# PARTNERSHIP FOR CLEAN INDOOR AIR

**October 2004 Issue 1**

## Welcome to the first issue of the PCIA Bulletin!

This quarterly newsletter provides updates on the activities of the Partnership for Clean Indoor Air (PCIA) and its Partners around the world, and fosters awareness about issues related to indoor air pollution, household energy and health.

The mission of the PCIA is to improve health, livelihood and quality of life by reducing exposure to indoor air pollution, primarily among women and children, from household energy use. The Partnership was launched at the World Summit on Sustainable Development in Johannesburg in September 2002 to address the environmental health risk faced by nearly two billion people who burn traditional biomass fuels indoors for cooking and heating. This voluntary Partnership is bringing together over 75 governments, public and private organizations, multilateral institutions, industry, and others to increase the use of affordable, reliable, clean, efficient, and safe home cooking and heating practices. Please visit www.pciaonline.org to join!

**In This Issue**



## EPA Announces First PCIA Grants!

In support of the Partnership for Clean Indoor Air (PCIA), the U.S. Environmental Protection Agency (USEPA) awarded grants to eleven non-profit organizations to implement innovative, community-based programs to reduce indoor air pollution from household energy use. The pilot projects will demonstrate effective approaches for addressing social and cultural barriers to adopting improved cooking and heating practices, developing local markets for improved technology, meeting design and performance guidance for improved technology, and monitoring reduced exposure. The $1.3 million funding is being provided by the U.S. Agency for International Development (USAID) and the USEPA. These two-year grants will increase the use of clean, reliable, affordable, efficient, and safe home cooking and heating practices that reduce people's exposure to indoor air pollution.
*More information on page 2….*

## Household Energy and Health Country Overviews Posted

Winrock International, under a cooperative agreement with the USEPA, has compiled household energy and health reports on India, South Africa and Guatemala to provide an overview of the energy and health sectors, experiences and lessons in household energy programs, and key actors in energy, health, environment, and related sectors. These overviews aim to help guide program implementers and the donor community in supporting comprehensive, multi-sector approaches to addressing the health impacts of indoor air pollution from cooking and heating practices. Household energy and health specialists engaged with each country have jointly authored the reports which you can download from the PCIA website at www.pciaonline.org. Overviews on China and Mexico will be available in November.

# PARTNER SPOTLIGHT

Each quarter, the ***PCIA Bulletin*** will highlight one or more Partners who are reducing women and children's exposure to indoor air pollution. This issue highlights the eleven grantees selected this year to receive Partnership for Clean Indoor Air (PCIA) grants for promoting clean, efficient, affordable, reliable, and safe household energy practices. These grants were competitively selected by an international panel of experts from the World Health Organization (WHO), Shell Foundation, Italian Ministry of Environment and Forests, USEPA and USAID from over 90 concept proposals and 30 full proposals. Collectively, these grants will:

- ✓ Improve health, livelihood, and quality of life by reducing exposure to indoor air pollution in more than 30,000 households (approximately 160,000 people);
- ✓ Improve awareness of the dangers of indoor air pollution and the benefits of improved cooking/heating alternatives to more than approximately 1 million people via advertising and public service campaigns, stove demonstrations at markets and in schools, social marketing campaigns, and working with other NGOs and women's groups;
- ✓ Result in more than 200 local entrepreneurs starting their own clean cook stove production/distribution business; and a sustainable model for stove dissemination that ensures local empowerment and self-sufficiency;
- ✓ Reduce exposure to indoor air pollution in home adopting new clean technologies by 50% - 80%; and
- ✓ Test, improve, and market a number of clean household energy technologies, including: improved biomass stoves, retained heat cookers, biogas digester systems, solar cookers, and methanol stoves.

The USEPA will assess the need to solicit proposals to fill any potential geographical, technological, or strategic gaps in 2005. For more information on the grantees and their projects, please visit www.pciaonline.org.

