



# PARTNERSHIP FOR CLEAN INDOOR AIR

## PCIA Bulletin

August 2006 Issue 8

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 120 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 <http://pciaonline.org> to join!

### Educating Children, Families and Communities

One of the biggest challenges to promoting the adoption of new household energy technologies is the lack of awareness of the dangers of indoor air pollution and the availability of appropriate alternatives that meet social and cultural needs. Therefore, a central theme of the Partnership for Clean Indoor Air is to educate communities about the benefits of clean, efficient, affordable and safe cooking and heating practices. There are many ways to accomplish this, such as through educating children, utilizing members of the community to lead in education and outreach activities, and integrating gender into energy project implementation, planning and policy-making. This bulletin focuses on some of these education and outreach approaches.

All over the world, children have become agents of change for a wide range of environmental and health/safety messages, such as hygiene and sanitation (see box on page 6 for some examples). Children share what they learn at school with their families and communities and influence behavior change. Since children are involved in cooking, collecting fuel wood and caring for younger siblings, they can help reduce exposure to indoor air pollution now and throughout their adult lives.

#### *Save the date!*

The third biennial PCIA Partner meeting will take place March 20-23, 2007, in India; details to follow by email and in subsequent Bulletin issues.

At the PCIA Partner Meeting in Morocco in March 2005, participants requested more information and resources on educating children and incorporating IAP into school curriculum. In response to this need, the USEPA, through a competitive process to develop an education curriculum on IAP from household energy use, funded HELPS International to develop the place-based education guide described on page 5 of the Bulletin.

We invite you to continue to share your community education and outreach experiences through the PCIA Bulletin and website. We are particularly interested in learning about household energy programs that are collaborating with community health promoters to educate and motivate communities to adopt clean, efficient and safe cooking practices. Please drop us a line at [PCIAonline@yahoo.com](mailto:PCIAonline@yahoo.com).

### In This Issue

- **PCIA — A special issue on Education and Outreach.....p. 1**
- **Partner Spotlight: ENERGIA.....p. 2**
- **Feature Articles:**
  - Place-based Education Guide.....p. 5
  - Project Gaia IAP education and study.....p. 7
  - China CDC/IEHS school health education.....p. 9
  - Nedwa education activities.....p. 10
- **Happenings.....p. 12**
- **What's New .....p. 14**

## PARTNER SPOTLIGHT ENERGIA

**Each quarter, the PCIA Bulletin highlights one or more Partners who are reducing women and children's exposure to indoor air pollution. This issue highlights the activities undertaken by ENERGIA.**

### **Mainstreaming Gender Concerns into Energy Policies, Programmes and Projects**

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*"The outcome of CSD 14 and 15 needs to not just reflect but articulate in very concrete terms a new deal for the poor, particularly poor women, in the energy sector that delivers adequate representation of women in energy management and decision making along with the necessary input for individualization of capabilities". – Statement by Women Major Group Coordinators in the Sustainable Development Issues Network (sdin) Volume 6, Issue 8 MAY 10, 2006*

ENERGIA, the International Network on Gender and Sustainable Energy, has been engaged since 1996 in information exchange, capacity-building, research and advocacy to "engender energy" and "empower women".

ENERGIA was set up to create an institutional base for galvanizing action aimed at putting gender and energy on the agenda of both mainstream organizations concerned with energy policy and planning, and those concerned with social development and poverty issues.

An important focus area for ENRGIA has been supporting emerging national and regional networking initiatives in Africa, Asia, Oceania and Latin America. The network has grown to include 22 organisations working on energy and sustainable development issues in Africa and Asia, who share agreed principles on gender, women's empowerment and sustainable development. ENERGIA Africa includes an Africa Regional Network Coordinator based in Uganda and National Focal Point institutions in 13 countries: Kenya, Tanzania, Uganda, Lesotho, Swaziland, Zimbabwe, Botswana, Nigeria, Ghana, Mali, Senegal, Zambia and South Africa. ENERGIA Asia includes Regional Network Coordinator based in India and National Focal Point institutions in nine countries: India, Nepal, Bangladesh, Vietnam, Lao PDR, Pakistan, Indonesia, Sri Lanka and Philippines. The networks activities are backstopped by the International Secretariat hosted by ETC Foundation in the Netherlands with support from the Swedish Inter-

national Development Cooperation Agency and the Netherlands Directorate of International Cooperation.

The ENERGIA Resource Centre focusing on the synthesis and dissemination of knowledge has contributed to a higher visibility of the ENERGIA Network and has been supportive of other ENERGIA activities such as advocacy. Information has mainly been produced in digital form and posted on the ENERGIA website: [www.energia.org](http://www.energia.org). This includes online databases of ground-breaking papers and reports (over 120 entries) prepared by ENERGIA that have drawn global attention to the importance of considering gender issues in energy development plans and policies, annotated bibliographies of a total of 450 entries on gender and energy literature specific to Africa, Asia and the Pacific, contact details of experts working on gender and energy issues and a photograph library.



