoor Air. To share comments, suggestions, news, and article contributions please email pciaonline@yahoo.com. The deadline for contributions to next quarter's Bulletin, the topic of which is Health Impacts of IAP, is **June 1, 2008**.

Open Space Sessions

Twice during the Forum participants were invited to convene sessions on topics they wanted addressed, including questions they needed answered, offers and stories they wanted to share, and requests they wanted to make to others. A summary of one of the sessions is provided on the following page.

Sessions convened included:

- Health Impact on Children
- Gasifier Stove Opportunities for You
- How to Create 20M Stoves/year distribution chain
- Cocinas Solares are for You
- Operation of For-Profit Stove Enterprises
- How to Obtain and Use Rotary's Money
- Sharing Solar Success Stories
- Rocket Refinements, Simple Well-drilling Pumps
- Processed Biomass Fuels: New Options
- Industrial Production of Improved Stoves Comparison
- Urban Compact Biogas Systems
- Building Resources for Market Development
- Mainstreaming Gender Concerns in Energy Projects
- Sustainable Fuel for Poor Communities
- Climate Change and Household Energy
- Managing Stove Selection Design & Manufacturing
- Household Energy Rights
- Micro-segment Marketing Systems
- Contribution to Improved PCIA Work

Nancy Hughtes of StoveTeam International hosted a popular session on Rotary Club International funding

- Developing a Stove Marketing Handbook
- IAP Health Effects on Adults
- Quality Management thru Monitoring & Evaluation
- Solar Lighting Business Model
- Sustainable Fuel for the Poor Community
- Renewable Charcoal for Kitchens in Africa
- Clean Cooking with Ethanol Stoves, Project Gaia
- Mainstream Gender Concerns in Energy Projects
- How to Make Excellent Stoves
- Smoke-free Village in India Experience
- Solar Lighting Monitoring & Eval Methods
- Institutional Rocket Stove
- Gasifier Project Details: Nepal and Elsewhere

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Results Reporting

Thank you to all who have completed the online Results Report! Some 93 organizations have already shared their input, enabling us to demonstrate a strong foundation of global and national progress in the use of cleaner, more efficient home cooking and heating technologies and fuels. Every Partner organization that completed a Results Report by March 18, 2009 was entered into a raffle sponsored by Winrock International for lodging at the Speke Resort during the 2009 Forum in Kampala, Uganda.

Congratulations to Atsu Titiati of EnterpriseWorks/VITA, Ghana, right, for winning the Results Reporting raffle!

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Open Space - Building Resources for Market Development

Lisa Feldmann, GTZ

The Open Space Session on Building Resources for Market Development was organised by Faisal Khan of Aga Khan Foundation-Pakistan. Faisal gave a short introduction on a project in Pakistan disseminating a stove used for both cooking and heating, as the winters are harsh and long in the valleys of the project area. Productive activities are possible only a few months out of the year, thus people have very few opportunities to make an income. Rising prices for metal and transport have caused higher stove prices (+50% in the last two years) making their purchase very difficult for the people. Searching for strategies to cope with higher prices and dropping demand, Faisal posed two questions to the group: Could microcredit be a solution? Should subsidies be given to people?

Based on these questions, the discussion focused mainly on three points: the ability of people in handling loans, cultural issues such as the role of women in Pakistan, and house insulation. All participants in the discussion emphasized that the way a product is introduced determines its future. "Never introduce a product for free" was one of the recommendations. On the theme of microcredit, the experiences of AidAfrica in Uganda were interesting for the group. AidAfrica noticed that it has sometimes been very difficult for some people to get access to credit and to handle money from loans. Since household stoves are mainly used for cooking purposes and not income generating activities, it can be difficult to get credit from a bank. AidAfrica proposed therefore to organise women groups who meet and pool small contributions and then loan out the sum one person at a time to purchase stoves. Those groups have a rotating accountant and chairperson. Experiences have shown that it is important to engage the whole community in this process. Many participants shared their experiences that as long as consumers are not financially stable, selling products is difficult.

Faisal shared that in the Pakistani valleys women make the decision to have a stove but men have the money and thus the final decision. Having men and women attend the same meeting can be difficult in some regions where this goes against tradition. In this situation, the group recommended sensitizing especially men since they are the final decision-makers on spending money for a stove. Last but not least, the discussion focused on house insulation being of high relevance in cold regions since stoves are used for both cooking and heating. While the AKF project is already engaged in floor insulation, the insulation of roofs and walls is necessary but is very costly, as Faisal pointed out.

Offers and Requests

At the Forum, Partners made many offers and requests that will help us all achieve our common goals. Please visit http://www.pciaonline.org/proceedings/2009Forum/offers_requests to view and follow-up on these offers and requests. Do you have offers or requests of your own to post? Please do so at http://www.pciaonline.org/messageboard.

Forum Fun!

One evening during the Forum was reserved for a **PCIA Film Festival** highlighting Partner activities and results. Participant-submitted films shown were moving, funny and informative, sometimes all at once! Next time we'll make popcorn! All films will be posted on the Forum Proceedings section of the PCIA website at http://www.pciaonline.org/proceedings/2009Forum soon.

On the second to last night of the Forum, GTZ organized a **Dinner and Cultural Dance** at the Ndere Centre, at which participants were treated to a performance (skit and dance!) on indoor air pollution and improved stoves created especially for the occasion and performed by the talented Ndere dance troupe. Upon arriving at the Centre, participants were welcomed by the Ndere Troupe playing the grand Royal "Mujjaguzo" drums at the reception entrance. Guests walked through the rhythmic "Guard of Honour" played by musicians clad in Royal musical regalia. Participants later enthusiastically accepted an entreaty to join the performers on stage, and danced well into the night. Everyone enjoyed the local and international cuisine, and the impressive music and dancing of the Ndere Troupe!

