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NGOs fostering transitions towards sustainable urban sanitation in low-income countries: Insights from Transition Management and Development Studies

Mara J. van Welie*, Henny A. Romijn

Eindhoven University of Technology, School of Innovation Sciences, P.O. Box 513, 5600 MB Eindhoven, The Netherlands

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ABSTRACT

Globally, 756 million people in urban areas have no access to improved sanitation, while the urban population is increasing rapidly. Providing toilets has often not been a sustainable solution because of failure to link them to the necessary service infrastructure. Resolving urban sanitation problems in low-income countries requires innovations in approaches covering infrastructure, technology, social embedding, financial mechanisms and cost recovery. This paper explores the potential challenges and contribution of NGOs in facilitating new, integrated solutions to urban sanitation problems that address the entire sanitation chain, promising better social, financial and environmental sustainability. A case study of a sanitation project initiated by a large Dutch NGO is presented, using reconstruction of project documentation and interviews with project stakeholders. The analytical framework combines elements from Transition Management (TM) with insights from process approaches to development projects and community development. The choice of the TM concept is motivated by the notion that the new NGO approaches could be conceived as efforts to initiate a sustainability transition process in urban sanitation, whereas its complementation with insights from the development studies domain answers to the need to attune a TM-based framework to participation in the socio-institutional context in low-income countries, to understand the progress of governing transition processes in informal, low-income settings. This context requires special attention for capacity-building and creation of organizational structures in poor local communities. The case study shows that this entailed specialised groundwork, with which the NGO laid a crucial foundation that enabled transition frontrunners to act. Simultaneously, this focus on bottom-up empowerment created challenges for the NGO in effectively involving the right frontrunner actors who could put pressure on incumbent societal structures and institutions. We conclude that transitions in low-income contexts require extra attention to local empowerment and institution building to lay the required foundations for a locally rooted transition process. Development NGOs like the one in our case study have the skills to do this, but need to learn how to combine these with additional necessary competences to facilitate systemic change.

1. Introduction

Four billion people, about 54% of the world's population, live in urban areas, where inequalities are rising (UN-Habitat, 2016). Many of the urban poor live in informal settlements characterized by unsanitary conditions because of high population density, inadequate (solid) waste management and poor drainage systems (Hawkins et al., 2013). Worldwide, approximately 756 million urban residents have no access to improved sanitation (Galli et al., 2014). In urban areas of sub-Saharan Africa up to 80% of sanitation access is established with on-site technologies (Diener et al., 2014), for example latrines that store

excreta at the point of generation, in contrast with off-site systems, particularly sewerage that transport excreta to another location for treatment, disposal or use (WHO, 2006). The faecal sludge collected from on-site systems is often (illegally) dumped, causing large-scale health hazards. Storm water drains fill up with human waste, which frequently contributes to flooding and contamination (Galli et al., 2014). Residents of informal settlements suffer from cholera, diarrhoea and worm infections and thus have a lower quality of life and are less productive than other people (Hawkins et al., 2013).

The rapid urbanization in many low-income and lower-middle-income countries¹ will seriously aggravate these challenges in the future

* Corresponding author. Present address: Eawag, Swiss Federal Institute of Aquatic Science and Technology, Überlandstrasse 133, CH-8600 Dübendorf, Switzerland.
 E-mail address: mara.vanwelie@eawag.ch (M.J. van Welie).

¹ Low-income countries: Gross National Income (GNI) per capita \$1025 or less; Lower-middle-income countries: GNI per capita between \$ 1026 and \$ 4035 (World-Bank, 2017).

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(UN-Habitat, 2014). Access to improved sanitation needs to be increased on a much larger scale (Hawkins et al., 2013). Therefore, innovative approaches in infrastructure, technology and cost recovery are needed (Diener et al., 2014). This paper focuses on the challenges and contributions of Non-Governmental Organizations (NGOs) to sustainable sanitation in urban informal settlements in low-income countries. While the humanitarian impact from improved facilities can be substantial, most of the existing NGO approaches have not resulted in solutions that last beyond the external support (Murray and Ray, 2010). Provision of free latrines to poor populations lack reliable solutions for emptying, transporting and treating faecal sludge and wastewater (Koné, 2010). Furthermore, many approaches have been supply led, failing to take into account the characteristics of sanitation demand at household level, which has resulted in unwillingness to pay for, maintain, and use new sanitation facilities (Jenkins and Sugde, 2006).

In response, several NGOs are developing new integrated approaches addressing infrastructure, technology, social embedding, environmental contamination and cost recovery. This shift is reflected in the adoption of the sanitation value chain concept (e.g. Galli et al., 2014). This conceptualizes sanitation as a system with inputs and outputs, comprising sub-components of capturing, storing, transporting, processing and/or recycling of faecal sludge (Fig. 1). The concept is also embraced by knowledge institutions (Evans et al., 2015), international development organizations (WSP, 2014) and specific donors (Gates-Foundation, 2010). In this paper, we speak of a ‘holistic approach’ when referring to these fundamentally new approaches that are based on recapturing waste streams to create value for financial, social and environmental self-sustainability, as opposed to old stand-alone latrine provision.