## The Grantees

### Latin America

**Trees, Water & People** (TWP) will promote the Rocket Stove, Super Rocket, and EcoStove wood burning stoves in an urban area of Honduras. The project aims to raise awareness about the dangers of indoor air pollution (IAP) among 200,000 individuals; disseminate improved cook stoves to at least 720 households; reduce exposure to IAP by 50 – 90%; and provide technical assistance to 30 local entrepreneurs. In the last five years, TWP has installed 7,500 improved stoves in Central America which reduced emissions by more than 50%, burned 67% less wood, and saved families $5/week.

**HELPS, International** will promote the retained heat cooker ("hay box") in rural areas of Guatemala to complement the 2,800 improved cook stoves they have installed with support from the Shell Foundation. They will: design a locally appropriate cooker that can be mass produced; establish a distribution method for supplying 1500 retained heat cookers; train NGOs to promote the cookers; and monitor exposure to IAP. They anticipate an additional 15% savings over the 70% reduction in firewood use with the improved stoves.

**Solar Household Energy, Inc.** (SHE) will promote solar cooking in rural Mexico. SHE will manufacture and sell 2,000 "HotPot" solar panel ovens. They will raise awareness of targeted communities of solar cooking techniques and train small-scale local distributors to market the ovens.

### Asia

**Appropriate Rural Technology Institute** (ARTI) will introduce and promote biogas technology in rural areas of Maharashtra, India. Project goals include: field-testing ARTI's compact biogas system in 200 rural and semi-urban households; standardizing its design and mode of operation; standardizing feedstock production protocols; quantifying improvement in IAQ and health due to use of the biogas system; conducting statewide awareness raising campaigns for cleaner indoor air; and creating at least 10 entrepreneurs serving 2,000 households, and 10 self-help groups marketing the biogas plant and feedstock.

**Society for Development Alternatives** (DA) will promote improved wood burning stoves and other technologies in rural areas of Madhya Pradesh and Uttar Pradesh, India. Project goals include:

implementing a social marketing campaign to raise awareness of 50,000 households about IAP; disseminating clean energy solutions among 15,000 households; providing access of credit to approximately 3,000 families and 20 micro-enterprises; engaging 60 micro-enterprises, 2-3 industrial manufacturers, and local distributors in the production and delivery of improved technologies; and achieving significant improvement in environmental conditions, health, and quality of life.

**Institute for Environmental Health & Related Product Safety** (IEHS) of the China Center for Disease Control will promote improved coal and biomass technology in rural Guizhou and Gansu Provinces. Goals of the pilot project include: increasing awareness and knowledge of IAP and health effects among 4,800 households; introducing new practices in 3,000 households; reducing IAP emission by 80%; initiating the commercialization of stove/parts; standardizing production and use of improved stove/heating sets; and determining health improvements.

**The Nature Conservancy China Program** will promote solar water heaters, biogas units, and biomass stoves in northwest Yunnan Province, China. TNC will use alternative energy to meet the rural communities' energy needs to achieve dual biodiversity and health benefits through the reduction of fuel wood consumption. The project aims to develop and deliver alternative energy units to 5,000 households, and raise awareness about the dangers of indoor air pollution in 20,000 households. Twenty schools will use alternative energy for cooking and heating demonstration projects reaching approximately 4,000 teachers, staff and students.

## Africa

**Centre for Household Energy and Environment** (CEHEEN) will introduce a methanol stove-fuel cooking system in Nigeria. CEHEEN will raise awareness of 63,000 households and improve IAQ, with 300 families adopting the technology; develop a new market for methanol stove-fuel systems, including micro-finance options; and improve indoor air quality by 80% in pilot households.

**Venture Strategies**, in collaboration with Center for Entrepreneurship in International Health and Development, will promote local technology and the Rocket Stove in urban areas of Uganda. Goals of the project include: building awareness about benefits of improved stoves in 5,000 households; establishing a successful wood stove business in a low-income urban neighborhood; introducing a high-quality product to urban markets; and measuring the effect on indoor air pollution by using traditional and improved cooking devices.

*Descriptions of the pilot projects in Mauritania and South Africa will be available in November.*

## PCIA Logo Competition!

The Partnership for Clean Indoor Air invites you to design a logo for the Partnership! The winning design will appear on the Partnership website, stationary, and other promotional materials.