Saturday – Assessing Impacts

The final day of the Forum started out with an overview by Jonathan Rouse of the recently published WHO Catalogue of Methods for evaluating household energy and health interventions. Participants had received a copy of the Catalogue in their registration packets, and via the presentation walked through the contents of the catalogue and the areas of evaluation that the Catalogue covers. Participants learned, many for the first time, about pollution levels and personal exposure, and the environmental health pathway. The group followed along with a practical example, and how to use the Catalogue to approach it, including through the recommended adapting of methods to individual situations.

Nick Lam and Dana Charron of Berkeley Air Monitoring Group presented several times during the day, including on how to organize IAP monitoring studies, the Kitchen Performance Test (KPT) protocol, and the results of and methods used for the field trip monitoring exercise, in which IAP instruments were placed in four homes and two schools for 24-hour samples.

The IAP monitoring presentation carefully walked participants through the necessary components of successful monitoring work, what household characteristics can be measured, and how. Participants learned how to use proper sampling to demonstrate that statistically measurable reductions in IAP are achieved and are not due to chance. They also learned about written materials and instrumentation necessary for a successful study, and how to use them. During the field trip presentation participants were reminded that unexpected results can arise from ventilation conditions, and the presence of multiple stoves, especially when some are less "improved" than others, in the monitoring area.

Following the presentations participants worked in small groups to brainstorm monitoring difficulties one might encounter and solutions to these challenges.

Case studies were presented throughout the morning by Bhushan Tuladhar (Environment and Public Health Organization, Nepal) on the evaluation of environmental & health impacts of ICS in Nepal; Faisal Khan (AKF-Pakistan) on AKPBS' experiences in monitoring impacts of household energy projects; Dr. Guangqing Lui (China Association of Rural Energy Industry) on CAREI's use of the KPT in China for biomass semi-gasification stoves; and Joseph Ndemere Arineitwe (Centre for Integrated Research and Community Development Uganda- CIRCODU) on methods, results, challenges and lessons from Ugastove stove KPT testing.

In the afternoon Dr. Stephen Gordon, Liverpool School of Tropical Medicine and Dr. Jonathan Grigg, Queen Mary University, led a discussion on Opportunities to Collaborate on Health Research. Elisa Derby, Winrock International, shared with Partners key PCIA resources for staying together as a Global Community in Action, and specifically solicited Partner feedback and suggestions for the PCIA website and Bulletin. Health experts in the room offered to organize an upcoming Bulletin issue on health impacts of IAP—keep your eyes out for that in July!

Dr. Kirk Smith, University of California Berkeley, provided an inspiring closing keynote, focusing on recent health effects results from his work in Guatemala on the first randomized controlled trial ever on health effects of solid fuel use. He highlighted toxic pollutants in biomass fuel smoke from incomplete combustion, known health outcomes, comparative risk and resulting implications for the stove community.

To close out the day and the week, organizers thanked the Forum co-sponsors and financial contributors, including the David and Lucile Packard Foundation, the World Bank Carbon Finance Assist unit, and the United Nations Foundation. Richard Grinnell then led the group in a Partner-developed PCIA song, sung to the tune of Y-M-C-A! It was a tremendous event, and was only made possible by the tremendous energy and enthusiasm of the participants. We can't wait to see you all again in 2011!

Regional Networking Sessions
Inputs provided by CAPS Msukwa (Africa), Jun Hada (Asia) and Richard Grinnell (Latin America).
During the Forum, participants met twice in regional groups to identify opportunities for regional collaboration.

The Africa regional networking group discussed several possibilities. These included the use of PCIA and HEDON websites for networking and communication, wherein members/ organisations could share their needs and what they have to offer. Other ideas included exchange visits between group members to learn and share experiences and resources, and the establishment of a Regional Research Centre which is being opened in Uganda and which members could use for testing and any other services they need. The group discussed taking advantage of the upcoming Johannesburg International Solar Energy Gathering to share and collaborate on some thematic areas. Participants also suggested exploring the possibility to create a social movement to do advocacy work on energy issues, and establishing an M&E system in-country also linking the region. This system would consolidate information on energy conservation and indoor air pollution control within each country and the region (much as PCIA has consolidated results reporting from Partners), and individual organisations would volunteer to consolidate the information at country or regional level.

The Asia regional networking group noted multiple current opportunities for regional collaboration, including opportunities to link demand and supply through mass production/ distribution of stoves in China/India; opportunities for capacity building on stoves testing and building; and the use of Asia Regional Network for Solar Cookers Association for offering systems. The group noted the existence of many regional stove and IAP testing facilities including those run by Dian Desa (Indonesia), ARTI (Pune, India), GERES (Phnom Phen, Cambodia), Prakti Design (India), Carbon Solidarity Asia, Clean Air Initiatives -Asia, South Asia Regional Network on Indoor Air Pollution and Health (a loose network of professionals for knowledge sharing), e-net (Energy Network, hosted in Sri Lanka), Regional Network of Solar Cookers Association, ARECOP and ENERGIA-Asia Regional Network.