The quarterly newsletter ENERGIA News produced since 1996 as a key activity of ENERGIA has also been an important vehicle for sharing insights and experiences from projects mostly written and edited by practitioners working in developing countries. The newsletter is freely distributed to over 2500 subscribers and the 25 back issues can be

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## PARTNER SPOTLIGHT ◀ CONTINUED...

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found on the ENERGIA website. ENERGIANet, which was launched in November 2000, is the first electronically-disseminated newsletter focusing solely on gender and energy that disseminates timely and up-to-date information. The information disseminated includes: forthcoming events, workshops, and conferences; relevant experiences, projects, and approaches; and relevant documents, new publications, interesting websites, and work opportunities in the field.



For the past five years, and with the recent support from the European Commission, ENERGIA has engaged in the development of new tools for use in energy policy and project design to assist policymakers and planners to build in gender and energy components as a matter of course. This has been based on the past ten years of ENERGIA's experience and assessment that has demonstrated that although there are a number of general gender analysis tools and methodologies described in the general development literature, there are no gender methods specifically designed for the energy sector (Skutsch, 2005<sup>1</sup>). The testing of the tools has been an essential part of the process to move the tools from the drawing board to energy practice in the field. To ensure that this is regionally specific, testing of the tools has been conducted in both Africa and in Asia. The tools have then been translated into five training modules<sup>2</sup> in English and French that have been adapted and used in (sub) regional level work-

shops that have to-date been used to train 30 trainers and in national level workshops that have to date been used to train 200 energy, gender and development practitioners. The aim of these capability building activities is to create a cadre of gender-sensitive professionals in mainstream energy organizations on how to integrate gender into energy project implementation, planning and policy-making.

With support from the UK Department of International Development (DfID), ENERGIA's research activities have focused on research project entitled "Gender as a Key Variable in Energy Interventions in Developing Countries: Are We Asking the Right Questions?" The project brought together some of the world's foremost experts on gender and energy in a Collaborative Research Group on Gender and Energy (CRGGE) from France, Kenya, India, the Netherlands, the Philippines, South Africa, Sri Lanka, Uganda, the UK and the US, who further involved other researchers in their networks and countries in the endeavour. The challenge was to move towards a framework for gender and energy policy research and practice in the 21st century, a framework that would be credible both for energy and for gender researchers and practitioners, and that would contribute to the overall goal of strengthening energy policy, programme, and project linkages with the Millennium Development Goals (MDGs), with a focus on gender. The group also wanted to build capacity in our own institutions to do policy research on gender and energy, and to influence the international energy policy research agenda as well as practice. The main outputs of the project, available on the ENERGIA website, have been: eight case studies by partner institutions in Asia, Africa and France using creative research approaches to explore the policy issue in the gender-energy-poverty nexus in their country or region, six papers that present the findings of empirical review of evidence, from a gender perspective, on linkages between energy and the first seven MDGs, and a final synthesis paper that proposes a framework for strengthening gender-sensitive energy policy research in the new millennium with key elements based on work by the CRGGE.

The best practices that have resulted from ENERGIA's capacity building and research have been used to support its policy influencing activities. At the national level this consists of gender audits of

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## PARTNER SPOTLIGHT ◀ CONTINUED...

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national energy policy in Kenya, Senegal and Botswana<sup>3</sup> aimed at identifying gender gaps in energy/poverty practice (national energy statistics, national mainstream energy organisations and programmes, and national objectives in achieving the MDGs) that can be used to inform the content and process of developing gender responsive energy policy. At the regional and international level, ENERGIA's policy influencing activities have involved advocacy and lobbying to influence the government and intergovernmental political agenda by mobilizing network members as advocates on gender and energy issues at international, regional and national consultations on energy and sustainable development. This has included consultations that relate to the follow up of the World Summit on Sustainable development, the 14 and 15 Sessions of the Commission on Sustainable Development as a coordinator for "Women as a Major Group", the World Renewable Energy Congresses, the World Bank Energy Weeks.

Other examples of the body of experience that have been built-up by ENERGIA in pursuit of its objectives are:

1. A gender and energy sustainable toolkit and resource guide<sup>4</sup> developed as a joint publication by UNDP and ENERGIA has been designed to help development practitioners ask the relevant questions needed to bring about better development and energy outcomes that are gender specific and that address the needs of women in particular.

2. A case study in Namibia commissioned by GTZ ProBEC, the regional Program for Biomass Energy Conservation in Southern Africa, to demonstrate how gender aspects can be successfully integrated at different levels in the biomass energy sector, thus contributing not only to improved efficiency and effectiveness of household energy programs, but to increased gender equity in participation and benefits.

3. In Tunisia, a best practice study<sup>5</sup> of the successful rural electrification experience included attention to gender as a factor in the success of the rural electrification program supported by The Energy Sector Management Assistance Programme (ESMAP), a World Bank-UNDP Programme<sup>6</sup>.