**The winner will have the opportunity to see his/her design used to represent the Partnership and will receive round trip airfare to attend the upcoming PCIA Meeting planned for March 2005 in Marrakech, Morocco!**

### Design Criteria

The competition is open to anybody 18 years or older. All designs must:

- Reflect the issues of household energy, indoor air pollution and health;
- Represent the mission of the PCIA;
- Be submitted electronically in JPEG format with 300 dpi (Note: do not send submissions in ZIP format); and
- Be accompanied by complete contact information of contestant (Name, occupation, mailing address, email, telephone number).

### Closing and Award Dates

The closing date for entries is **December 15, 2004**. The winning design will be announced on the PCIA website on **January 15, 2005**.

**For more details on the competition, keep checking our website** – www.pciaonline.org.

*We deserve the right to not select a logo out of this competition.*

# ☼ FEATURE ARTICLE

## PCIA Activities in China

The World Health Organization (WHO) estimates that indoor air pollution related diseases account for 20% of deaths in China. The PCIA has five partners in China from government, NGO and private sectors: the People's Republic of China, The Nature Conservancy, All China Youth Federation, China Association of Rural Energy Industry, and the Institute for Environmental Health and Related Product Safety. In September 2004 Brenda Doroski and John Mitchell of the U.S. Environmental Protection Agency (USEPA), traveled to China on behalf of the Partnership for Clean Indoor Air (PCIA) to learn about existing household energy and health programs; share information on the PCIA; and explore opportunities to work together. U.S. Ambassador Randt hosted a donation ceremony and press conference to announce the Partnership for Clean Indoor Air grants in China. Ms. Doroski and Mr. Mitchell were joined by Ms. Kate Pongonis of the U.S. Embassy during site visits to the PCIA pilot project sites in the country, and by Ms. Karen Westley of the Shell Foundation during meetings with Chinese government ministries, NGOs and stove manufacturers in Beijing. Information collected during the trip is highlighted below.

**Field Visits to PCIA Pilot Projects**

The team visited two PCIA pilot projects: **The Nature Conservancy (TNC)** in Yunnan and **The China Center for Disease Control, Institute for Environmental Health and Related Product Safety (IEHS)** in Guizhou.

The goal of the Nature Conservancy project is to reduce fuelwood consumption by 75 percent, improve health and raise local community living standards by promoting improved cook stoves, biogas systems and solar water heaters.

In the project sites in Lashihai and Laojunshan counties in Yunnan, families with incomes below USD 120 per year collect between four and six tons of wood per year as fuel for cooking and heating activities on both traditional open-hearth and improved cook stoves. Some families owning pigs have installed biogas units which can power a biogas cook stove and light bulb. These units are jointly funded by the local government, the TNC and the recipient family. In the Yunnan counties, a range of cooking fuels and technologies are used. These include electric rice cookers, improved cook stoves, open hearths, LPG fuel and stoves. These households experience various health problems associated with wood burning and exposure to indoor air pollution.

The IEHS sites in Xingren and Guiding counties in Guizhou rely on coal as the primary fuel source for cooking and heating. Guizhou is a relatively warm climate, so home heating is only necessary in the winter months. The coal in this region has a high arsenic and fluoride content which leads to arsenic poisoning and fluorosis in residents cooking in poorly ventilated spaces.

**Woman Using Coal Stove**

The focus of IEHS and World Bank projects in this area is to heighten public awareness of the diseases associated with inhalation of coal smoke and ingestion of food dried in coal smoke, promote improved ventilation of existing traditional cook stoves, introduce improved cook stoves with chimneys, and encourage drying food outside the kitchen/home. Most families earn well below USD 120 per year and do not have the livestock to support a biogas digester at this time.

**Collaboration with Government, NGO's and Manufacturers in Beijing**

The following information provides an overview of the team's meetings with government and NGOs working in the area of household energy and health.