The group discussed several upcoming events around which to generate action and results in IAP, including Better Air Quality 2010, and others referenced in the upcoming events section of this issue. Participants also noted specific plans and offers to generate action and results in the region. Among these: Carbon Solidarity Asia: training on developing projects for Carbon Financing; GERES: stove rating and standardization systems; Paul Anderson: advise on wood gassifier stoves; Practical Action: IAP monitoring and health impact assessment tools/methods.

The Latin America regional networking group developed big plans for the near future based on a discussed need to create a regional organization that will give this region a “louder” voice in world issues involving IAP, carbon financing, grants for stove development and distribution, and others. To that end, the group has already set a date for a “pre-general meeting” to decide where, when, and what topics to cover in the first regional forum. These topics will be prioritized to make sure the important issues like monitoring, design principles, and the need to join efforts are covered. The pre-meet will take place in Bolivia in September (exact date to be determined), and will include a maximum of 12 participants from several countries to brainstorm on these issues. The group looks forward to hosting the next PCIA Forum in that part of the world, where the first initiatives for improved stoves began in the 70’s.

At the recommendation of GTZ-Uganda, the Forum was held at the Speke Resort Munyonyo on the outskirts of Kampala, Uganda which offered a safe and ample venue for 260 participants. One important benefit of this selection was it allowed substantially more participant networking time and less commuting time in heavy traffic than at the 2007 Forum in Bangalore where the 120 participants were housed in five separate hotels. With complimentary breakfast, internet access and transportation to and from the airport, the Speke met other essential needs indentified by the 2007 Forum participants.

Finally, the Speke offered the large conference room, two breakout rooms, a registration area, space for the reception and poster session, and lunch dining area required to accommodate such a large gathering. Conference organizers Winrock International and USEPA will work with Partners in Latin America to identify a similarly appropriate venue that meets the above participant and logistical requirements for the 2011 Forum. Look for a “Save the Date” announcement in future Bulletins!

☼ 2009 FORUM GLOBAL LEADERSHIP AWARDS

For vision, initiative, and achievement

The PCIA Global Leadership Award recognizes programs which have incorporated the four priority areas proven to be essential elements of sustainable household energy and health programs and achieved noteworthy results. Winners of the prestigious Global PCIA Leadership Award serve as models for other programs striving to increase the use of clean, efficient, affordable, reliable and safe home cooking practices throughout the world.

We sat down with Richard Grinnell of HELPS International; Faisal Khan of Aga Khan Planning and Building Services, Pakistan; and John Kuteesakwe of GTZ – Ministry of Energy, Uganda, and are pleased to share our conversations below.

Congratulations to the 2009 winners:
HELPS International; GTZ – Ministry of Energy, Uganda; and Aga Khan Planning and Building Services, Pakistan!

HELPS International

Since 1984, HELPS International has supported community development throughout Latin America. In a region where over 9 million families cook with open fires, the ONIL Stoves Project was created to address the health and deforestation issues associated with traditional three-stone fires. HELPS International has since developed a range of stove models that suit the needs of rural populations. The stoves reduce wood use by 70% and minimize exposure to carbon monoxide and particulates. HELPS International promotes local manufacturing, distribution, and social marketing among communities to ensure program sustainability and to best-serve their target population. Since 2001, HELPS has disseminated 67,000 stoves.

What is the most exciting aspect of your work?

HELPS International has, from the start, been innovative in attacking IAP problems in Guatemala and now in other regions of Latin America. It has been very exciting to come up with novel ways to solve the problems that continue to emerge as the project continues over time, to create a REAL solution that is sustainable. At HELPS we believe that many people are not involved because they don't know how to be involved in solving poverty issues, so generating and being part of the solution is a great feeling vs. being a by-stander.

What accomplishments are you most proud of?

I believe that HELPS has managed to change the way improved stove projects are focused. We have seen how many projects that began defending the "build one at a time in the home with local materials" way of implementation have understood the need for mass production and implementation if we are to start making a real impact in the problem of IAP. Additionally, we are proud that the ONIL Stove Project is the first stove project, to our understanding, to be sustainable, and has been for the past three and a half years.

How has PCIA helped you in your work?

PCIA has helped to developed materials to create awareness in communities, specifically the place based education program materials, and provided networking opportunities to share results, manufacturing materials and to disseminate information about HELPS' activities.

What did you find most useful about the 2009 PCIA Forum?

The 2009 PCIA Forum in Kampala was very useful in seeing and understanding why different organizations are using different technologies and NOT using chimneys (cooking outdoors as I saw in the communities around Kampala). Better understanding the carbon financing process and procedure of acquiring certification was probably the highlight of the forum for HELPS, as we are

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currently seeking this to aid in expanding the distribution directly to the end user. Meeting other Latin America players was also very important to create a network that will enable to bring further attention and financing for projects in the region.

What mentoring or other opportunities have you had to share your successful approaches with others?

There were various groups from different parts of the world interested in learning more about the HELPS method of production and distribution, and had many interesting discussions on these topics. I believe we could, at some time, offer a project visit for organizations interested in seeing our operation first hand.

What are your program's goals for the coming 1-2 years?

In the next couple of years HELPS is planning to expand further within Mexico, install a production site in Nicaragua and expand distribution to Honduras. HELPS plans to sell and distribute 216,000 stoves in the next 2 years. In the distribution, we plan to increase the Community Distributor system we have started to implement. It is our medium term goal to make this distribution system our main sales avenue, which will also be responsible for selling spare parts to make sure the stove continue to work over time. We are also working on an industrial scale plancha stove for commercial tortilla sales that should be finalized during 2009 and ready for distribution by 2010.