4. In Bangladesh, a comprehensive gender strategy and action plan for integration into the REB Masterplan, prepared in collaboration with the Rural Electrification Board and supported by the Dutch Embassy as part of their development co-operation planning<sup>7</sup>.

More information on the activities and results of ENERGIA International Network on Gender and Sustainable Energy can be found on the ENERGIA website at: [www.energja.org](http://www.energja.org) or by contacting the ENERGIA Secretariat at email: [energja@etcnl.nl](mailto:energja@etcnl.nl); P.O. Box 64, 3830 AB Leusden, The Netherlands; Tel: +31 33 432 6044/6000; Fax: +31 33 494 0791.

### References

1: (2005), *Gender Analysis for Energy Projects and Programmes prepared by Margaret Skutsch and published in Energy for Sustainable Development, Vol. IX, No.1, March 2005, pp 37-52.*

2: *The five training modules (Concepts in Gender and Energy, Gender Tools for Energy Projects, Engendering Energy Policy, Gender and Energy Advocacy and Engendering Energy Project Proposal Development: Capacity Building of Organisations) are available in English and French at: <http://energja-africa.org//TrainingModules>.*

3: *Gender Audit of Energy Policies and Programmes: The Case for Botswana, Botswana Technology Centre, May 2006, Final Report, Authors: Nozipho Wright, Elsie Alexander, Nathan Tihalerwa, Andrew Obokopok, Irene Ramatala, Peter Zhou, Masego Kealotswe, Leonard Dikobe, with Technical Guidance from May Sengendo and Joy Clancy.*

4: *[Gender and Energy for Sustainable Development: A Toolkit & Resource Guide](#), prepared by UNDP and ENERGIA in 2005.*

5: *Elizabeth Cecelski, Ahmed Ounali, Moncef Aissa and Joy Dunkerley, Rural Electrification in Tunisia: National Commitment, Efficient Implementation and Sound Finances, ESMAP Report 307/05 August, The World Bank, Washington, DC.*

6: *The Gender Equity Strategy and Action Plan of the Rural Electrification Board and Palli Bidyut Somitys (Bangladesh), prepared by ENERGIA in partnership with ECBL, April 2004.*

7: *The Gender Equity Strategy and Action Plan of the Rural Electrification Board and Palli Bidyut Somitys (Bangladesh), prepared by ENERGIA in partnership with ECBL, April 2004*

## ☀ Feature Articles

### Place-Based Education Workshop Guide: Health Hazards of Indoor Air Pollution from Cooking and Heating Fires

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Under contract with the U.S. Environmental Protection Agency, HELPS International is completing a place-based education guide on indoor air pollution (IAP) from household energy use. The guide will provide NGOs with strategies and instructional material to use with community leaders and educators (teachers, nurses, health promoters) to develop place-specific, indoor air quality projects that create attitudinal and behavioral changes in communities through the education of primary school children, although it is applicable for students of all ages. Through a series of workshops, educators design their own instructional units appropriate to their students based on what they, the educators, learn and the way they learn in the place-based IAP workshop. Place-based refers to site-specific, or project-based education, and incorporates participatory action-research methodology. Through place-based education, educators and their students are encouraged to maximize community interaction and collaboration and to investigate issues affecting the lives of community members, in this case focusing on IAP from household cooking and heating practices.

The *Guide* serves as an instructional template that can be customized to fit the given needs of a particular place and community, accommodating local photos, and directed to the needs of a specific target workshop audience. It contains proven instructional materials and place-based strategy in electronic form--both DVD and CD. The DVD por-



*School IAP presentation*

trays actual pilot placed-based workshops and an original story about IAP filmed on location. The CD contains two PowerPoint presentations about IAP that can be adapted into a product targeting a particular audience. It also includes resource articles, links, and sample forms--everything one needs to create the workshops.



*Mother's Day community IAP event*

Because this subject is about hearth, home, food--traditions that are the core of family life--the method of presentation of the information is particularly important in helping the listener to internalize the information and make fundamental behavioral changes. For that reason, and based on HELPS experiences working with indigenous populations over the past six years, the project designers chose a place-based approach.

The HELPS International project team validated their place-based design with two educator workshop groups in a rural community in Guatemala. The educators chosen for the workshop taught primary-age children in public and private schools in a rural area that shared a common culture and language. Project team members were on location for three weeks, on two separate visits. The purpose was to test the hypothesis that by taking the IAP workshop to educators in a community that lived with indoor air pollution and asking for their collaboration, the approach and material could be verified.

While these were design workshops, not implementation workshops, impressive results were nonetheless generated. Two months later, the students in each of the eight schools with teachers participating in Workshop 1 presented IAP

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information to their parents during a week in May dedicated to Mother's Day, reaching an estimated total audience of around 1200. Most of the presentations used the story of *Juan's Tortillas* which they acted out, made more dramatic, created songs, or altered in some imaginative way. The performances would often conclude with a student, a school official or a mother making a speech about the negative health effects of indoor air pollution. All the presentations were in the local language of the community which is Ixil.

