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Mallory, Adrian, Akrofi, Daniel, Dizon, Jenica, Mohanty, Sourav, Parker, Alison, Ray, Dolores, Prasad, CS Sharada, Welivita, Indunee, Brewer, Tim, Mekala, Snehalatha, Bundhoo, Dilshaad ORCID logoORCID: https://orcid.org/0000-0003-0262-9868, Lynch, Kenneth ORCID logoORCID: https://orcid.org/0000-0002-5296-2864, Mishra, Prajna, Willcock, Simon and Hutchings, Paul (2020) Business models for circular sanitation: lessons from India. In: Dresden Nexus Conference 2020; Circular Economy in a Sustainable Society, 3-5th June 2020, Online (Dresden).

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Business models for circular sanitation - Lessons from India

INTRODUCTION

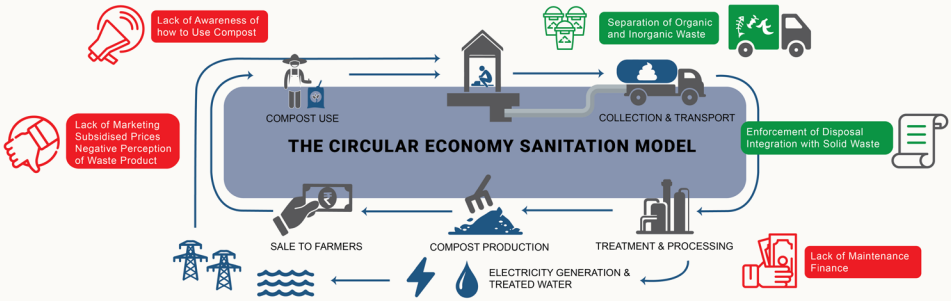
According to the WHO and UNICEF (2017), 61% of the global population lack safely managed sanitation services. Traditional sewer networks prove to be unfeasible in many low to middle-income high density areas, as waste management and safe disposal become problematic with treatment plants lacking financing for operations. One of the options for a non-capital intensive solution is circular sanitation. Circular Economy (CE) in this context focuses on the whole sanitation chain which includes the provision of toilets, the collection of waste, treatment and transformation into sanitation-derived products including fertiliser, fuel and clean water.

CASE STUDY LOCATIONS

STUDY AIM & METHODOLOGY

This research identifies the main barriers and enablers for circular sanitation business models to succeed. Collection of information from five case studies across India. covering different treatment technologies, waste-derived products, markets and contexts.

FINDINGS: THE ENABLERS & BARRIERS OF THE CIRCULAR SANITATION MODEL



- A framework assessing the technical and social system changes required to enable circular sanitation models was derived from the case studies.
- Some of these changes can be achieved with increased enforcement, policies and subsidies for fertilisers, and integration of sanitation with other waste streams across its value chain to increase its viability.
- Major changes such as the cultural norms around re-use, demographic shifts and soil depletion would be outside the scope of a single project, policy or planning initiative.

CONCLUSION

The move to CE sanitation may still be desirable from a policy perspective but shifting to CE models should not be seen as a panacea that can solve the global sanitation crisis. The presented case studies raise a series of relevant learning points but processes of change that occur across social and technical sub-systems at different scales and timeframes are required to ensure success. While it reduces the financial burden and poses a lot of potential for waste reuse, delivering the public good of safe sanitation services for all, whether circular or not, will continue to be a difficult task.

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For more details see Mallory et al "Evaluating the Circular Economy for Sanitation: Findings from a Multi-case approach" Science of the Total Environment, accepted subject to revisions.