Aga Khan Planning and Building Services, Pakistan

Through the Building and Construction Improvement Program (BACIP), Aga Khan Planning and Building Services has been able to reduce indoor air pollution in all target communities. Keys to their success include focusing on capacity building to insure integrated sustainable development, creating strong relationships and trust with community members thus empowering them, identifying unique characteristics of each community, and creating a reliable monitoring and evaluation process.

What is the most exciting aspect of your work?

Availing opportunities to make real life contributions for thousands of families by

Global Leadership Award winners again

improving their housing conditions gives me a job satisfaction that I had never felt before. I am most excited about the fact is that we are able to improve the indoor air quality, reinforce the building structure of a house, secure access to safe drinking water, provide fuel efficient and cost effective cooking and heating systems and build adequate sanitation facilities for impoverished households, all within a year.

What accomplishments are you most proud of?

Changing people's perception about indoor air quality, removing myths and changing people's behaviors. AKPBS' Community Health and School Health programs promote behavior change messages. In addition, IAP is one of the key components of the organization's Building and Construction Improvement Program. Interventions include a comprehensive assessment and a housing planning tool, as part of an integrated solution to improve housing conditions. It also makes me proud to see women and children benefit the most from our interventions as they spend most of their time indoors. Most amazingly, the positive energies that are generated by members of the household living in decent housing conditions can be witnessed in the positive changes in their attitudes and increase in their productivity.

How has PCIA helped you in your work?

PCIA has helped to prove the correlation between IAP and health by funding a study that is looking at impact of smoke exposure. PCIA has helped achieve a paradigm shift towards approaches for reaching out to communities. PCIA has also helped change the intervention models from a project oriented development program to a to a market driven enterprise model. The networking through PCIA is phenomenal as it has enabled us

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to access expertise that can help us in further design improvement of our products, testing new technologies, and seeking input from other specialists that have already contributed enormously in other parts of the world. In fact, PCIA membership has enabled us to join a distinct international community that shares our goals and is striving to meet similar objectives elsewhere in the world. Such networking has given a new impetus to our work!

What did you find most useful about the 2009 PCIA Forum?
The level of energy and enthusiasm in the Forum was unparalleled. The Forum was well organized, and the organizers knew how to draw attention and energize the participants. AKPBS will get assistance from PCIA Partners in assessing product design, carbon finance, municipal waste incineration, and use of LED lights for affordable lighting.

What mentoring or other opportunities have you had to share your successful approaches with others?
Several Partners have expressed interest in community exchange visits in AKPBS' working areas. They have also informed us that they will try to introduce exchange visits on similar patterns. There is interest in AKPBS' stove designs from Chinese and African partners and interest in social marketing approaches from partners in Mali. Ugastove has already started exploring opportunities for promoting institutional stoves in collaboration with Aga Khan Development Network in Uganda.

What are your program's goals for the coming 1-2 years?
AKPBS plans to disseminate 45,000 stoves over the next 3 years and improve stove design. These stoves will be sold by 20 emerging enterprises in the project are as per market demand.

"What a learning Forum!! I have benefited in terms of gaining knowledge, making a lot of deals and networking. I would like to extend my appreciation to you and your team for organizing such a wonderful Forum."

-Dr. Amare Gebre Egziabher, Office of the United Nations High Commissioner for Refugees

GTZ – Ministry of Energy, Uganda

Through a collaborative partnership with Ugandan companies and non-governmental organizations, GTZ and the Ugandan Ministry of Energy are working to provide rural populations with sustainable cook stove technology. The partnership, also known as the Energy Advisory Project, promotes grassroots community participation and seeks to provide public outreach to populations most vulnerable to poor indoor air quality due to smoke inhalation. In the last few years, over 600,000 improved stoves have been installed in rural households. In addition, over 200 schools, hospitals, and companies now use cleaner stove and oven technologies, saving over 60 percent in fuel and energy costs.

What is the most exciting aspect of your work?
To see that the GTZ- Ministry of Energy, Uganda is significantly contributing towards solving problems of the rural poor.

What accomplishments are you most proud of?
We're most proud of reaching over 0.5 million households (2.5 million people) in the rural areas in less than 5 years. This is approximately 10% of the population.

How has PCIA helped you in your work?
Learning more about stove designs, getting an opportunity meet the various PCIA partners who are manufacturing improved stoves, and learning more about funding mechanisms such as carbon finance.

What did you find most useful about the 2009 PCIA Forum?
Information exchange was the most useful aspect of the Forum for us. Specifically, technical exchange on stove design with the Aprovecho team; learning more about the dangers of IAP; and getting to know what Partners are doing in other countries.

What are your program's goals for the coming 1-2 years?
We will disseminate stoves in more than 220,000 households, focusing on Northern Uganda.

☼ 2009 FORUM SPECIAL ACHIEVEMENT AWARDS

Interview with Bhushan Tuladhar
Environment and Public Health Organization
ENPHO's plaque reads: In appreciation and recognition of your dedication, commitment, and investment to demonstrate the impact of household energy interventions.

ENPHO is a research based NGO that works with communities and other research institutes to develop appropriate technologies and test their performance in the lab setting. The technologies are then field tested to assess their performance in real life situations, as well as for social acceptance by the community. Through widespread monitoring they showed a reduction in pollution levels, as indicated by concentrations of $PM_{2.5}$ and CO, by more than 60%.