**The Ministry of Agriculture (MOA)** has joined the PCIA and is interested in collaborating with other partners to address cultural barriers associated with household energy and health; commercialization of biogas digesters; and evaluation of household energy and health projects. The Ministry has 40,000 people engaged

**Production of Coal Bricks**

in the administration of renewable energy from the central government level to the local level. The MOA led the implementation of the National Cookstove Program which placed about 190 million improved cookstoves in rural households, and is developing wind, solar, biomass gasification and micro-hydro projects in rural areas to take advantage of the available resources. Additionally, MOA is installing household size and community biogas plants. When installing a household biogas plant, MOA upgrades the bathroom and the livestock area in addition to the kitchen.

**The China National Institute of Standardization** sets the national standards for products and facilities related to renewable energy. The NGOs support these state agencies in forming, implementing, and evaluating rural development efforts as well as implementing independent projects to improve the quality of life in rural China.

**The Energy Foundation**, **The Nature Conservancy**, **AusAid**, **United Nations Development Programme**, **World Vision** and **Asian Development Bank** all have renewable energy programs in the country. While many of the organizations do not have a mission focused exclusively on household energy programs and improving indoor air quality, all parties present expressed interest in participating in the Partnership for Clean Indoor Air.

**The China Association of Rural Energy Industry** (CAREI) represents over a 1,000 companies. They have a Division of Efficient Cook Stoves, with 40 manufacturers and 100 professional stove members in northern China, and a Division of Biogas Digesters. CAREI has collaborated with experts in the U.S. to monitor indoor air pollution in homes. The association is at present implementing an improved cook stove project in 7 counties with Dutch funding and collaborating with the German GTZ program to provide two efficient stoves for use in Africa. CAREI has joined the Partnership for Clean Indoor Air and would like to contribute by providing trainings on use and maintenance of improved stoves; setting up stove manufacturers outside of China; and disseminating information from other countries to its members.

**Beijing Laowan Bio-Energy Technology Co. Ltd.,** with 160 million RMB in sales last year, is the largest private manufacturer in China specializing in biomass stoves. Laowan's products include mini-boilers, commercial heating boilers, pellet products and wood burning cast-iron stoves. The smallest 3 in 1 biomass stove is priced at about 1000 RMB (USD 121). Laowan has a network of 2,000 distributors who provide sales, technical support and maintenance. HQ handles advertising with big media outlets and provides support for local advertising.

The **Beijing Jindadi New Energy Equipment Co., Ltd** was one of the first companies to get involved in biomass stove manufacturing in the country. They manufacture 600kW, 200kW and 100kW units. The semi-gasification stove for rural households can convert straw and/or agricultural waste to gas. This 400 RMB (USD 48) device can also provide heating and hot water while cooking. About 2000 stoves for individual household use have been sold since the company got involved in household devices in early 2003. The company is selling household products in NE China and has exported units to various countries.

# ☼ HAPPENINGS

## SAVE THE DATE!

**PCIA Membership Meeting – March 2005**

Mark your calendar to participate in the Partnership general membership meeting in March 2005 in Marrakech, Morocco. The meeting will be held in conjunction with the International Forum on Partnerships for Sustainable Development. An electronic announcement will be sent to Partners as soon as the date is set.

## Upcoming Events…

**American Public Health Association Panel on Indoor Air Pollution: November 2004**

PCIA Partners **Nigel Bruce (University of Liverpool)**, **Sumeet Saksena (East-West Center)**, and **Brenda Doroski (USEPA),** along with **Vinod Mishra (ORC Macro)** will present on current initiatives to reduce IAP exposure, and associated health monitoring issues, at the upcoming APHA Annual Meeting & Exposition *(November 6-10, in Washington DC)*. APHA is the leading Public Health Educational Forum where experts, policy makers and implementers meet to discuss cutting-edge research; exceptional best practices; and the latest public health products and services.

