



Photo: M. Lydecker

Septage: Turning an Environmental Hazard into a Safe Asset in Sri Lanka and Southern India

A focus area within the CGIAR Research Program on Water, Land and Ecosystems

THE CHALLENGE

Septic tanks and pit latrines are the most appropriate and available sanitation system for millions of rural and urban households. Only a small percentage of urban households are connected to sewers, with only some of those sewers being connected to treatment plants.

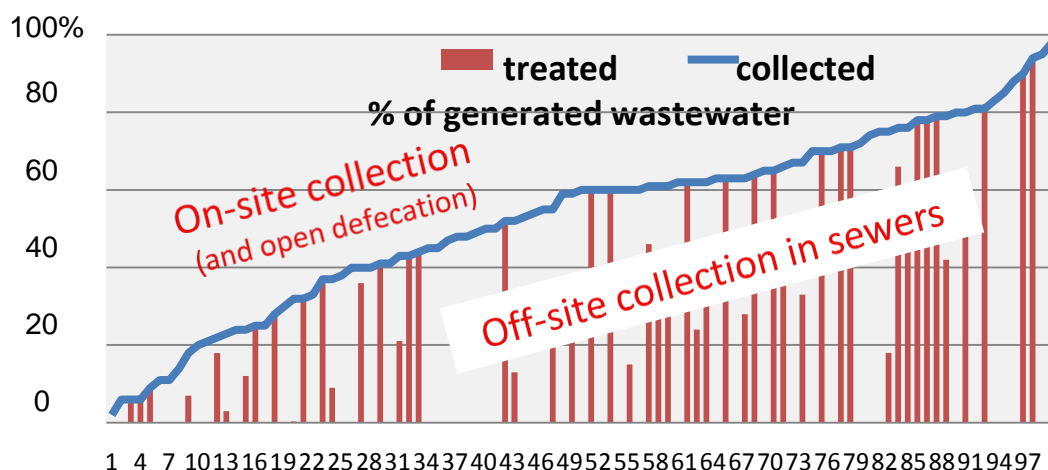
Little attention is given to the fate of septage accumulating in septic tanks. Where collected, it is usually dumped on the environment creating severe pollution as treatment plants are rare. A recent trend has been the increasing valuation of septage in energy production or to be used as fertilizer in farming. In most cases, however, safety guidelines or regulations are missing.

Private sector initiatives have begun to serve the market given an ever-increasing amount of septage. In India, informal enterprises collect and dispose of fecal sludge, while in Sri Lanka the public sector still dominates. However, in both cases, environmental hazards are common, potentially undermining the efforts made for safe drinking water supply. It is, therefore, important to support the sanitation sector with septage guidelines which value public and private sector participation as well as best practices for reuse.

DID YOU KNOW

- In India, more than 100 million on-site sanitation systems exist, though treatment of septage (excreta) is largely lacking.
- In India, only 30-40% of the wastewater generated is eventually treated.
- If safety standards could be implemented, the current amount of wastewater generated could help to irrigate another one million hectares in India.

Wastewater that enters sewers which are not connected to treatment plants might eventually enter the food chain through irrigation. This is much more common than the planned use of treated wastewater. Thus, where conventional treatment is lacking, and given the common reality of irrigation in these areas, public health will have to rely on the adoption of safety measures on- and off-farm, and incentives for farmers and other stakeholders to change their behavior in terms of adoption and compliance monitoring.



In India, collection of wastewater in the 100 largest cities via sewers varies between 0 and 100%, but in most cases only a fraction of what gets collected is also treated (Source: NIUA)

SOLUTIONS WITHIN REACH

Based on a decade of research on safe wastewater and excreta reuse in Africa and Asia, IWMI and its partners are supporting a shift from treatment for disposal to treatment for reuse by:

- Assessing current wastewater and septage disposal and reuse practices.
- Assessing risks and safe reuse options for wastewater and septage in farming.
- Introducing technical options for composting, blending and pelletizing septic sludge or biosolids to produce a safe commercial fertilizer.
- Assessing business solutions for resource recovery and reuse (RRR) to leverage private capital.
- Conducting feasibility studies for different RRR business options at scale.
- Assisting in drafting guidelines and policies for safe and productive resource recovery and reuse.
- Supporting stakeholder participation and policy dialogues.

THE OBJECTIVE

- To establish septage and sewage management as critical and integral components of a safe and complete sanitation solution in Sri Lanka and Southern India.



OUR PARTNERS

In Sri Lanka: Ministry of Water Supply and Drainage; National Water Supply and Drainage Board; and the Central Environmental Authority (Pilisaruru project).

In India: Biome Environmental Solutions & Small Scale Sustainable Infrastructure Development Fund, and the Waste Wise Trust.

CONTACTS

Priyanie Amerasinghe, IWMI, Hyderabad, India (p.amerasinghe@cgiar.org)

Sudarshana Fernando, IWMI, Colombo, Sri Lanka (s.fernando@cgiar.org)

Krishna Chaitanya Rao, IWMI, Colombo, Sri Lanka (K.C.Rao@cgiar.org)

Resource Recovery & Reuse (RRR), a strategic research portfolio of the CGIAR Research Program on Water, Land and Ecosystems

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