What is the most exciting aspect of your work?
Taking on new initiatives in a sector that has been ignored by many people and then seeing the impact on the lives of people. It is great to see that what you are doing really makes a significant impact on the health and well being of poor people, especially the children. It is great to be able to put a smile on a child's face.

What accomplishments are you most proud of?
We are proud that we were able to do a scientific analysis of the environmental and health impacts of Nepal's Improved Cook Stove (ICS) Programme. The results have been appreciated by all and we are confident that the results of the study will be very helpful in further promoting ICS in Nepal and thus improve the lives of thousands of Nepalese women and children. The fact that PCIA recognized our work with the Special Achievement Award is very satisfying as well.

More recently, we are proud of the research work we have been doing on developing a system for Water Pasteurization through Improved Cookstoves (WAPIC) in Nepal. We have developed and tested the system in our lab and now it is being field tested in four districts of Nepal. The system will allow us to address the two most significant health risks in Nepal – indoor air pollution and unsafe water and reach across sectors to use the synergetic efforts of ICS and safe water promotion programmes to scale up both these programmes.

ENPHO special achievement award for monitoring

How has PCIA helped you in your work?
The training organized by PCIA in Vietnam from August 7-11, 2007 on monitoring and evaluation was very helpful for us. As a participant of the training, I learned a lot and it boosted my confidence to go ahead and do this research. The training also provided an opportunity to meet others interested in monitoring and evaluation and learn about their experiences. We were also able to buy the necessary equipment (UCB particle monitors and HOBO CO loggers) in Vietnam and get hands on training on using the equipment. Even after the training, we were able to receive technical assistance and guidance from friends at Berkeley Air Monitoring Group which was extremely helpful in our future work. PCIA therefore played an instrumental role in connecting us to the right people and building our capacity and our confidence.

What did you find most useful about the 2009 PCIA Forum?
Networking! It was great to meet all the brilliant and committed people in this sector and learn about all the exciting happenings from all around the world – from scaling up of stove programmes in Guatemala to carbon financing of improved stoves in Uganda and commercialization of rocket stoves in China. There are a lot of good things happening in this sector and the Forum provided a great opportunity to learn about all of it under one roof by actually interacting with the people who are involved in these initiatives.

What do you want the rest of the household energy community and world to know about monitoring impacts?
Monitoring impacts is not as difficult or as complicated as many people seem to think. Some

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people tend to get a little scared when it comes to handling all the equipment, data and analytical work associated with scientific research. Now, there is a lot of experience from several places through which we can learn and the equipment and methodologies are also fairly simple to use. Therefore, I would urge all promoters of clean household energy to monitor your impacts to make sure that you are on the right track. This will also help in convincing your donors, beneficiaries and yourself that you are doing a good job.

What are your goals for the coming 1-2 years?
In the next 1-2 years, we hope to do more impact monitoring of different household energy projects, build local capacity, raise awareness on clean household energy and also complete our research work on WAPIC. We will also to do more research and demonstration on biogas from waste and wastewater to link household energy with sanitation.

Interview with Sanu Kaji Shrestha Foundation for Sustainable Technologies

FoST's plaque reads: In appreciation and recognition of your commitment to advancing the development and production of innovative fuels

The Foundation for Sustainable Technologies (FoST) is a non-profit organization that provides low-cost, locally-built sustainable technologies to rural populations in Nepal. FoST invented low-cost, fuel briquettes manufactured at the local level, using household waste, that are tested to ensure low carbon monoxide and particulate emissions. FoST provides training and technical assistance for briquette manufactures and social marketing to thousands of end-users.

What is the most exciting aspect of your work?
The most exciting aspect of my work is when I see FoST's program being adopted by rural communities. It's thrilling to see them saving fuel wood and other costly fossil fuels (LPG and kerosene), reusing and recycling their own household or community wastes, reducing fuel wood collection time, minimizing chopping trees, protecting the forest, reducing environmental pollution in a local level, and empowering family members through less smoky alternative fuels as briquettes.

What accomplishments are you most proud of?
I am most proud of the achievements gained at the community level, where I've found women groups to be enthusiastic and sensitive in creating employment opportunities based on local wastes. I am proud when I see: family members use their time to produce briquettes instead of collecting fire wood in the forest; communities mobilizing their wastes for a good cause; housewives cooking food with the briquettes they made themselves; communities educating students on briquettes in local schools; and family members earning income from the briquette business.

FoST special achievement award for briquettes

How has PCIA helped you in your work?
Being a PCIA Partner has given us a broad network through which we have been able to promote our activities. The PCIA-organized Forum gave us a good opportunity to share our ideas among Partners as well as create a possible collaborative approach for the promotion of our initiatives.

What did you find most useful about the 2009 PCIA Forum?
The topics presented at the PCIA Forum were very interesting and educational. The most useful to us were: different type of stove designs; techniques of quality and efficiency tests; maintaining indoor air quality; heavy duty rocket stoves for boiling water; and bread making in rocket stoves. FoST has already decided to replicate the rocket stove in Nepal.

What do you want the rest of the household energy community and world to know about briquettes?
As we all know, fuel crisis is becoming a burning issue everywhere: people need fuel for cooking food, and for water and space heating. We have

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an abundant source of raw materials to produce sufficient fuel from our own waste, which otherwise create environmental problems. I would like to share this with the household energy community: Produce Fuel Briquettes from Your Own Wastes! Any type of paper waste, saw dust, rice husk, sugarcane bagasse, grass, leaves, coconut shells, kitchen wastes including peels and seeds, agricultural and forest residues, paper-based industrial wastes. Process the waste by shredding, cutting, soaking, hammering, pulping, mixing, pressing and drying. Burn the briquettes in mud stoves, briquette stoves, fan operated stoves, gassifier stoves, rocket stoves, and all types of firewood stoves. Briquettes can also be widely sold!