Winrock International will moderate the panel on *Indoor Air Pollution: Advances in Interventions and Impact Assessment,* with the following objectives: to discuss the epidemiological evidence linking indoor smoke exposure to leading diseases and death among women and children worldwide; to identify and understand the key factors that influence human exposure to the major pollutants; to present current initiatives that are approaching the problem in integrated, cross-sectoral partnerships; and to discuss the findings of recent field studies and challenges to achieving sustainable reductions in IAP exposure. More information is available at http://apha.confex.com/apha/132am/techprogram/

**India Stoves Camp: November 2004**

Dean Still and Damon Ogle from Aprovecho Research Center will be spending one month in India working with local NGOs. Two one-week stove trainings will take place at the Appropriate Technology Research Institute (ARTI) and Development Alternatives (DA) centers near Pune and Jhansi. Participants will learn about advances in stove design and share ways to improve performance. The course will include methods of testing insulative materials suitable for combustion chambers from clay and low cost additives. The Shell Foundation and the Partnership for Clean Indoor Air are sponsoring this training and technical assistance by Aprovecho. For more information please visit www.aprovecho.net.

## PCIA Website!

The PCIA Website (www.pciaonline.net) was launched in April 2004 as a resource for the PCIA Partners and the larger global household energy and health community. The website provides information about PCIA Partners and activities; grant opportunities and grantee projects; and news and events of general interest to the Partners and those working with household energy and health issues.

The PCIA currently has 75 Partners from government agencies, non-governmental organizations, private sector parties and independent consultants worldwide. We encourage you to join.

Partners are requested to complete a 'Partner Profile' page which provides information about the Partner's activities in the area of household energy, indoor air pollution, and health, and their interest in working with the PCIA. **REMINDER! Existing partners, please complete your profiles at: www.pciaonline.net/becomeapartner.cfm**

**Please visit the website often for updates and new information and events!**

## Recent Partner Activity…

### Shell Foundation/PCIA Workshop in India: October 2003

The Society for Development Alternatives and the Appropriate Rural Technology Institute hosted two social marketing workshops, sponsored by the Shell Foundation, in their respective project sites of Jhansi and Pune, India in October 2003. John Mitchell and Brenda Doroski of the USEPA facilitated the *Achieving Environmental Results Workshops*, a model designed to assist organizations in developing local interventions on environmental health issues. The 2-day trainings resulted in action plans for local social marketing campaigns. The trainings utilized local expertise and experience, and focused on capacity building and achieving results. Social marketing campaigns use proven methods, targeted outreach, and the right "messengers" to get individuals to take action.

During the workshops, course participants established preliminary plans for developing and implementing campaigns aimed at increasing the use of clean, reliable, affordable, efficient, and safe home cooking and heating practices. Additional social marketing workshops will be held by the Partnership for Clean Indoor Air in other regions of the world in mid-2005. Check the PCIA website for announcements.

### Design and Performance Guidelines Workshop: February 2004

In February 2004, USEPA conducted a workshop sponsored by the PCIA and ETHOS (Engineers in Technical, Humanitarian Opportunities of Service-learning), aimed at establishing broad design and performance principles for home cooking and heating practices that can be used by a wide range of organizations throughout the world. The Workshop was held in Seattle, Washington, in conjunction with the ETHOS first annual conference, thereby tapping into the experience and energy of a group of household energy practitioners that gathered annually to exchange advances in developing and disseminating appropriate, efficient and low-emission cooking technologies. These leaders in stove development, testing and dissemination, as well as experts in indoor air pollution worked together to define the terms "clean," "efficient," "affordable," "reliable," and "safe" as they relate to home cooking and heating practices; identify design and performance principles that represent best practices from throughout the world; and establish broad design and performance guidelines for improved cookstoves and heating devices that can be used by PCIA Partners.
The resulting draft design and performance guidelines are posted on www.pciaonline.org for public review and comment. ETHOS proceedings are available at: www.vrac.iastate.edu/~aholland/ETHOScdrom/cdrom.html.

### Harmonized Health and Exposure Protocols Workshop: March 2004

The Italian Ministry for the Environment and Territory hosted a Harmonized Health and Exposure Protocols Workshop, co-organized with USEPA, WHO and the Shell Foundation. The Workshop was held in March 2004 in Rome, directly following the International Forum on Partnerships for Sustainable Development.

