



Supportive Environments for Healthy Communities

Issue 80 | November 30, 2012 | Focus on Fecal Sludge Management

This issue focuses on recent information and research about fecal sludge management (FSM). This includes presentations that are now online from the recent Second International Fecal Sludge Management Conference. These provide some of the latest findings on the technical, economic, and other factors that affect the success or failure of FSM initiatives. Also included are an FSM research proposal in Bangladesh from the IRC International Water and Sanitation Centre and case studies from Cameroon, Burkina Faso, the Philippines, South Africa, and others.

WASHplus is conducting an end of the year survey to help bring you better information. Please take a few minutes to fill in the [survey](#) and provide your input.

EVENTS

- **Second International Faecal Sludge Management Conference, Oct. 29–31, Durban, South Africa.** ([Link to presentations](#))

The conference was structured around the following themes: on-site sanitation as a business; socio-political aspects of on-site sanitation; understanding on-site sanitation; toilet design for FSM optimization; pit emptying—what are the options; the how of fecal sludge treatment; waste not want not—beneficial use of fecal sludges; technology and innovation; and the health aspects of fecal sludges. All of the conference presentations are available at the link above.

RESEARCH PROPOSALS

- **Renewed Research Call for Faecal Sludge Secondary Treatment Options in Bangladesh, 2012.** ([Download the guidelines and application form](#)).

IRC International Water and Sanitation Centre announces a renewed research call for *fecal sludge secondary treatment technologies for challenging settings*. The planned duration of the fecal sludge research project will be 18 months. The anticipated cost of the project is EUR 325,000. EUR 50,000 is available for piloting. The **deadline** for submission of full proposal application forms is **January 11, 2013**.

GLOBAL

- **Business Analysis of Fecal Sludge Management: Emptying and Transportation Services in Africa and Asia**, 2012. S Chowdhry, Bill and Melinda Gates Foundation. ([Full-text, pdf](#))

The purpose of the study is to analyse the fecal sludge management sector and its operating models in 30 cities across 10 countries. The study also aims at filling the important information gaps on this business sector, which is often unregulated and leads to situations where households pay excessive fees for these services or are compelled to undertake emptying manually exposing themselves to serious health hazards.

- **Business Model Innovations for Scaling-Up FSM Businesses in Low and Middle Income Countries**, 2012. L. Schöbitz, EAWAG (Swiss Federal Institute of Aquatic Science & Technology). ([Abstract](#)) | ([Links to other 2012 EAWAG reports on FSM](#))

This article describes a “coopetition” approach to FSM. Coopetition means micro-enterprises compete to find customers but cooperate in technology innovation to drive down costs, innovate treatment technologies, and recover resources. This paper contributes to a better understanding of business challenges in the scaling-up process of FSM.

- **Faecal Sludge Management**. *Sustainable Sanitation Practice, Issue 13, 2012*. ([Link](#))

This issue contains four case studies: absence of fecal sludge management shatters the gains of improved sanitation coverage in Bangladesh; optimizing the fecal sludge management scheme in Ouagadougou, Burkina Faso; analysis of fecal sludge management in the cities of Douala and Yaoundé in Cameroon; and toward sustainable pit latrine management through latrine dehydration and pasteurization.

- **Faecal Sludge Management: Systems Approach for Implementation and Operation**. International Water Association. *Nov 2013*. ([Summary of book and order information](#))

This book addresses the organization of the entire fecal sludge management service chain from the collection and transport of sludge, to the current state of knowledge of treatment options, to the final end use or disposal of treated sludge. The book also presents important factors to consider when evaluating and scaling-up new treatment technology options.

- **Global Review of Sanitation System Trends and Interactions with Menstrual Management Practices**, 2012. M Kjellén, Stockholm Environment Institute. ([Full text, pdf](#))

The problem with disposing of menstrual waste into pit latrines is that it causes the pits to fill up faster. The excreta in the pit decompose and decrease in volume, while the non-biodegradable components of menstrual waste accumulate and do not break

down. Furthermore, once the sludge has been removed from the pit latrine, if it is to be used in agriculture, any waste that has not completely decomposed such as menstrual pads must be removed before the sludge can be composted or applied to farmland. The cost to remove, screen, and dispose of menstrual management products from pit latrine sludge is high and not accounted for.

- **Sanitation Surcharges Collected through Water Bills: A Way Forward for Financing Pro-Poor Sanitation?** 2012. Water and Sanitation for the Urban Poor. ([Full text, pdf](#))

This discussion paper is a situation review of sanitation surcharge systems in African cities, focusing on systems designed to raise revenues for improving sanitation in low-income districts. The review considers existing pro-poor surcharge systems in Lusaka and Ouagadougou; systems that cannot currently be considered pro-poor, in Dakar, Beira, and Antananarivo; and the special case of Maputo, where there is ongoing debate about how a surcharge might be introduced.

COUNTRY STUDIES

- **Philippines: Opportunities in Fecal Sludge Management for Cities in Developing Countries: Experiences from the Philippines**, 2012. D Robbins, RTI International. ([Full text, pdf](#))

In July 2012, a team from RTI International deployed to the Philippines to evaluate four FSM programs with the goal of reporting on best practices and lessons learned. The four cases—Dumaguete City, San Fernando City, Maynilad Water for the west zone of metro Manila, and Manila Water from the east zone of metro Manila—were chosen to highlight their different approaches to implementing FSM.

- **Senegal: Capital and Operating Costs of Full-Scale Fecal Sludge Management and Wastewater Treatment Systems in Dakar, Senegal.** *Environ Sci Technol*, Apr 2012. P Dodane. ([Full text](#))

This study makes a financial comparison of a parallel sewer based (SB) system with activated sludge, and an FSM system with onsite septic tanks, collection and transport trucks, and drying beds. In addition to costing less overall, FSM operates with a different business model, with costs spread among households, private companies, and the utility. The results of the study illustrate that in low-income countries, vast improvements in sanitation can be affordable when employing FSM, whereas SB systems are prohibitively expensive.

- **South Africa: How Fast Do Pit Toilets Fill Up?** 2012. D Still, Water Research Commission. ([Link-download is free but registration required](#))

A number of possibilities exist for using fecal sludge beneficially. Data provided by Water Services Authorities indicate that most pits are filling in five to nine years. This suggests that of the more than a million ventilated improved pit latrines that have been built in the past decade many will soon reach capacity. Studies of pit filling rates

across a number of communities indicate that pits generally fill at a rate of 40 liters per capita annum, with 60 liters per capita annum providing a safe margin for planning pit design and emptying programs.

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.

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