What are your goals for the coming 1-2 years?
My goals are very big. People say "light for all", "water for all"; I say "**fuel for all**". This is a big challenge and FoST looks forward to collaborative work with and support from others in achieving this goal!

Interview with Mouhsine Serrar
Prakti Design

Prakti Design's plaque reads: In appreciation and recognition of your dedication to rigorous field testing resulting in improved stove design and clean, efficient cooking technologies

Prakti Design Lab's international team of engineers and designers develop ecological products to serve the basic water, energy, and health needs of poor communities worldwide. Prakti sends a team of two designers to 'live' with the local community for at least a week, during which time potential stove designs are tested by the local woman, cooking their own food, and approximately 20 households are involved in continuous field testing of products. This feedback shapes the next iterations of design, focusing always on maximum product effectiveness and durability at the lowest possible cost.

What is the most exciting aspect of your work?
In what other field do engineers have opportunities to improve performance by 50% and reduce pollution by 80%? Improved biomass stove engineering offers practitioners amazing opportunities to design and engineer products. It even more exciting to see your products having a positive impact on people and the environment.

What accomplishments are you most proud of?
We developed "Leo" a series of factory-made portable double-pot stoves with a current capacity of 2000 units/month. Our stoves, with or without chimney, meet the Aprovecho-Shell Foundation fuel and IAP benchmark, and most important, cooks in South India love them! We also developed "Giza" a cottage all-masonry stove, along with corresponding training material and software tools to customize design and manufacturing specifications.

How has PCIA helped you in your work?
PCIA is a unique platform connecting all different players of the stove world. PCIA is making an excellent contribution to technology dissemination, training, building awareness about IAP, sharing experiences in marketing, and monitoring. PCIA helped us connect with funders and customers already involved in stoves and IAP work.

What did you find most useful about the 2009 PCIA Forum?
The PCIA Forum is a unique opportunity to have face to face meetings with so many people and organization totally committed to the stoves and IAP. That alone makes attending the Forum worthwhile!

What are your goals for the coming 1-2 years?
We plan to develop a mud stove that can consistently reduce fuel consumption by 50%, and which can be built by artisans accurately and efficiently. We will also develop an IAP-certified portable factory single-pot stove that retails for $10, and a chimney double-pot stove that retails for $20.

Prakti special achievement award for improved stove research and design

Interview with Javier Saldivar
ProPeru

ProPeru's plaque reads: In appreciation and recognition of your dedication to meeting local community needs through household energy interventions

Through its staff and volunteers, ProPeru works to protect the native, endangered forests of the Sacred Valley while helping to improve the health of its community members, including by installing fuel-efficient wood stoves with proper ventilation. To address increasing metal costs, ProPeru redesigned the stove to utilize ceramic technology and decreased the stove's cost by 50%. Stove costs are covered through a triple alliance of community, local government, and ProPeru. ProPeru is working to ensure sustainability by training and educating community leaders about benefits to health and environment, as well as assembly and practical stove usage. These trained leaders become mentors and trainers in their community and help facilitate replication in other communities.

What is the most exciting aspect of your work?

The most exciting aspect of my work is being part of an organization that encompasses many intercultural aspects, where foreign volunteers, local communities, institutional alliances, and our staff team focus on developing low-cost, simple, and replicable projects that truly contribute to the development and pursuit of a better quality of life for the rural populations of Cusco, Peru. What excites me most is the possibility of replicating our projects, not only at other sites in which ProWorld operates, but wherever potential partners express an interest in collaborating with us.

What accomplishments are you most proud of?

I am proud to have worked in collaboration with hundreds of volunteers, to whom I am grateful. With their efforts and collaboration we have implemented infrastructure projects for schools, educational activities, activities to improve health, reforestation projects, and designed a ceramic clean burning stove model according to local customs and needs. The two-pot stove uses a chimney, and has a production cost of only $15 per unit. To date we have installed approximately 4,600 units and have sold another 1,450 units. We have also initiated the production of ceramic water filters to provide potable water to our target population.

ProPeru special achievement award for meeting community needs

How has PCIA helped you in your work?

We have utilized the information that PCIA distributes as an indispensable reference tool for our projects. Furthermore, PCIA has provided us with the opportunity to be in direct contact with leaders from other organizations to share similar experiences from other parts of the world. An invaluable aspect of these contacts has been the formation of friendships and alliances that heighten our vision and in turn, our anticipated success.

What did you find most useful about the 2009 PCIA Forum?

The most invaluable and practical aspect of the 2009 PCIA Forum was to have been able to directly exchange information and experiences with other project leaders that undertake projects in different parts of the world, enriching our knowledge which in turn supports our projects. In addition, receiving special recognition has opened doors to help develop our commitment to work on a larger scale with increased quality.

What do you want the rest of the household energy community and world to know about meeting local community needs?

There is a large sector of the population with scarce economic resources that do not have access to basic information. However, this population, when provided this information and education, value it and utilize it to discover new technologies and new alternatives. In an effort to obtain a better quality of life and an improved environment, they are willing to change or mold their attitudes and customs. For this reason it is our obligation to help facilitate this process of sharing information and providing opportunities for this population to learn about new technologies. In economic terms, this population will achieve fundamental changes on the planet by

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using simple, low cost technological alternatives, particularly compared to other populations who have access to information but do not act upon it. We believe that those involved in the clean burning stoves project should be committed to constantly searching for materials, technologies, and practices that will ultimately have less of a negative impact on our environment.