This workshop brought together 30 leaders from around the world working in the field of household energy, indoor air pollution and health. The purpose of the workshop was to discuss and refine existing health and exposure assessment protocols for home cooking and heating practices that can be used by organizations throughout the world. The workshop was very successful in generating productive and insightful discussion of why standardization of health and exposure assessment is useful for a number of audiences, including the researchers, implementers and donor groups who participated in the workshop. It was clear that no single protocol would address all of the questions that each of the groups would want to answer, but that a set of protocols, or "catalogue of methods," would greatly aid in capturing and comparing the real impacts of household energy interventions, and thus enabling this community to:

- Take a collective view of what interventions work and why;
- Provide lessons learned to implementers and other stakeholders to facilitate more effective interventions to benefit the poor, and women and children in particular; and
- Have a coherent set of results that can make the case with policy makers and funding institutions.

A summary of the workshop is posted on www.pciaoline.org. A draft *Catalogue of Methods* will be circulated for broader community input once participant feedback has been processed.

**IAP Seminar at UK Department for International Development: July 2004**

ITDG (Intermediate Technology Development Group), collaborating with the Health team of the United Kingdom's Department for International Development's (DFID) Policy Division, organized a seminar to highlight the health risks associated with indoor air pollution from home cooking fires. The audience comprised DFID personnel from: health, infrastructure, livelihoods and environment and members of the Global Village Energy Partnership (GVEP). The audience provided contributions after each of the three presentations.

Dr. Nigel Bruce - senior lecturer in Public Health at the University of Liverpool - presented the evidence that smoke is a health and social issue, especially for women and children who are most at risk. He discussed the research which led WHO to rank indoor air pollution from fires as the fourth greatest health risk in developing countries, and made the case for further action in strengthening evidence, conducting cost-effectiveness and cost-benefit analyses, and developing the role of the health system in policy and implementation.

Dr. Liz Bates - household energy programme manager at ITDG, discussed the work currently being done through DFID funding in Kenya, Nepal and Sudan. Liz discussed the participatory methods being developed by ITDG and the structure of the project from pilot study to determine what is appropriate and successful, to research into making these technologies sustainable through both commercial and policy routes.

Brenda Doroski of the USEPA, presented the Partnership for Clean Indoor Air (PCIA). Brenda called for a more 'holistic' approach to addressing the problem, and for the collaboration of public and private institutions to raise awareness, leverage resources, and increase global action.

All of the presenters urged DFID and GVEP to engage in this issue, and to work to tackle the problem and raise awareness through cross-departmental involvement. Through discussions following the meeting, it was agreed by a cross-sectoral DFID group in discussion with Brenda Doroski that DFID should join the PCIA. For more information on this seminar, visit http://www.gvep.org/content/general/detail/8665

**ARECOP Planning Meeting: August 2004**

The Asian Regional Cookstove Program (ARECOP) held its Phase III Planning and Technical Advisory Meeting in August in Hanoi, Vietnam, to determine the future direction of the network. This was ARECOP's 6th such planning meeting. In addition to representatives from the network's fourteen member countries, five organizations were invited to participate and discuss potential collaboration: ENERGIA, Mangrove Action Project, GERED, USEPA, and Winrock International. The meeting focused on past activities and trends, important priorities for the network in the future, and strategies for leveraging other resources. Participants determined that future work by network members should include greater attention to entrepreneur development; links to plantations; fuel switching; R&D for cost efficiency; and climate change.

**Stoves Camp: August 2004**

For the third year in a row, Aprovecho Research Center in Cottage Grove, Oregon, hosted a "Stoves Camp" to foster advances in the development of better, inexpensive stoves for the poor through hands-on testing and insights that participants share from their field experience. Stoves Camp 2004 was jointly organized by Aprovecho and ETHOS (Engineers in Technical and Humanitarian Opportunities of Service), and drew 17 participants from Nepal, Mexico, and the United States. Victor Berrueta of GIRA, who received a full scholarship from ETHOS to attend, is currently implementing a Shell Foundation grant in Michoacán, Mexico. He and his colleagues are working closely with Aprovecho and Dr. Kirk Smith of UC Berkeley on stove testing and indoor air pollution monitoring under the grant.