In addition, a group of men inquired about having a stove store in Nebaj, a remote town in the Guatemalan highlands, where people could buy a HELPS stove and learn how to use it, and there has been considerable interest at the participating teachers' schools to receive an institutional cooker

so that the women will not have to cook the students' morning snack on huge open fires in unvented rooms.

The filming of *Juan's Tortillas* was itself an outcome of Workshop 1; the workshop generated enough interest that some of the teachers recruited the actors, chose a location, and adapted the story for video.

*"Smoke was just smoke before the workshop. We had no idea of the severely damaging effect on health and knew nothing much about the respiratory system."*

-Participant in Pilot Workshop

Look for future announcements on how you can order your free copy of this new Partnership for Clean Indoor Air resource.

#### **Additional resources on children as agents of environmental health change:**

In 2006, the European Child Safety Alliance published a paper "That Sensitive Indicator of the World: A Historical Perspective on Children as Agents of Change in the Field of Health and the Environment" which gives numerous examples of the way in which changes for children have paved the way for changes that help the wider community. [http://www.cehape.env-health.org/article.php?id\\_article=467](http://www.cehape.env-health.org/article.php?id_article=467)

The international organization WASTE is implementing an Ecosan School Programme to meet the need for safe sanitation around the world. By informing the pupils schools can provide links to reaching families and communities. <http://www.ecosan.nl/page/901>

The 29th Water Engineering and Development Centre International Conference in Abuja, Nigeria, 2003 paper "Children as agents of sanitation and hygiene behaviour change" focuses on promotion of sanitation and hygiene education among school children with a goal of enhancing positive knowledge, attitudes and skills that help encourage them to become agents of hygiene behaviour change in their schools, homes and communities. <http://weduc.lboro.ac.uk/conferences/pdfs/29/Olayiwole.pdf>

The International Development Research Centre developed the Child-to-Child approach with a group of health and education professionals. The goal was to improve health and reduce infant mortality by engendering positive health practices among children through activity-oriented learning methods ranging from structured programs in schools to the participation of children in community health programs in urban slums. [http://www.idrc.ca/es/ev-26910-201-1-DO\\_TOPIC.html](http://www.idrc.ca/es/ev-26910-201-1-DO_TOPIC.html)

## IAP Study as an Educational Tool in Kebrebeyah Camp

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For the past year, Project Gaia (PG) has been working with the University of California's Center for Entrepreneurship in International Health and Development (CEIHD) and the Shell Foundation to examine whether alcohol-powered stoves can have a positive impact on indoor air quality in various Ethiopian communities, including UNHCR-administered refugee camps.



*Camp dwelling in Kebrebeyah*

PG's affiliate, the Gaia Association, an Ethiopian NGO and UNHCR Implementing Partner, recently conducted tests in Kebrebeyah Refugee Camp in Ethiopia's Somali Regional State with equipment provided by CEIHD. The equipment used was the Carbon Monoxide (CO) HOB0 logger (Onset Computer Company) and the University of California-Berkeley Particle Monitor (UCB PM), which measures particles of approximately 2.5 microns, or PM<sub>2.5</sub>. A Gastec Tube was also used as a backup for measuring CO. During the study 'before' and 'after' IAP samples were taken in 12 homes. The before study measured IAP levels when the households used their regular stoves (fuelwood and charcoal) and the after study measured IAP levels when the ethanol-burning CleanCook stove, which successfully displaced other stoves for all cooking and heating tasks, was introduced.

Staff of the Ethiopian government's Administration for Refugee and Returnee Affairs (ARRA), who are based at and run the day-to-day affairs of the camp, selected the 430 homes that currently have stoves; eventually all families in the camp will have a stove. The Gaia Association, repeating a strategy that it has used in other settings, re-

cruited in the camp for local staff to conduct its survey work. This Somali staff has gone through intensive training that included a primer on fuels, cooking and indoor air pollution (IAP), including health impacts of IAP and specifically the vulnerability of young children and pregnant mothers, survey tools to be used to gather baseline and post intervention data, personal and professional skills to be used during interaction with families, and hands-on practice by doing. Gaia was able to recruit four staff from a group of well-educated younger people in the camp who speak not only their native Somali but also Amharic, the principal language of Ethiopia. This staff will stay with Gaia for the duration of the project or for as long as they are able, and are the leaders of the education and outreach activities in the camp.

The 430 households had already taken part in discussions on IAP and family health impacts, and fuel and fire safety in order to receive their stoves. IAP education was based on materials and guidance that staff received participating in the second WHO regional training workshop on indoor air pollution and household energy monitoring, held in Kampala, Uganda June 13-17, 2005. The 12 homes recruited by camp staff to participate in IAP monitoring received additional interaction on IAP and what the Gaia staff would do to measure it. Most important, these families were given a clear explanation of what the equipment was, how it worked and the data it would collect during the 48-hour sample period. The lights on the HOB0 and UCB PM were carefully pointed out and discussed, as these would be visible at night. Since the Gaia staff speaks Amharic, the camp staff took the lead in Somali.