What are your goals for the coming 1-2 years?
Our goals include further developing the educational and social components of our projects, improving upon the technology of the products that we offer, and working on a much larger scale. To achieve these goals we would like to establish a factory that would allow us to control quality standards of the product at competitive prices, with the capacity to produce approximately 5,000 ceramic stoves with chimneys and 5,000 ceramic water filters per year. We would also like to take advantage of the diversity of successful alternative technologies that already exist in the world and offer them to our diverse target population.

LIFETIME ACHIEVEMENT AWARD: DR. LARRY WINIARSKI

In recognition of your lifelong commitment to developing and promoting clean and efficient cooking technologies worldwide

Dr. Larry Winiarski has devoted his life to promoting a variety of clean and efficient household technologies. His crowning achievement, and the one for which he is most proud, is his rocket stove invention and its wide scale adoption in developing countries. Hundreds of thousands of stoves have been made using his technology.

Larry's strategy to ensure wide-scale adoption is based on adapting the technology to use local materials, construction skills, and machinery in order to produce models appropriate to the local market niche and cost range. He has freely shared this technology with the whole world, and worked to stop any patenting or exclusive rights in order to ensure a sustainable commercial supply of stoves at a fair price. He travels around the work to teach individuals and groups about the rocket stove principles and help them start small, local shops and factories. "You can have a good stove," he advises, "but you also need good training and follow-up."

PCIA's first Lifetime Achievement Award

Dr. Larry Winiarski is known as the Grandfather of Rocket Stoves

Larry has been an active member of ETHOS (Engineers for Technical and Humanitarian Opportunities of Service) and PCIA, and sees networking as the most useful aspect of the 2009 PCIA Forum. He values building relationships. "If someone with status in the community is against your project," he says, "the peer pressure can kill it." He credits PCIA for supporting his travel to Uganda, which also allowed him to spend time in Northern Uganda to work with AidAfrica, for whom he serves as Board Member.

In the next few years Larry will continue his work on stoves, including the development of a rocket incinerator, while also focusing on another household killer: unclean drinking water. He is currently developing and testing water pumping and hand-operated well drilling technologies. He notes that the most exciting part of his work is making a difference, which we see he clearly does on a regular basis.

☼ 2009 Forum Net Forward Energy Awards

Forum facilitators requested that participants use their time at the Forum to create organizational action plans and to create our powerful community together focused on our results, our plans and our future. Forum Participants met the request to "be" a certain way during the week:

- Be Learning from Peers
- Be Celebrating Results: Yourself and Others
- Be Looking to Contribute
- Be Networking
- Be On Time & Eager to Participate
- Be "Thinking Big"
- Be Speaking Powerfully
- Be Committing to Actions
- Be Generating Net Forward Energy

What is net forward energy? Basically, what we think, what we say, and what we spread to others, makes all the difference.

Two Kinds of Energy, Thoughts, Statements

Positive (+)	Negative (-)
Good Stories	Bad Stories
Taking Responsibility	Blame
Opportunities	Problems
What We Can Do	What We Can't Do
Acting	Waiting, Wishing
Being Proactive	Being Reactive
Open	Judgmental
Bold Goals	Fears, Worries

Margaret Owino of Solar Cookers International and Christa Roth of Food and Fuel Consultants, the 2007 Global Net Forward Energy Award winners, facilitated the selection of the two participants who most demonstrated these positive energy characteristics during the Forum.

Congratulations to Dean Still and Iwan Baskoro as the 2009 Global Net Forward Energy Award Winners for consistently moving the discussions forward to seek opportunities and solutions for meeting the global challenge of providing cleaner, more efficient and safer cooking and heating technologies and fuels to improve the lives of millions of families around the world.

Dean and Iwan's plaques read: In appreciation and recognition of your energy, optimism, and enthusiasm.

We caught up with Dean to discuss, below.

What is the most exciting aspect of your work?
I think the most exciting aspect of our work is that, after two years of development, high-quality, low-cost stoves are being disseminated in the field. I feel immensely satisfied every time a ship leaves port loaded with a container of Aprovecho's StoveTec stoves.

What did you find most useful about the 2009 PCIA Forum?
The opportunity to network with members of the PCIA Partnership, sharing knowledge and learning from the experience of others, is always helpful. Establishing and maintaining relationships with PCIA Partners through the Forum is especially useful.

What are your goals for the coming 1-2 years?
My primary goal is to assist StoveTec customers in any way I can to disseminate hundreds of thousands of stoves to those who need them most, while maintaining consistent product quality and keeping the cost to the end user as low as possible. I also want to complete the design of an efficient, affordable fan stove that drastically reduces emissions.

What advice to you have for others in this field, especially with respect to generating and maintaining net forward energy?
My advice to others? Persevere. Look for opportunities to help others and in doing so, help yourself.