This year's Camp was the first to benefit from a newly-installed "test kitchen," in which stoves are tested for particulate and carbon monoxide using the ITDG protocol. The Camp's accomplishments include: creating an efficient refugee stove from World Food Program cans; making a simple-to-build inexpensive institutional stove for the WFP from a single 55 gallon drum; exploring self-feeding using downdraft/down-feed to potentially be used to drive machines or lanterns; producing white light by combusting wood smoke in a mantle. For Stoves Camp summary and photos: www.vrac.iastate.edu/~kmbryden/stovescamp2004/stovecamp.htm.

### Nepal Household Energy and Health Workshop: August 2004

Winrock International Nepal co-organized a National Workshop on Household Energy, Indoor Air Pollution and Health, held in August in Kathmandu. The workshop was jointly organized with ITDG-Nepal, Forum for Indoor Air Pollution and Health – Nepal, and the Department of Health Services under the Ministry of Health.

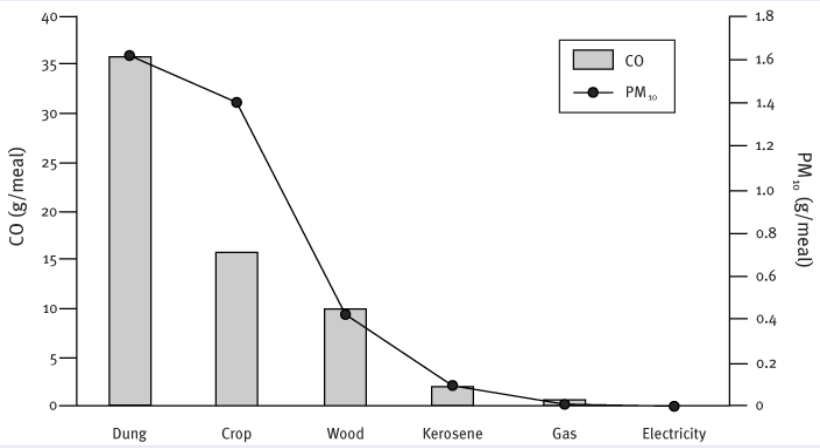
The workshop brought together key actors in the health and household energy communities into one forum to discuss the cross-cutting issue of indoor air pollution and health. Among the workshop objectives were creating awareness about the seriousness of indoor air pollution in Nepal to different stakeholders; presenting the status report prepared by Winrock for Nepal on Household Energy, Indoor Air Pollution and Health Impacts; identifying gaps in current efforts, and identifying possible interventions to tackle these problems.

A total of 93 participants from the government, NGOs, private sector and donor organizations attended the event. Key gaps were identified and all participants reiterated their commitment to the issue. Hi-level remarks were made by the Minister of State for Health, the Minister of Population and Environment, the Resident Representative of WHO in Nepal, the Director of USAID/Nepal, the Deputy Infrastructure Advisor from DFID/Nepal, and the Executive Director of the Alternative Energy Promotion Center. The workshop was very successful in engaging these officials and raising awareness of the seriousness of household energy, indoor air pollution and health issues in Nepal. Workshop proceedings are available at: www.cleanairnet.org/caiasia/1412/article-59010.html

### First Annual Meeting of the Mexican Bioenergy Network: October 2004

Government agencies, research institutions, NGOs and members of the private sector attended this meeting, held in Oaxaca Mexico, October 7-8, 2004. There was extensive discussion about the current status and future prospects of bioenergy in Mexico in the areas of: small scale applications, municipal solid waste, liquid fuels, biomass resources, and power generation. Both the National Forest Commission and the Energy Ministry see bioenergy as a promising energy source for Mexico. In recent years a number of successful initiatives have been launched in the country, including: a) the largest project in Latin America biogas production from municipal solid waste in the city of Monterey; b) a legal initiative to make ethanol mandatory as a gasoline additive; and c) various projects aiming at the dissemination of efficient woodstoves and kilns. A "white paper" for bioenergy in Mexico will be drafted with support from the Forestry Commission and Energy Ministry. Proceedings will be available in mid-November at www.anes.org/bioenergy. Contact: Omar Masera, President Mexican Bioenergy Network, omasera@oikos.unam.mx