When the IAP equipment was set up in the first home, a group of at least 20 on-lookers assem-



*Inside camp dwelling in Kebrebeyah, with IAP monitoring equipment*

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bled, drawn from neighboring homes and from other homes participating in the study. While the IAP team worked to place the equipment, the Somali staff engaged in a lively discussion with the assembled group about the equipment and the study. This was repeated at almost every test home. The IAP testing thus served as an opportunity for education and outreach, all the more so because of the activity and excitement generated. If not immediately, by the end of the set-up process most of the IAP test homes generally understood what the tests were for and what the equipment would measure.



*New CleanCook in Kebrebeyah camp*

Half of the sample group had just received the stove, while the other half had been using the stove for six months. The 48-hour IAP sample period was thus the first opportunity for the new group to use the stove. Initially, families in this group had more difficulty in understanding the purpose of the IAP testing. After they used the CleanCook for the 48-hour sample period it was clear that they could see and feel the difference in the quality of the air, and understood that it was this difference we were measuring. In the process, our Somali staff learned how to better explain IAP, including through better word choices and descriptions emphasizing experiences which were universally understood, including key descriptions of symptoms, such as weak eyes and the need to spit often. Families could also explain better to each other.

Participant understanding was further demonstrated by the increased feedback the Team received, especially from the women, about their experience with indoor air pollution. They readily talked about the symptoms they experienced with

their wood and charcoal fires, including eye, nose and throat irritation, coughing, breathing problems (asthma-like symptoms) and headaches. It became evident that, while taken for granted as a part of daily life, the discomforts associated with smoke from cooking fires—as well as some of the health risks—were well known to them. They were excited by the possibility that they would find relief from symptoms that they had previously accepted as necessary and unavoidable.

Our IAP 'before' samples showed that heavy use of fuelwood combined with the lack of ventilation in the cooking structures resulted in very high levels of CO and PM. The highest levels that we recorded during the 48-hour period were 707.0 ppm and 235.4 mg/m<sup>3</sup> respectively. There is only a small door to ventilate the kitchen. Much of the fuelwood is green, not dry. When the Team was installing and collecting the equipment from the households we could hardly breathe. Within a few minutes of exposure to smoke in the homes, tears would run down our faces as we hurried to complete our work. Once the CleanCook was introduced, the CO and PM concentrations were significantly reduced—by 91.1% (to 63.2ppm) and 98.59% (to 23.9.9mg/m<sup>3</sup>) respectively.

The data collected at Kebrebeyah Camp provided evidence not only to our team but perhaps even more importantly to the camp residents themselves that better fuels and stoves are available, and needed. The tests created an expectation for the camp residents; in realizing what was possible, they naturally felt that the clean stoves should come to the camp as soon as possible. There are some 3000 families in the camp presently, with the numbers growing daily as more people flee the fighting and hardships of Somalia. Our target date by which to provide stoves to all families in the camp is December 2007.



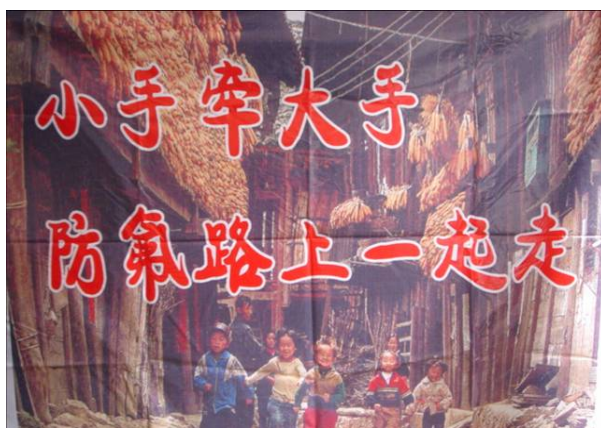
*Kebrebeyah stove training*



## Health Education in Schools for Reducing IAP Exposure

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Health education is one important component of the PCIA supported project, *Household energy intervention for reducing IAP exposure in rural areas in China*. The concept is based on the "small hands leading big hands" premise; that child education is an effective way to also reach adults, since children more readily learn and internalize new knowledge (and adapt to new living habits), and with China's one-child policy, families have a strong focus on their children. Those who benefit from health education were expected to affect their communities after learning the knowledge of reducing exposure to indoor air pollution (IAP).



*"Small hands leading big hands"*

Through the behavior changes in the next generation of children, health education may change unhealthy living habits related to fluorosis and arsenism, which are diseases related to exposure to smoke from coal with high fluoride and arsenic content, respectively. The diseases can also be contracted through consumption of food contaminated through the use of coal smoke for drying and storage. Fluorosis can cause malformation of bones and teeth. The main symptoms of arsenic poisoning are skin scathe, pigmentation, skin keratosis, Bowen's disease or skin cancer, with possible links to nerve damage, cardiovascular disease and bowel cancer.