☼ HAPPENINGS

Recent Partner Activity…

Gold Standard Stove Project Approval

PCIA Partners J.P. Morgan Climate Care and Center for Entrepreneurship in International Health and Development (CEIHD) have launched the first efficient cook-stove project to be registered by the Gold Standard Foundation. The project, located in Uganda, has the potential to reduce the country's output of CO_2 by over one million tonnes. The efficient cook-stoves, financed by J.P. Morgan and built by PCIA Partner Ugastove, burn fuel more efficiently, lower family expenditure, mitigate deforestation, curtail green-house gas emissions and help to reduce the exposure of families and cooks to dangerous air pollutants in smoke from indoor cooking. The project also provides a concrete, replicable template for sustainable development to be combined with carbon reduction. Important technical assistance for this project has been provided by PCIA Partners GTZ, Aprovecho Research Center, CIRCODU, Colorado State University, and Berkeley Air Monitoring Group. The ultimate purchaser of the credits is Landrover Ltd. More information on this project, Efficient Cooking with Ugastoves, GS ID number GS447, can be found in the Public Reports section of the Gold Standard Registry/Project Database: http://goldstandard.apx.com and at: www.jpmorganclimatecare.com/projects/countries/Uganda-efficient-stoves.

Upcoming Events…

2nd Generation Biofuels & Jatropha World Summit 2009
May 28-29, 2009, Accra, Ghana

This summit is a unique gathering of international Jatropha and biofuel practioners with the common aim of building a sustainable biofuel industry. For more information please email Enoch Ang at enoch.ang@magenta-global.com.sg.

"I must say that every moment of the Forum was just wonderful, I had a very good time there and enjoyed everyone's company and learned a lot. I hope this process will continue in future and we see each other soon."

-Atif Sohail, STREET

Putting the D into the CDM: Acquiring Carbon Finance for Development Projects
June 15, 2009, London, UK

This intensive one day workshop, organized by CarbonAided, HEDON and Ch4nge will enable entities thinking about participating in carbon projects with social benefits to understand issues related to regulatory and voluntary carbon markets and how they work, including for carbon credit based development projects. For more information and to register, please visit www.hedon.info/666/events.htm.

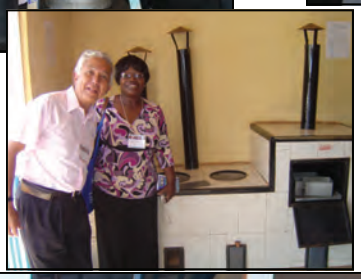
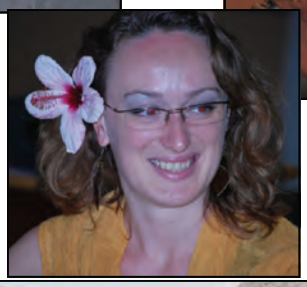
ADB Climate and Clean Energy Week, Clean Energy Forum
June 15-19, 2009, Manila, Philippines

The Asian Development Bank (ADB) is pleased to announce Climate and Clean Energy Week, which will consist of two major events: the High-Level Dialogue on Climate Change in Asia Pacific, and the 4th Asia Clean Energy Forum 2009. The first event, June 16-17, will convene climate change policy leaders to discuss the path forward for the Asia Pacific region. The Dialogue will feature global leaders to share the latest thinking on various aspects of climate change. The Asia Clean Energy Forum, June 17-19, will serve as a platform for exchanging experiences and forging new partnerships to advance clean energy solutions in the region. This event will promote best practices in policy and finance and seek to catalyze actions that respond to the region's climate and energy security challenges. For more information and to register, please visit http://www.adb.org/documents/events/2009/CCEWeek.

International Conference on Waste & Biomass residues Valorization
July 9-11, 2009, Ouagadougou, Burkina Faso

This conference will bring together representatives from academic institutions, companies and non-profit organizations with the objective to promote research and development activities in developing countries on the sustainable valorization of waste and biomass residues as fertilizers, useful materials and fuels in urban and rural areas. For more information and to register, please visit http://www.2ie-edu.org/wasteeng_africa/index.php?lang=english

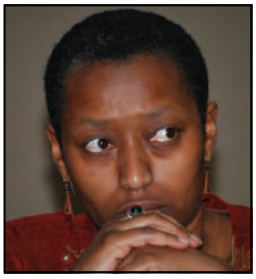



2009 PCIA Forum Participants!








☼ Our New PCIA Song!

Did you miss the Forum, and the PCIA song that participants wrote and performed at the Forum's close?

Sing along at home!
(to the tune of Y-M-C-A)

No stove, should go untested today
Monitoring, is important I say
So just do it, in the lab and in homes
And improve your great stove de-sign

How to, access carbon finance
What do I ne-ed to test?
Gold standard or the C-DM
Do I have a-ddi-tion-ality

We learned it all at the P-C-I-A!
We learned it all at the P-C-I-A!
WBT and the
CCT and don't forget
The KPT___

We practiced testing at the P-C-I-A!
We practiced testing at the P-C-I-A!
Let's reduce the CO
And clean up PM's
Clean homes, that is our e-nd!!

Network! is what we all need to do
Celebrate! Progress is impo-ortant too
Positive energy! Is what we need to succeed
To achieve our big goals in-deed!!
The challenge, 128 million
In 7 years, can we get the job done?
Let's double, every o-other year
And toge-ther let's achieve it!!

We set our goals high at the P-C-I-A!
We set our goals high at the P-C-I-A!
3 billion, the need
Is huge you can see
But together we sow the se-ed

All together at the P-C-I-A!
All together at the P-C-I-A!
Brenda, Elisa
Michael, Dennis and John
We thank you for a job well done!!!

The 2009 PCIA Forum organizers gratefully acknowledge our supporters, who graciously provided funding for Forum participant airfare assistance, including the World Bank's Carbon Finance Assist unit, who also providing carbon finance training.

CARBON FINANCE ASSIST

THE David & Lucile Packard Foundation

UNITED NATIONS FOUNDATION