## ☼ FACT BOX




**Emissions Along the Energy Ladder**
*(Source: Smoke: The Killer in the Kitchen, ITDG, 2004)*

### DID YOU KNOW?

According to WHO's Atlas of Children's Health and the Environment, 24-hour mean concentration of $PM_{10}$ can be as high as 3000 $\mu g/m^3$ in a hut with an open fire. This is compared to 240 $\mu g/m^3$ in a Bangkok roadside and 30 $\mu g/m^3$ in Berlin city center.

*(Source: Inheriting the world: 'Indoor Smoke: Breaking Down Respiratory Defences,' The atlas of children's health and the environment, World Health Organization, 2004 <http://www.who.int/ceh/publications/atlas/en>)*

# ☼ WHAT'S NEW…?

## …in Resources?

### Participatory Methodologies (ARECOP)

ARECOP was established in 1991 as a network that facilitates the development of improved cookstove and biomass energy programs at the household and institutional levels. At present the network is composed of organizations and individuals from fourteen countries in Asia.

The Methodology for Participatory Assessment was initially developed for water and sanitation projects by the International Resources Center and the World Bank, notably the Minimum Evaluation Procedure (World Health Organization) and other participatory methodologies (SARAR, PRA and PHAST).

The MPA is designed not only for project monitoring and evaluation, but also as a tool for project design and planning. Gender and poverty are integrated as part of the overall assessment process. The objectives of the MPA are: improving adoption rates for improved cook stoves; involving women in the decision making process from the planning to implementation stage; training ARECOP members on how to use and apply the tools; implementing pilot projects (in ARECOP member countries) to apply the tools; and designing participatory tools to be used by individuals and institutions involved in stove programs.

### WHO Atlas of Children's Health and the Environment

The World Health Organization launched the first atlas of its kind mapping the impact of unhealthy environments on children. Indoor air pollution, and its impact on children's health, has received extensive focus. Other issues addressed include lack of sanitation; fluoride and arsenic in drinking water; and climate change. Full color maps and graphics clearly highlight where children are most at risk from various environmental conditions. In addition, success stories have been included to emphasize the benefits of policies and interventions that have resulted in a healthier and safer environment for the world's most vulnerable population. More information on the Atlas is available at: www.who.int/ceh/publications/atlas/en/

### Design Principles for Wood Burning Cook Stoves

With support from the Shell Foundation, Aprovecho Research Center has completed an easy-to-read booklet synthesizing years of stove research on stove theory, efficiency, safety, performance testing and maintenance. The booklet aims to guide household energy project implementers in optimizing stove design to utilize locally-available materials while maximizing reductions in biomass consumption. USEPA will be publishing the booklet in both English and Spanish.

## …in Technologies?

### UCB Particle Monitor

The University of California at Berkeley (UCB) has pioneered the development of a small, smart, light, and cheap particle monitor that promises to make indoor air pollution monitoring less intrusive, more informative, and far less expensive than currently available devices. Kirk Smith has been leading the development of the UCB Monitor, which combines advanced smoke detector components with versatile programmable computer chips to create an inexpensive device that measures and logs two sizes of particles, temperature and humidity. Smith presented on the advantages of this new device to the participants of the Harmonized Methodologies workshop in Rome (see page 7), stimulating great interest in this promising solution to low-cost IAP monitoring. Prototypes of the monitor are currently being field tested in conjunction with Shell Foundation pilot projects in Guatemala, Mexico and India. It is hoped that the UCB PM Monitor will be sufficiently developed by early-mid 2005 to be made available to relevant groups around the world interested in indoor air pollution research. For more information: http://ehs.sph.berkeley.edu/heh/page.asp?id

**Your comments are welcome!**

**For comments, suggestions, or news that you would like to share please email us at PCIAonline@yahoo.com.**

**The deadline for contributions to next quarter's bulletin is January 5, 2005.**

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