### 1. Main Activities of Health Education

Health education in schools was performed throughout the span of the project, reaching more than 8,000 students in 24 townships of 7 counties in Guizhou Province. It was required by the government that trained teachers be utilized for this education about clean indoor air. Besides courses,



*A health education course*

various interesting activities, such as a knowledge quiz, a composition competition, an artistic performance, blackboard activities, and social practice attracted students to take part so as to strengthen the effect of health education. Students were also encouraged to disseminate their knowledge to their parents and communities.

### 2. Key Information Presented

#### *Sources of IAP*

\*Improper stove devices, lack of a proper chimney, higher F/As contaminated coal, incomplete combustion, and unhealthy living habits, including improper stove usage, and using coal smoke to dry and cure foods.

#### *Health impact of IAP*

\*Respiratory diseases and symptoms, fluorosis/arsenism, neurological symptoms, eye symptoms, and CO poisoning.

#### *Prevention of endemic fluorosis and arsenism*

\*Use and maintenance of improved stoves, promotion of healthy living habits, including drying



*Lecture competition*

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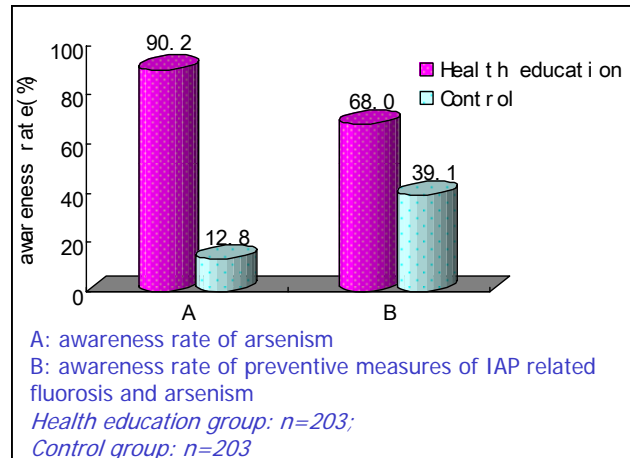


*A poem of fluorosis prevention on blackboard*

food by sunshine or in special facilities such as tobacco drying closet instead of drying food by coal smoke on attic; packing food after drying for storage; washing food before cooking or eating; and correct stove usage, including keeping the stove mouth covered, and keeping children away from the stove when cooking and adding fuel.

### 3. Results of Health Education

In project areas, IAP awareness rates in students in the health education group were significantly higher than the control group. The measures of "small hands leading big hands" proved to be an effective measure of health education in rural areas in China.



*Figure 1: Understanding of IAP-related knowledge*

### Nedwa Education and Outreach Activities in Mauritania

Amy Helmick; [niecey43844@yahoo.com](mailto:niecey43844@yahoo.com)

In support of the Partnership for Clean Indoor Air, the U.S. Environmental Protection Agency (USEPA) awarded pilot project grants to ten non-profit organizations to implement innovative, community-based programs to reduce indoor air pollution from household energy use; Nedwa is one of these grantees.

Nedwa, an Arabic word meaning "meeting place for dialogue", is a newly created local NGO working in Mauritania in the field of communications for educational development; the objectives of Nedwa are to provide high quality educational tools and materials that are based on the needs and well-researched obstacles of specific target audiences. Nedwa is collaborating with Peace Corps Mauritania to improve and select a cook-stove that will be affordable to the Mauritanian population and which will aid in the fight against desertification and respiratory infections.

A key motivating factor in stove promotion and education in Mauritania has been the training of sixty-two dynamic, vocal women from each of the target communities to serve as community out-



*Professional community outreach assistants teach community agents how to deliver health messages to their families and peers.*

reach agents. These women were chosen by elected community leaders to attend a two-day conference in the regional capital in December

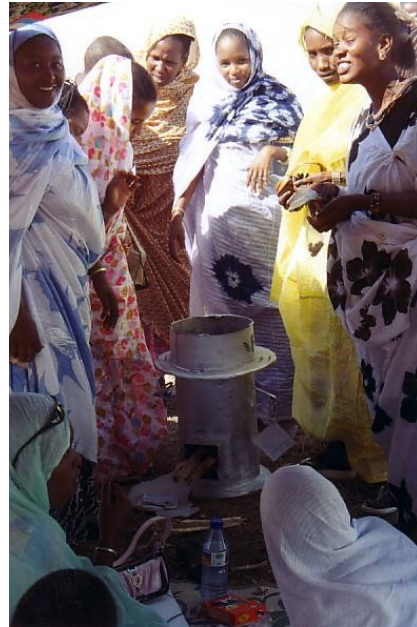
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2005, where they were educated about previous national efforts made to promote improved cook-stoves as well as the health dangers associated with traditional cooking practices. Immediately following, they were introduced to the educational folder created for the PCIA Mauritanian-adapted Rocket stove called "Fourneau Mâsse-coono" (literally translating from Wolof to "Stove heal your tiredness"). This folder, resulting from a collaborative effort between Peace Corps Volunteers serving as the Project Officer and a Nedwa artist, featured color photographs and written text in both French and Arabic explaining the health, environment, and economic advantages of the FMC. It was created so that literate or illiterate individuals could understand the messages and it was laminated to ensure durability. The community agents each received a copy of the folder and were taught how to use it as an educational tool for other community members.