The holistic NGO approaches are more complex than the earlier approaches because they address the entire sanitation chain and necessitate cooperation with new types of actors in the different parts of the chain, for example non-conventional financiers and regulatory bodies. To oversee these collaborations and create a financially self-sustaining sanitation chain, actors need to be found who are able to orchestrate and govern the whole chain. An additional complication is the changing funding context in which NGOs work, caused by recent policy changes in the development sector that call for NGOs to become increasingly financially self-sufficient. For instance, the Dutch government has adopted a new policy paradigm, *From Aid to Trade* (Rijksoverheid, 2011) and ended one of the main governmental subsidy programmes for NGOs in 2015 (Rijksoverheid, 2016). Similar changes have been underway in, e.g., the UK, US and Australia, affecting NGOs that significantly depended on government funding (Smedley, 2014).

The goal of this paper is to explore the challenges and opportunities of development NGOs that are moving towards more holistic approaches in sanitation in cities in developing countries. What are their challenges, and how can they contribute to processes of structural change? We primarily use a framework based on Transition Management (TM) to answer these questions (Loorbach, 2007, 2010). TM is a transition-governance approach, and the challenge of these NGOs can be framed as one of initiating and governing a socio-technical transition process. However, the use of TM in informal, low-income

settings requires more specific consideration and attentiveness to the participatory process for capacity building and empowerment. This has been out of scope of western applications of the TM framework. Process approaches to development projects (Bond and Hulme, 1999; Korten, 1980) and community development (Campfens, 1997; Mathie and Cunningham, 2005) seem particularly useful literature streams to gain insights into the specifics of participatory change processes in low-income countries.

In this paper, we analyse the challenges encountered by an NGO in applying its holistic approach in a specific project, based on project documentation and interviews with project stakeholders. We complement this with information from reflective conversations with representatives from several other sanitation NGOs in order to get a grip on issues of generalizability of the case findings.

Section 2 reviews Transition Management theory and its applications in low-income countries to date. These applications reveal certain limitations arising from TM’s western roots. The literature strands from development studies are introduced to deal with these issues, yielding a contextually relevant framework for analysis. Section 3 outlines the methodology. Section 4 contains the case analysis. Section 5 contains a broader discussion of challenges of transition facilitation in low-income countries and the potential contribution and role of NGOs in such processes, using the case findings and insights from other sanitation experts. It also draws lessons from using a combined theoretical framework consisting of transition and development studies literature. We conclude with the challenges of, and opportunities for, NGOs in fostering change processes in low-income countries with a holistic approach.

2. Theory

With the theoretical framework we should be able to analyse how well an actor facilitates *systemic* change in a low-income country context. In this section we review Transition Management (TM) and its applications in low-income countries for this purpose. We identify certain limitations of TM that emanate from its Western European scientific roots. This leads us to explore bodies of literature of potential relevance that have grown out of experiences in low-income country contexts, for essential complementary insights.

2.1. Transition Management

TM deals with complex societal problems and governance (Loorbach and Rotmans, 2010) and is said to be ‘a promising model for sustainable development, allowing societies to explore alternative social trajectories in an adaptive, forward-looking manner’ (Kemp et al., 2007, p. 2). It develops fundamental and also practical knowledge to influence and direct transitions towards sustainability (van den Bosch, 2010, p. 38). The new holistic sanitation approaches of NGOs can be conceived as efforts to govern a process aiming for long-term structural changes towards sustainability. Therefore, the principles of TM can be useful for analysing how well an actor such as an NGO structures or ‘manages’ an ongoing governance process in society (Loorbach, 2010, p.

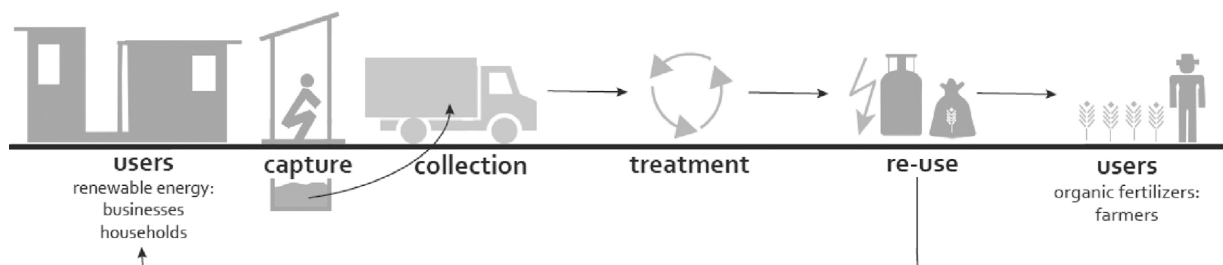


Fig. 1. Conceptualization of the sanitation chain (authors’ figure, inspired by Gates-Foundation (2010), Simavi (2015)).

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