



Supportive Environments for Healthy Communities

Issue 57 May 25, 2012 | Focus on the Integration of WASH and the Prevention of Indoor Air Pollution

This issue updates the [April 22, 2011](#), weekly with more recent news and studies. A recent *Lancet* article stated that an integrated multisector approach can lead to rapid improvement in child survival. A *WHO Bulletin* study points to the need for multisector integration but discusses the difficulties in integrating cookstoves with other interventions to prevent pneumonia. A report on the adoption of cookstoves in Kenya found that cookstove adoption was greater where household water treatment occurred. Other resources include news from Uganda on the use of latrine wastes for biogas and the use of solar cookers in China for water treatment and cooking.

Please let WASHplus know at any time if you have resources to share for future issues of WASHplus Weekly or if you have suggestions for future topics. An [archive](#) of past Weekly issues is available on the WASHplus website.

REPORTS/ARTICLES

- **Anaerobic Biogas Generation for Rural Area Energy Provision in Africa, 2012.** B Amigun, National Biotechnology Development Agency. ([Full-text](#))
The use of biogas has the potential to improve the quality of life in rural areas—reduced drudgery for women and children, reduced indoor smoke, improved sanitation, and better lighting. Biogas initiatives in Africa are characterized by small to medium scale plants. Biogastechnology is, however, still beyond the reach of the rural poor due to its high initial investment costs. A number of other constraints affect the implementation of biogastechnology on large scale.
- **Assessing the Microbiological Performance and Potential Cost of Boiling Drinking Water in Urban Zambia, *Environ Sci Technol*, 2011.** R Psutka, London School of Hygiene & Tropical Medicine. ([Abstract](#))
Boiling is the most common method of disinfecting water in the home and the benchmark against which other point-of-use water treatment is measured. In a six-week study in peri-urban Zambia, this study assessed the microbiological effectiveness

and potential cost of boiling among 49 households. Evidence suggests that water quality deteriorated after boiling due to lack of residual protection and unsafe storage and handling. In this setting where microbiological water quality was relatively good at the source, safe-storage practices that minimize recontamination may be more effective in managing the risk of disease from drinking water at a fraction of the cost of boiling.

- **Biogas**, *Partnership for Clean Indoor Air Bulletin*, Sept. 2011. ([Full-text](#))
Biogas is a fuel that is now widely promoted and used to decrease fuelwood consumption and improve indoor air quality for families around the world. This issue has articles from programs with experience promoting biogas stoves and fuel in Africa, Asia, and Latin America at the household, community, national, and regional levels.
- **Combined Household Water Treatment and Indoor Air Pollution Projects in Urban Mambanda, Cameroon, and Rural Nyanza, Kenya**, 2011. A Shaheed, World Health Organization. ([Full-text](#))
An evaluation of these projects found that a combined approach of environmental health interventions was well received by implementers and beneficiaries alike. Key gains noted by implementers included efficiency on several fronts (e.g., number of community interventions, time, cost), and improvements through consolidated promotion. Key difficulties included the affordability of the interventions (principally the stove), funding, and managing project sustainability in the face of challenging local circumstances. The indoor air quality component of the intervention saw perceived benefits such as efficient fuel use, a cleaner cooking environment, and visible smoke reduction. Use of water treatment on the other hand was attributed to raised awareness and health-and hygiene-based behavior change.
- **Concentrated Solar Thermal (CST) System for Fuelwood Replacement and Household Water Sanitation in Developing Countries**, *Journal of Sustainable Dev*, 2012. O Akinjiola. ([Full-text](#))
Concentrated Solar Thermal (CST) is a proven renewable energy technology that harnesses solar irradiation in its most primitive form. This technology with roots in ancient history is growing at a fast pace. Developing countries could use CST to solve fundamental human-needs challenges—as a substitute for fuelwood and to treat water for household use. This paper proposes a conceptual design for a standardized modular CST for these applications in developing countries.
- **The Effect of an Integrated Multisector Model for Achieving the Millennium Development Goals and Improving Child Survival in Rural Sub-Saharan Africa: A Non-Randomised Controlled Assessment**, *The Lancet*, May 8, 2012. P Pronyk. ([Full-text](#))
Village sites averaging 35,000 people were selected from rural areas across diverse agro-ecological zones with high baseline levels of poverty and undernutrition. Starting

in 2006, simultaneous investments were made in agriculture, the environment, business development, education, infrastructure, and health in partnership with communities and local governments at an annual projected cost of US\$120 per person. The study assessed MDG-related progress by monitoring changes three years after implementation across these village sites in nine countries. It concludes that an integrated multisector approach for addressing the MDGs can lead to rapid improvement in child survival in rural sub-Saharan Africa.