On Day Two of the conference, the women were divided into teams and were given cooking supplies, pre-measured wood, and a FMC and were required to prepare their own lunch. This activity was especially successful because it gave them the opportunity to experience the stove's efficiency first-hand, and all of the women raved about the fact that their nice clothing did not smell of smoke or get dirty during the cooking. At the end of the conference, each woman was loaned a stove to take back to her village, where they each organized demonstrations, educated their neighbors, and loaned the stove out to other families. Making the stoves available for communities to use before purchase helped increase sales, for these families recognized the health advantages and how the FMC differed from other improved stoves promoted previously.

By July 2006, 2305 households had been educated about the health impacts of indoor air pollution, and 283 homes had adopted the new stove technology. Nearly 1500 women and children



*Community agents with an FMC discuss what they learned*

have reduced exposure to indoor air smoke and have also gained time to dedicate to studies, economic opportunities, and other household chores. Our efforts in Mauritania continue.

In March 2006, songs were written and produced by local artists in three of the four local languages and also in French. These songs speak of the stove as being non-harmful to the environment or the family's health and as the stove that brings peace. It is described as an important addition to the family, a miracle, a solution to Mauritania's problems, and an improvement to the home. The lyrics motivate and unite the communities, and have been an effective way of educating illiterate populations. The FMC team in Mauritania will continue to work to promote the stove, informing new communities about the healthful, helpful, and miraculous stove known as "Fourneau Mâsse-coono" in all the languages.

## ⚙ Happenings

### Recent Partner Activity...

#### PCIA Partners Win Ashden Awards

The winners of the 2006 Ashden Awards for Sustainable Energy were announced in June, rewarding outstanding and innovative projects which tackle climate change and improve quality of life through the generation of sustainable energy at a local level. Of the ten first and second place awards, six relate to improved fuels and technologies for household cooking. PCIA Partners include first place winners GIRA, who won the Health and Welfare Award, for design and distribution of the Patsari stove; and ARTI, who won the Food Award, for dissemination of ARTI's food waste-based compact biogas system. Aprovecho and ProBEC won second prize in the Africa Award to promote institutional rocket stove design concepts. For more details please visit [http://www.ashdenawards.org/press\\_release\\_05\\_2006](http://www.ashdenawards.org/press_release_05_2006).

#### Enhancing Business Plans in Latin America

The U.S. Environmental Protection Agency sponsored the first Partnership for Clean Indoor Air Regional Commercialization Training Workshop in Patzcuaro, Mexico on the 21 - 23 June 2006. The workshop was the first in a series of regional workshops aimed at equipping organizations with relevant and appropriate business skills to strengthen the commercial aspects of their household energy programs as they embark on the path of scaling up stove production volumes. Representatives from six regional NGOs (Trees, Water & People (US), AHDESA (Honduras), Proleña (Nicaragua), Solar Household Energy (Mexico),



*Commercialization workshop participants*

GIRA (Mexico), Winrock International) and one research institute (Yale University) participated in the workshop.

The workshop was facilitated by Accenture Development Partnerships (ADP), a not-for-profit unit within Accenture, the global management consultancy, which provides field-based business and technology consultancy services to organizations in the international development sector. Accenture trained the participants on the fundamentals of the Commercialization Toolkit previously developed and field tested for the Shell Foundation. The commercial training helped Partners understand various aspects of the business cycle such as macro environment, customer and demand, supply analysis and sustainability to ensure that a self-sustaining delivery system is in place to support program scale-up.



*The workshop included a field trip to two GIRA project sites. Marlyng Buitrago of Proleña asks a local stove builder questions.*

The workshop resulted in an increase in the Partners understanding of commercial considerations and tools available to help them scale up their stove programs. Each NGO developed an action plan to identify the tasks which they can undertake in the short term to improve the commercial aspects of their programs.

*"We now have an excellent overview of all the aspects needed for a business model."*

*"Technical terms and how to organize our operations – not necessarily new, suddenly we under-*

*(Continued on page 13)*

(Continued from page 12)

*stood that everything we're doing has a name and place within a larger commercial framework."*

*"The workshop helped us consolidate our field experience, and organize the steps we need to take to operate more efficiently. We enjoyed the opportunity to discuss these topics within our NGO because we often don't get the opportunity to do so in the day to day operation."*

*-Commercialization workshop participants*

The USEPA will be sponsoring future PCIA commercialization workshops in Asia and Africa this fall. If you are interested in participating in one of these workshops, please contact Brenda Doroski at [doroski.brenda@epa.gov](mailto:doroski.brenda@epa.gov)

