

## Outline of Potential Comparative and Action (Oriented) Research on Sanitation Systems – for discussion

Project title	Rules, Roles & Resources: A Comparative Study of Productive and Conventional On-site Sanitation
Objective	To improve safety, dignity and cost-effectiveness of peri-urban waste management systems, through comparative studies of the institutions, organisation and economics of productive and conventional on-site sanitation systems.
Summary description	<p>Human settlements are continuously challenged by the build-up of human and at times also animal excreta and other waste products in the living environment. The lack of sanitation and poor waste management puts human health and well-being at risk. This is particularly problematic in rapidly urbanising areas with increasing densities.</p> <p>To the extent that sanitation services exist in peri-urban settlements, they are largely organised by the inhabitants themselves, since such areas are often informal and beyond the responsibilities of city authorities. Most common are simple pit latrines. This technology may involve emptying and disposal of excreta, typically at irregular intervals. Most resources invested in sanitation are today used to construct different types of latrines, and improve existing conventional systems by way of reducing the negative effects of waste, i.e. by treatment or organised disposal.</p> <p>Another way is to facilitate treatment and reuse from the outset. Such ecological – or productive – sanitation systems that recycle excreta products, generally into agricultural production, have been tested in several locations, with varying success. While having great potential for yield increases, soil improvement and environmental sustainability, productive sanitation poses many challenges. Such challenges include the handling, sanitization and application of excreta products in a way as to safeguard human health and dignity, the logistics of collection, treatment and reuse, as well as economic viability and space requirements of urban agriculture.</p> <p>How do systems of productive sanitation and peri-urban agriculture compare with conventional on-site sanitation systems in terms of convenience, health, environmental protection, and the potential for income generation and sustainable livelihoods?</p> <p>This research will study productive sanitation pilot implementation schemes (from toilet to farm) and compare with more conventional on-site sanitation, from three inter-related perspectives:</p> <ul style="list-style-type: none"> <li>i) Institutions – <i>rules</i> – what (combinations of) formal and informal rules apply?</li> <li>ii) Organisation – <i>roles</i> – what labour is involved? How is the work managed?, and</li> <li>iii) Economics – <i>resources</i> – what payments are made? (in kind/cash, subsidised or on commercial basis)</li> </ul> <p>Documentation (including legal instruments and policies) and key informants (including government officials and community representatives) will be consulted in exploring the institutional aspects and establish what is permitted and encouraged at various levels. Organisational aspects will be investigated through observation and interviews with a select (small) number of households and individuals. These will be either users of so-called ecological (e.g. urine-diverting and dry) toilets or involved in the handling and application of fertilizer or soil improvement products, as well as those relying on and maintaining the conventional systems. Particular attention will be paid to the gender and/or ethnic division of labour and who governs the process. Interview schemes will also cover payments that occur for fertilizer products as well as handling, removal and cleaning services (ranging from commercial remuneration to development agency subsidies). These will be recorded so that the economics of productive as well as conventional on-site sanitation can be analysed.</p> <p>The research result should show</p> <ul style="list-style-type: none"> <li>1) how the different sanitation systems function (or not) – i.e. do they safely and conveniently collect, store, treat and dispose/re-use excreta?</li> <li>2) how formal regulations match informal rules and attitudes towards different ways of a) managing waste and b) fertilising crops</li> <li>3) what policy interventions would be needed for more cost-effective waste management along with dignified and healthy household or hired labour inputs</li> <li>4) the cost-effectiveness of different sanitation systems and the (actual rather than potential) economic viability of productive sanitation in peri-urban areas</li> <li>5) how productive sanitation can contribute to sustainable livelihoods in peri-urban</li> </ul>

	<p>areas (or not)</p> <p>This knowledge will help devise local, regional and international strategies for cost-effective peri-urban waste management. The research should identify critical factors for instituting safer, more equitable and economical waste management systems.</p>																				
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Expected Outcome(s) / impact(s)	<p>Policy outcomes/impacts 2011-2012</p> <ul style="list-style-type: none"> <li>– local policy makers aware of contradictions/weaknesses/strengths of regulatory framework for sanitation/waste managements</li> <li>– labour conditions (safety/dignity) in sanitation highlighted</li> <li>– local policy makers aware of how sanitation/waste management can be made safer and more cost-effective</li> <li>– economics of productive sanitation highlighted = important contribution to international discussions about economic viability of different sanitation systems</li> <li>– Specific productive sanitation pilot initiatives evaluated</li> </ul>																				
Outputs by 31 Dec 2012	- two working papers, two policy briefs, two draft articles, conference/workshop and conference report, one proposal.																				
Outputs beyond 2012	<ul style="list-style-type: none"> <li>- lessons learned for productive sanitation piloting/scaling up</li> <li>- future programme for supporting attractive sanitation solutions and innovative policy development in rapidly urbanising low-income areas</li> <li>- published articles ???</li> <li>- revised waste management policies ???</li> </ul>																				
SEI / EcoSanRes project team	Marianne Kjellén, Nelson Ekane, Jennifer McConville, Madeleine Fogde, Linus Dagerskog and others																				

<http://sei-international.org/>

<http://www.ecosanres.org/index.htm>