- **Integrating Pneumonia Prevention and Treatment Interventions with Immunization Services in Resource-Poor Countries**, *Bull World Health Organ*, Apr 2012. A Cohen. ([Full-text](#))

Pneumonia is a leading cause of morbidity and mortality worldwide. Effective vaccine and non-vaccine interventions to prevent and control pneumonia are urgently needed to reduce the global burden of the disease. This paper explores practical strategies and policies for integrating interventions to prevent and treat pneumonia with routine immunization services, and it investigates the challenges involved in such integration.

- **Safe Water for All: Harnessing the Private Sector to Reach the Underserved**, 2011. J Brown, International Finance Corporation. ([Full-text](#))

This report examines a range of technologies and revenue models intended to increase safe-water access among lower-income populations, with primary attention on East Africa, India, and China as important emerging markets. The survey identified several major barriers to reaching the bottom of the pyramid markets, including consumer challenges, entrepreneurial challenges, enabling environment challenges, and physical challenges.

- **A Strategy to Increase Adoption of Locally Produced Ceramic Cookstoves in Rural Kenyan Households**, *BMC Public Health*, 2012. B Silk. ([Full-text](#))

This article describes the roles of local vendors, behavior change, promotional incentives, and integration of cookstoves with household water treatment interventions to motivate adoption of locally produced, ceramic cookstoves. Cookstove adoption was greater where household water treatment occurred.

- **Sustainable Decentralized Water Treatment for Rural and Developing Communities Using Gasifier Biochar**, 2012. Aqueous Solutions. ([Link](#))

This handbook summarizes preliminary results of collaborative field and laboratory research pertaining to the use of traditional kiln charcoals and gasifier charcoal in decentralized water treatment.

NEWS

- **Biogas Offers Poor Countries a Cleaner, Safer Fuel**, *New York Times*, Oct 25, 2011. ([Link](#))

In developing countries where domestic animals are ubiquitous and sewage systems

rare, biogas technology—in this case methane derived from feces—can provide both valuable fuel and improved sanitation.

- **Clean Cooking Stoves from Biogas**, Tevel B'Tzedek, 2011. ([Video](#))
Biogas reactors installed in a village in Nepal are providing clean cooking stoves and improved sanitation. The project is an initiative of local villagers and part of a holistic community development program.
- **Evan Thomas on Using Remote Sensing for More Effective Humanitarian Aid Systems**, *Smartplanet*, Apr 26, 2012. ([Link](#))
Evan Thomas, with the Institute for Sustainable Solutions at Portland State University, is helping to bring water filters and clean-burning cookstoves to 750,000 Rwandans to provide cleaner water and healthier homes while reducing household fuel consumption. By using a remote sensing platform that SWEET Lab developed, Thomas will monitor and measure the use of these filters and stoves, thereby adding a means of ensuring and improving the effectiveness of the entire aid project.
- **Uganda: Cooking Fuel for Schools from Biogas**, *Green Health Uganda*, Apr 2, 2012. ([Link](#))
Wakiso Children School of Hope—located in Bulabakulu Village in Wakiso District—currently has about 350 children; 10 adults care for 120 who reside at the school. Africa Greater Life Mission UK partnered with Green Heat to design and install a biogas digester for the school, which generates enough gas for at least 40% of the school's cooking needs.

Each WASHplus Weekly highlights topics such as Urban WASH, Indoor Air Pollution, Innovation, Household Water Treatment and Storage, Hand Washing, Integration, and more. If you would like to feature your organization's materials in upcoming issues, please send them to Dan Campbell, WASHplus knowledge resources specialist, at dacampbell@fhi360.org.



About WASHplus - WASHplus, a five-year project funded through USAID's Bureau for Global Health, creates supportive environments for healthy households and communities by delivering high-impact interventions in water, sanitation, hygiene (WASH) and indoor air pollution (IAP). WASHplus uses proven, at-scale interventions to reduce diarrheal diseases and acute respiratory infections, the two top killers of children under five years of age globally. For information, visit www.washplus.org or email: contact@washplus.org.

MailChimp

[unsubscribe from this list](#) | [update subscription preferences](#)