### **Nepal Biogas in the News**

Carbon reduction funding for Nepal's biogas program was recently written up on the Science Development Network. For background, please refer to Bulletin #6 Feature article on CDM financing of household biogas in Nepal. To read the current article visit <http://www.scidev.net/content/news/eng/nepals-biogas-initiative-gets-major-funding-boost.cfm>

### **Upcoming Events...**

#### **International Workshop on the Use of Bio-Slurry in Domestic Biogas Programmes September 27-28, 2006, Bangkok, Thailand**

Organized by the Netherlands Development Organization (SNV), this workshop will bring together practitioners, researchers and policy makers to exchange information on the use of bio-slurry including extension practices among participants, and presentations on bio-slurry utilization in PR China, India and Nepal. For more information please visit: <http://www.hedon.info/goto.php/389/events.htm>

#### **Wood Energy 2006 September 28 - October 1, 2006, Augsburg, Germany**

This event, co-located with RENEXPO 2006, is a wood energy trade fair and conference with a focus on wood production and electricity and heat generation, aimed at sectors including agriculture, handicraft, energy supply, energy consulting, forestry and timber industry, retail, planning and

project development, (local) authorities, manufacturing, research and development, architecture, the housing industry, and private interest consumers.

<http://www.ihe-woodenergy.com/>

#### **International Conference on Energy, Environment, and Development: Analysing Opportunities for Reducing Poverty December 14-16, 2006, Bangalore, India**

Organized by Institut Veolia Environnement (IVE), and Institute for Sustainable Development and International Relations (IDDRI) and PCIA Partner The Energy and Resources Institute (TERI), this conference will focus on challenges for sustainable development that arise from the nexus between energy, environment, and poverty, provide an opportunity for researchers, policymakers, practitioners, and the donor community to engage in constructive dialogue on possible solutions, and will attempt to identify an agenda for action and policy relevant research, particularly focusing on developing countries in Asia. For more info, visit [http://www.teriin.org/events\\_inside.php\\_id\\_17298](http://www.teriin.org/events_inside.php_id_17298)

#### **Better Air Quality 2006 Workshop September 13-15, 2006, Yogyakarta, Indonesia**

The theme of the 5th Better Air Quality (BAQ) workshop is a "Celebration of Efforts" to highlight the success stories that Asian countries, cities and communities have achieved over the last years in addressing air pollution while at the same time highlighting the efforts that are still ahead in improving air quality in Asia. For more information, please visit <http://www.baq2006.org>

### **PCIA Website Update!**

Please visit the website ([www.pciaonline.org](http://www.pciaonline.org)) for information on PCIA activities!

New features on the website include:

- PCIA Factsheet in French
- Design Principles for Wood Burning Cookstoves in Spanish
- New articles in Media Coverage

The website is undergoing enhancements. Please check back for new features. For any website related questions please contact Winrock International at [PCIAmoderator@yahoo.com](mailto:PCIAmoderator@yahoo.com)

## ⚙️ What's New?

### ...in Resources?

#### "Design Principles for Wood Burning Cook Stoves" in Spanish

The Partnership for Clean Indoor Air has published a Spanish version of the "Design Principles for Wood Burning Cook Stoves" to provide technical best practice stove design support to Spanish-speaking practitioners implementing household energy and health projects.

The booklet covers stove theory, design principles, instructions for making insulative ceramic combustion chambers and an in-field Water Boiling Test with the objective of promoting well-engineered stoves that improve combustion efficiency, thereby reducing harmful emissions, and increasing heat transfer efficiency, dramatically reducing fuel use when cooking. To download the document in English or Spanish, or for instructions on how to order a hard copy, please visit <http://pciaonline.org/resources.cfm>

#### WHO Fuel for Life Report

The World Health Organization has published a report entitled Fuel for Life: Household Energy and Health, which gives an overview of the health impacts of indoor air pollution from solid fuel use and describes solutions to promote health and development in the context of the household energy challenge. For more information, and to download the document please visit <https://www.who.int/indoorair/publications/fuelforlife/en/index.html>

### Principios de diseño para estufas de cocción con leña



Aprovecho Research Center  
Shell Foundation  
Partnership for Clean Indoor Air

#### Innovation in Rural Energy Delivery Study

Navigant Consulting, Inc. and Soluz, Inc. have released a multi-client study on accelerating rural energy service through the private sector using distributed energy. The study, Innovation in Rural Energy Delivery, focuses on opportunities to accelerate energy access in rural areas of developing countries, including through the use of entrepreneurial small and medium enterprises (SMEs) in providing service through distributed clean energy (DCE) technologies, primarily small renewable energy systems. For more information please visit <http://www.soluzusa.com/innovation.html>

### *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](mailto:PCIAonline@yahoo.com). The deadline for contributions to next quarter's Bulletin, the topic of which will be **Commercialization**, is **September 15, 2006**.

DISCLAIMER: Unless otherwise stated, information contained in this Bulletin is not necessarily the opinion of and/or endorsed by all Partners.