



Faecal Sludge Management Seminar FSM2

International Convention Centre (ICC) Durban
29-31 October 2012



INCENTIVIZING SANITATION THROUGH URINE COLLECTION

E. Tilley and I. Günther

NADEL: ETH Zurich, Voltastrasse 24, 8092 Zürich, Switzerland; Tel: +41 44 632 94 58; Fax: +41 44 632 12 07; email: elizabeth.tilley@nadel.ethz.ch

UDDTs are waterless, above-ground toilets that separate urine from faeces; the faeces dry in one of two chambers and are reduced to an ash-like powder, while the urine is infiltrated directly into the soil. Although the toilets are not universally loved (some families abandon or convert them to flush toilets) the Municipality of eThekweni, in South Africa, has constructed tens of thousands of UDDTs to date. Urine is rich in nitrogen, phosphorus and potassium: expensive nutrients that should not be wasted. Indeed, the possibility to recover huge quantities of nutrients from thousands of families is immense.

This 4-year interdisciplinary field-research project aims to identify and strengthen the drivers for sanitation. In the hopes of achieving 100% sanitation coverage, and surpass the MDG targets, we are interested to know if urine-derived fertilizer production can be one such driver.

The goal of this research is to determine the conditions under which urine collection, transport and processing are attractive to both the municipality and the UD toilet user. This will be done by estimating the UDDT owners' willingness to accept (WTA) an incentive for urine transport, testing the incentive schemes which are the most likely to succeed and then determining the overall program efficiency for both the municipality and the UD owner.

Incentives (also known as conditional cash transfers, results-based financing, etc.) are mechanisms for achieving socially desirable outcomes, essentially by paying someone to do something. Unlike welfare or subsidies, the payment depends on action, and it can be withdrawn at anytime. Incentives have been used effectively in health and education programs, but never with sanitation. Furthermore, previous work has examined the willingness of households to buy or pay for sanitation services but there have not been any examples of users being incentivized to use those facilities.

In order to understand how much the UD toilets are used, and to begin to quantify the nutrient potential, urine production information was measured at more than 600 households. We are in the process of developing community-scale incentivized urine collection schemes; by measuring the volume of urine delivered to our urine collection depots, we will be able to determine the effect of the different incentive delivery types (amount of payment, frequency of payment, etc.) on the households' urine production. Although the toilet is used for both urination and defecation, we consider urine to be a good estimator of toilet use, and expect to see an increase among those families who participate in the incentive scheme.